Article 3.7 – Autonomous Vehicles

§ 227.00. Purpose.

(a) The regulations in this article implement, interpret and make specific Division 16.6 (commencing with section 38750) of the Vehicle Code, originally added by Statutes of 2012, Chapter 570 (SB 1298), providing for the regulation of autonomous vehicles operated on public roads in California.

(b) A motor vehicle shall not be operated in autonomous mode on public roads in California except as permitted under Vehicle Code section 38750 and the regulations in this article.


§ 227.02. Definitions.

As used in this article the following definitions apply:

(a) “Autonomous mode” means an autonomous vehicle, as defined by this article, that is operated or driven without active physical control by a natural person sitting in the vehicle’s driver’s seat. An autonomous vehicle is operating or driving in autonomous mode when it is operated or driven with the autonomous technology engaged.

(b) “Autonomous vehicle” means any vehicle equipped with technology that has the capability of operating or driving the vehicle without the active physical control or monitoring of a natural person, whether or not the technology is engaged, 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 natural person.

(c) “Autonomous vehicle test driver” means a natural person seated in the driver’s seat of an autonomous vehicle, whether the vehicle is in autonomous mode or conventional mode, who possesses the proper class of license for type of vehicle being driven or operated, and is capable of taking over active physical control of the vehicle at any time.

(d) “Conventional mode” means the vehicle is under the active physical control of a natural person sitting in the driver’s seat operating or driving the vehicle with the autonomous technology disengaged.

(e) “Designee” means the natural person identified by the manufacturer to the department as a person authorized by the manufacturer to drive or operate the manufacturer’s autonomous vehicles on public roads.
(f) “Manufacturer” means a manufacturer of autonomous technology as defined in Vehicle Code section 38750 (a)(5) and includes a vehicle manufacturer as defined in Vehicle Code section 672 that produces an autonomous vehicle from raw materials or new basic components; and, a person as defined in Vehicle Code section 470 who modifies any vehicle by installing autonomous technology.

(g) “Public road” means “highway” as defined in Vehicle Code section 360, “offstreet public parking facility” as defined in Vehicle Code section 4000, and “street” as defined in Vehicle Code section 590.


§ 227.04. Requirements for a Manufacturer’s Testing Permit.

A manufacturer may conduct testing of autonomous vehicles on public roads in California if all of the following requirements are met:

(a) The manufacturer is conducting the testing.

(b) The vehicle is operated by an autonomous vehicle test driver who is an employee, contractor, or designee of the manufacturer, who has been certified by the manufacturer to the department as competent to operate the vehicle and has been authorized by the manufacturer to operate the vehicle.

(c) The manufacturer has in place and has provided the department with evidence of the manufacturer’s ability to respond to a judgment or judgments for damages for personal injury, death, or property damage arising from the operation of autonomous vehicles on public roads in the amount of five million dollars ($5,000,000), in the form of: an instrument of insurance issued by an insurer admitted to issue insurance in California; a surety bond issued by an admitted surety insurer or an eligible surplus lines insurer, and not a deposit in lieu of bond; or a certificate of self-insurance.

(d) The manufacturer has applied for and the department has issued to the manufacturer a Manufacturer’s Testing Permit to conduct autonomous vehicle testing on public roads in California.


A manufacturer’s obligation to provide evidence of an ability to respond to damages under Vehicle Code section 38750 is in addition to any other insurance obligation required by law.

§ 227.08. Instrument of Insurance.

A manufacturer may satisfy the requirement of Vehicle Code section 38750(b)(3) to provide evidence of financial responsibility to the department as a precondition of conducting testing of an autonomous vehicle on public roads by submitting evidence of the existence of an instrument of insurance as follows:

(a) The instrument of insurance is issued by an insurer admitted to sell the line of insurance under which the policy is issued or an eligible surplus lines insurer that meets the requirements of Insurance Code section 1765.1.

(b) The instrument of insurance specifies the name, National Association of Insurance Commissioner’s (NAIC) number, and the address of the insurer providing the policy to the manufacturer.

(c) The insurance policy insures the autonomous vehicles of the manufacturer.

(d) The instrument specifies the policy number and the effective date and the expiration date of the policy.

(e) The insurer certifies that the policy meets the requirements of Vehicle Code section 38750.


§ 227.10. Surety Bond.

A manufacturer may satisfy the requirement of Vehicle Code section 38750(b)(3) to provide evidence of financial responsibility as a precondition of conducting testing of autonomous vehicles on public roads by giving the department an instrument evidencing the existence of bond, as follows:

(a) The bond shall be issued by an admitted surety.

