

POTENTIAL DRAFT REGULATORY LANGUAGE:

This document provides draft regulatory language for rulemaking governing autonomous vehicles. This document is intended only to encourage public feedback and is not a formal regulatory proposal. Proposed regulations will be made available for public comment at a later date pursuant to the formal Administrative Procedure Act process.

Article 3.7. Testing of Autonomous Vehicles

Express Terms

§ 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.

Note: Authority cited: Sections 1651 and 38750, Vehicle Code. Reference: Section 38750, Vehicle Code.

§ 227.02 Definitions.

As used in this article, the following definitions apply:

(a) “Automated driving system” is the combination of both hardware and software, which collectively form autonomous technology, that, when equipped to a vehicle, is capable of making the vehicle perform the entire dynamic driving task on a sustained basis, with or without a driver physically located in the driver’s seat of the vehicle and regardless of whether the autonomous technology is limited to a specific operational design domain.

(b) “Automated driving system feature” is a feature of the automated driving system that operates at a specific level of driving automation and within a prescribed operational design domain.

(c) “Automated driving system service” is a product that uses a service model, whereby the manufacturer provides a registered owner or lessee, who is not the manufacturer of the product, with an automated driving system, that, when equipped to a vehicle and activated, makes the vehicle operate in a manner consistent with the definition of an autonomous vehicle.

(d) "Autonomous commercial motor vehicle," as used in the regulations of Title 13, Division 1, Chapter 1, Articles 3.7 and 3.8, is a motor vehicle, as included in the Vehicle Code section 260, with a gross vehicle weight rating of 10,001 pounds or more that is equipped with an automated driving system and used or maintained to transport property.

~~(a) (e) "Autonomous mode" is the status of vehicle operation where technology that is a combination of hardware and software, remote and/or on board, performs the dynamic driving task, with or without a natural person actively supervising the autonomous technology's performance of the dynamic driving task. An of an autonomous vehicle is operating or driving in autonomous mode when it is operated or driven with the autonomous technology automated driving system is engaged.~~

(f) "Autonomous test vehicle" is an autonomous vehicle that is operated for testing purposes.

A natural person, as included in the Vehicle Code section 470, who is an employee, contractor, or designee of the manufacturer that monitors an autonomous vehicle's performance and performs the dynamic driving task fallback in certain situations shall not affect whether a vehicle meets the definition of an autonomous test vehicle.

~~(b) (g) "Autonomous test vehicle" is a vehicle that has been is equipped with technology an automated driving system that is a combination of both hardware and software that, when engaged, performs the dynamic driving task, but requires and is capable of operating without the active physical control or monitoring by a natural person a human test driver or a remote operator to continuously supervise of the autonomous vehicle's performance of the dynamic driving task within the prescribed operational design domain.~~

~~(1) An autonomous test vehicle does not include vehicles equipped with one or more systems that provide driver assistance and/or enhance safety benefits but are not capable of, singularly or in combination, performing the dynamic driving task on a sustained basis without the constant control or active monitoring of a natural person.~~

For the purposes of this article, an "autonomous test vehicle" ~~is equipped with technology that makes it capable of operation~~ is capable of operating in a manner that meets the definition of Levels 3, 4, or 5 of the Society of Automotive Engineers (SAE) International's Taxonomy and Definitions for Terms Related to Driving Automation Systems for On-Road Motor Vehicles, standard J3016 (APR2021), as may be revised, which is hereby incorporated by reference. To determine whether a vehicle is equipped with feature(s), that, when engaged, meet the definition of Levels 3, 4, or 5 of the SAE International's J3016 (APR2021), and is thus subject to Vehicle Code section 38750 and the regulations in Articles 3.7 and 3.8, the department may rely on any relevant information available to the department.

~~(3) The presence of a natural person who is an employee, contractor, or designee of the manufacturer in the vehicle to monitor a vehicle's autonomous performance shall not affect whether a vehicle meets the definition of autonomous test vehicle.~~

~~(e)~~ (h) "Autonomous vehicle test driver" means a natural person is a driver physically located seated in the driver's seat of an autonomous test vehicle, whether the vehicle is in autonomous mode or conventional mode, who possesses the proper class of license for the type of vehicle being driven or operated, and is capable of taking over active physical control of the vehicle at any time and performing the dynamic driving task fallback.

~~(d)~~ (i) "Conventional mode" means the status of operation of an autonomous the vehicle when it is under the active physical control of a natural person driver physically located sitting in the driver's seat operating or driving the vehicle with the autonomous technology automated driving system disengaged.

(j) "Cyber security" means the manner