(b) The bond shall be in the penal amount of five million dollars ($5,000,000).

(c) The bond shall be conditioned that the surety shall be liable if the manufacturer, as principal, fails to pay any final judgment for damages for personal injury, death or property damage arising from an accident involving an autonomous vehicle operated by the manufacturer under Vehicle Code section 38750(b).

(d) The bond shall be subject to the Bond and Undertaking Law, Chapter 2 (commencing with Section 995.010), Title 14, Part 2, of the Code of Civil Procedure.
(e) The bond shall be considered a bond given as a condition of license or permit, shall be continuous in form, remain in full force and effect, and run concurrently with the manufacturer’s authority to test vehicles on public roads under Vehicle Code section 38750 and any and all renewals or until cancellation or withdrawal of the surety from the bond.

(f) The bond shall be a bond, and not a deposit in lieu of bond.

(h) The bond shall be submitted to the department on the Autonomous Vehicle Manufacturer Surety Bond, form OL 317 (NEW 9/2013), which is hereby incorporated and has been approved by the California Attorney General under Government Code sections 11110 through 11113.


(a) A manufacturer insured by a policy of insurance shall at all times maintain in its autonomous vehicles a copy of the proof of insurance provided by the insurance company.

(b) A manufacturer shall maintain in the vehicle at all times it is operated on public roads a copy of the bond, when the manufacturer relies upon a bond to comply with the requirements of Vehicle Code section 38750(b)(3).


(a) A manufacturer may satisfy the requirement of Vehicle Code section 38750(b)(3) to provide evidence of financial responsibility as a precondition of conducting testing of autonomous vehicles on public roads by applying to the department for and being issued a certificate of self-insurance. The application shall be submitted on the Autonomous Vehicle Tester Program Application for Certificate of Self-Insurance, form OL 319 (NEW 9/2013), which is hereby incorporated by reference.

(b) The manufacturer shall also submit with the application audited financial statements reflecting a net worth of not less than five million dollars ($5,000,000) for the three year period immediately preceding the date of the application including, but not limited to, documents commonly known as balance sheets, profit and loss statements, explanatory notes or other documents which allow the department to determine the manufacturer’s net worth.

(1) When an applicant has not been in existence for three years prior to the date of the application, the department may accept a financial statement covering the period the applicant has been in existence.
(2) The manufacturer shall submit an opinion of the financial condition of the manufacturer rendered by an independent certified public accountant, and not an employee or a person with a financial interest in the manufacturer, licensed to audit financial statements and render an opinion as to the subject’s financial condition.

(c) The department shall not permit a manufacturer to operate under a certificate of self-insurance if its net worth is less than five million dollars ($5,000,000), or if there are any outstanding unsatisfied final judgments against the manufacturer arising out of a motor vehicle accident.

(d) The department shall review the application. If the application is incomplete or insufficient, the department shall notify the manufacturer of the incompleteness or insufficiency and provide the manufacturer with a reasonable opportunity to cure the deficiencies. If the application is complete and the manufacturer meets all requirements for issuance, the department shall issue the manufacturer a certificate reciting that the manufacturer has permission from the department to satisfy the requirements of Vehicle Code section 38750(b)(3) by self-insurance.

(e) In the event the department receives information suggesting that the manufacturer no longer meets the requirements for permission to satisfy the requirements of Vehicle Code section 38750(b)(3) by self-insurance, the department may require additional evidence of the manufacturer’s ability to respond to damage, and the manufacturer shall be required to provide additional evidence.

(f) The department may cancel a certificate of self-insurance for any of the following reasons:

   (1) The holder of the certificate has not provided the additional evidence required by subdivision (e).
   (2) Inability, refusal or failure of the holder of the certificate to submit financial statements and supporting documentation as required by subdivision (b).
   (3) The submission of fraudulent or incomplete documents.


(a) A manufacturer shall not operate an autonomous vehicle on public roads unless the manufacturer has provided the department, in writing, the identification of the autonomous vehicle to be used for testing on public roads. For each vehicle so identified, the manufacturer shall provide to the department all of the following:

   (1) The make, model, and model year of the vehicle.
(2) The full vehicle identification number.

(3) The license plate number and state of issuance.

(b) Each document identifying autonomous vehicles for testing shall be signed by a person authorized by the manufacturer to bind the manufacturer, under penalty of perjury under the laws of the State of California.


§ 227.18. Requirements for Autonomous Vehicle Test Drivers.

A manufacturer shall not conduct testing of an autonomous vehicle on public roads unless the vehicle is operated or driven by an autonomous vehicle test driver who meets each of the following requirements:

(a) The autonomous vehicle test driver is either in immediate physical control of the vehicle or is actively monitoring the vehicle’s operations and capable of taking over immediate physical control.

(b) The autonomous vehicle test driver is an employee, contractor or designee of the manufacturer.

(c) The autonomous vehicle test driver shall obey all provisions of the Vehicle Code and local regulation applicable to the operation of motor vehicles whether the vehicle is in autonomous mode or conventional mode.

(d) The autonomous vehicle test driver knows the limitations of the vehicle’s autonomous technology and is capable of safely operating the vehicle in all conditions under which the vehicle is tested on public roads.


A manufacturer shall not allow any person to act as an autonomous vehicle test driver for testing autonomous vehicles on public roads unless all of the following have been met:

(a) The manufacturer has identified the autonomous vehicle test driver to the department in writing, providing the driver’s true full name and the driver’s license number and jurisdiction of issuance of the license and the autonomous vehicle driver has been issued an Autonomous Vehicle Testing (AVT) Program Test Vehicle Operator Permit, form OL 314 (NEW 9/2013), which is incorporated by reference.
(b) The manufacturer has certified to the department, for each autonomous vehicle test driver permitted by the manufacturer to operate its autonomous vehicles on public roads, that the driver meets all of the following requirements:

(1) The autonomous vehicle test driver has been licensed to drive a motor vehicle for the three years immediately preceding application to the department; and, at that time the driver:

(A) Did not have more than one violation point count determined as provided in subdivisions (a), (b), (c), (d), (e), (g), or (h) of Vehicle Code section 12810.

(B) Was not the at-fault driver of a motor vehicle involved in an accident that resulted in injury or death of any person.

(C) For the ten years immediately preceding application to the department was not convicted for driving or operating a vehicle under the influence of alcohol or any drug, and did not suffer any driver’s license suspension or revocation based on driving or operating any vehicle under the influence of alcohol or of any drug.

(2) The autonomous vehicle test driver has completed the manufacturer’s autonomous vehicle test driver training program and the date the driver completed the program.


§ 227.22. Autonomous Vehicle Test Driver Training Program.

A manufacturer conducting testing of autonomous vehicles on public roads shall maintain a training program for its autonomous vehicle test drivers and shall provide the department with a course outline and description of the autonomous vehicle test driver training program. The autonomous vehicle test driver training program shall include, but not be limited to the following:

(a) Instruction on the automated driving system technology to be tested in the manufacturer’s vehicles, including behind the wheel instruction provided by an experienced driver on the capabilities and limitations of the manufacturer’s automated driving systems.

(1) For purposes of this section, an “experienced driver” is one who has met the qualifications provided in Section 227.20, subsections (a) and (b)(1) of this Article and through training and experience has developed skill and knowledge in the operation of the manufacturer’s autonomous technology.

(b) Defensive driver training, including practical experience in recovering from hazardous driving scenarios.
(c) Instruction that matches the level of the autonomous test vehicle driver’s experience operating the specific type of automated driving system technology with the level of technical maturity of the automated system.


§ 227.24. Manufacturer’s Testing Permit.

(a) A manufacturer shall not conduct testing of an autonomous vehicle on public roads in California without having applied to the department for a permit to conduct testing, the department having issued an Autonomous Vehicle Testing (AVT) Manufacturer’s Testing Permit (hereafter “Manufacturer’s Testing Permit”) to conduct testing, and the permit being currently in full force and effect.

(b) A manufacturer shall not test autonomous vehicles on public roads unless the manufacturer has tested the autonomous vehicles under controlled conditions that simulate, as closely as practicable, the real world conditions that the manufacturer intends to subject the vehicles to on public roads and the manufacturer has reasonably determined that it is safe to operate the vehicles on public roads under those conditions.


§ 227.26. Manufacturer’s Testing Permit Application.

(a) A manufacturer desiring to conduct testing of autonomous vehicles on public roads in California shall submit an application for a permit to conduct testing to the department on Autonomous Vehicle Tester Program (AVT) Application for Manufacturer’s Testing Permit, form OL 311 (NEW 9/2013), which is hereby incorporated by reference.

(1) The manufacturer shall submit a fee of One Hundred and Fifty dollars ($150) for the processing of the application which will permit the operation of up to 10 autonomous vehicles and up to 20 autonomous vehicle test drivers.

(2) The manufacturer may supplement the application with additional pages to add more than 10 vehicles and more than 20 drivers by submitting the fee of Fifty dollars ($50) for each set of 1 to 10 vehicles and 1 to 20 drivers.

(b) Any changes or modifications to Manufacturer’s Testing Permit required by the manufacturer during the term of the permit shall be accomplished by submitting a revised form OL 311 and submit the seventy dollars ($70) fee for the processing of the modification.

§ 227.28. Review of Application.

(a) The department shall review the Autonomous Vehicle Tester Program (AVT) Application for Manufacturer’s Testing Permit, and notify the manufacturer within 10 days of receipt of the application whether it is complete or it is determined to be deficient. The department shall approve an application and issue a Manufacturer’s Testing Permit after determining that the application is sufficient. The department shall approve an application and issue an Autonomous Vehicle Testing (AVT) Program Manufacturer Permit, form OL 315, (NEW 9/2013), which is hereby incorporated by reference.

(b) The department shall notify the manufacturer of any deficiency and allow the manufacturer a reasonable period of time in which to correct the deficiency. The department will review material submitted to correct an application deficiency. If the department determines that the application remains deficient, the department shall notify the manufacturer/applicant of the continuing deficiency. The department shall deny an application if the manufacturer/applicant fails to make the application sufficient after a reasonable opportunity to do so.


§ 227.30. Term of Permit.

(a) Every Manufacturer’s Testing Permit issued under this article shall be valid for a period of one year from midnight of the last day of the month of issuance unless sooner revoked or surrendered. Renewal of the permit for the ensuing year may be obtained by the manufacturer to whom the permit was issued upon application to and approval by the department and payment of the fee required by subsection (b).

(b) Every application for renewal of a Manufacturer’s Testing Permit which expires pursuant to this section shall be made by the manufacturer to whom the permit was issued 60 days prior to the expiration date, and shall be made by submitting the completed renewal application form to the department and payment of the One Hundred-Fifty dollars ($150) annual renewal fee.


§ 227.32. Enrollment in Employer Pull Notice Program.

(a) Prior to applying for a testing permit a manufacturer shall enroll in the Employer Pull Notice Program pursuant to Vehicle Code section 1808.1.

(b) If the manufacturer fails to enroll in the Employer Pull Notice Program the application for a testing permit shall be denied until the manufacturer provides proof that it has enrolled in the Employer Pull Notice Program.

§ 227.34. Prohibitions on Operation on Public Roads.

A manufacturer shall not permit any of its autonomous vehicles to be operated on public roads in California:

(a) By a person other than one of its employees, contractors or designees who has been identified to the department as authorized by the manufacturer to operate the manufacturer’s autonomous vehicle, to operate one of its autonomous vehicles.

(b) By a person not licensed to operate the appropriate class of vehicle to operate one of its autonomous vehicles.

(c) By a person who does not meet the requirements of Section 227.20 of this Article.

(d) When the operator is not seated in the vehicle’s driver seat and either: monitoring its operations and able to take over physical control of the vehicle; or, in physical control of the vehicle.

(e) When the manufacturer does not have in effect evidence or proof of financial responsibility as required by Vehicle Code section 38750 and these regulations and as required by any other insurance obligation required by law.

(f) When the Manufacturer’s Testing Permit is revoked, suspended, expired, or otherwise not in full force and effect.


§ 227.36. Refusal, Suspension, Revocation of Manufacturer’s Testing Permit.

The department may refuse an application for a Manufacturer’s Testing Permit, or for the renewal of a Manufacturer’s Testing Permit, and may suspend or revoke a Manufacturer’s Testing Permit:

(a) For a violation of Vehicle Code section 38750 or this Article.

(b) For any act or omission of the manufacturer or one of its agents, employees, contractors or designees which the department finds makes the conduct of autonomous vehicle testing on public roads by the manufacturer an unreasonable risk to the public.

§ 227.38. Demand for Hearing after Refusal or Non-Renewal.

(a) Upon a refusal by the department to issue or renew a Manufacturer’s Testing Permit, the manufacturer shall be entitled to demand in writing a hearing before the director or his or her representative within 60 days after the notice of refusal.

(b) The hearing shall be conducted pursuant to the provisions of Chapter 5 (commencing with Section 11500) of Part 1 of Division 3 of Title 2 of the Government Code.


§ 227.42. Reinstatement of Testing Permit.

Upon the suspension of a Manufacturer’s Testing Permit by the department, the manufacturer shall cease all testing of autonomous vehicles on public roads until the department has verified that the manufacturer has taken appropriate action to correct the deficiencies that caused the suspension and the department has lifted the suspension.


§ 227.44. Reporting Accidents.

A manufacturer whose autonomous vehicle is in any manner involved in an accident originating from the operation of the autonomous vehicle on a public road that resulted in the damage of property or in bodily injury or death shall report the accident to the department, within 10 days after the accident, on Report of Traffic Accident Involving an Autonomous Vehicle, form (OL 316 (NEW 9/2013) which is hereby incorporated by reference. The manufacturer shall identify on the form, by name and current address, if available, all person involved in the accident, and a full description of how the accident occurred.


§ 227.46. Reporting Disengagement of Autonomous Mode.

(a) Upon receipt of a Manufacturer’s Testing Permit, a manufacturer shall commence retaining data related to the disengagement of the autonomous mode. For the purposes of this section, “disengagement” means a deactivation of the autonomous mode when a failure of the autonomous technology is detected or when the safe operation of the vehicle requires that the autonomous vehicle test driver disengage the autonomous mode and take immediate manual control of the vehicle.
(b) Every manufacturer authorized under this article to test autonomous vehicles on public roads shall prepare and submit to the department an annual report summarizing the information compiled pursuant to subdivision (a) by January 1st, of each year.

(1) The first report shall cover the period from the date of issuance of the Manufacturer’s Testing Permit to November 30th of the following year.

(2) After the first report, subsequent annual reports shall cover the period December 1st of the current year to November 30th of the following year.

(3) The annual report shall summarize disengagements for each month as follows:

(A) The total number of autonomous mode disengagements and the circumstances or testing conditions at the time of the disengagements including:

(i) The location: interstate, freeway, highway, rural road, street, or parking facility.

(ii) A description of the facts causing the disengagements, including: weather conditions, road surface conditions, construction, emergencies, accidents or collisions, and whether the disengagement was the result of a planned test of the autonomous technology.

(B) The total number of miles each autonomous vehicle tested in autonomous mode on public roads each month.

(C) The period of time elapsed from when the autonomous vehicle test driver was alerted of the technology failure and the driver assumed manual control of the vehicle.


§ 227.48. Vehicle Registration and Certificates of Title.

(a) A person shall not drive, move, or leave standing an autonomous vehicle upon public roads unless the department has been notified of its use pursuant to Section 227.16 of this Article.

(b) In addition to the requirements set forth in Vehicle Code section 4150, an application for original registration of an autonomous vehicle shall include:

(1) The certificate of ownership or certificate of origination from the vehicle manufacturer as defined in Vehicle Code section 672.

(2) A written description of the autonomous technology or features integrated into the vehicle and the functional capabilities made possible by this technology.

(3) A Brake and Light Adjustment Certificate issued by an entity licensed by the California Bureau of Automotive Repair.
(4) An Emissions Certification issued by an entity licensed by the California Bureau of Automotive Repair or a permit issued pursuant to Health and Safety Code section 43014.

(c) In addition to the requirements set forth in Vehicle Code section 5902, an application for transfer of ownership of an autonomous vehicle shall include:

(1) A written description of the autonomous technology or features integrated into the vehicle.

(2) A Brake and Light Adjustment Certificate issued by an entity licensed by the California Bureau of Automotive Repair.

(3) An Emissions Certification issued by an entity licensed by the California Bureau of Automotive Repair or a permit issued pursuant to Health and Safety Code section 43014.

(d) An autonomous vehicle shall be identified as such on the face of the registration card and any certificate of ownership and the Autonomous Vehicle Testing (AVT) Program Test Vehicle Permit, form OL 313 (NEW 9/2013), which is incorporated by reference, issued by the department pursuant to this Article.


§227.50. Transfers of Interest or Title.

No person shall offer for sale, sell, transfer, or dispose of an autonomous vehicle, or major component parts for such a vehicle that has been used for testing purposes on public roads except as follows:

(a) To a manufacturer holding a valid autonomous vehicle Manufacturer’s Testing Permit.

(b) The manufacturer disposing of the vehicle has obtained a Nonrepairable Vehicle Certificate ensuring that the vehicle is not retitled or resold, and ownership of the vehicle is transferred to an auto dismantler.

(c) Transfer of ownership to an educational or research institution or a museum where it would be appropriate for display or study.


§227.52. Vehicles Excluded from Testing.

(a) The following vehicles shall not be approved for testing as autonomous vehicles on public roads:
(1) Trailers as defined in Vehicle Code section 242 (camp trailer), section 324 (fifth-wheel travel trailer), and section 635 (trailer coach).

(2) Motorcycles as defined in Vehicle Code section 400.

(3) Motor vehicles with interstate operating authority pursuant to Vehicle Code sections 8050 through 8058.

(4) A vehicle with a gross vehicle weight rating of 10,001 or more pounds.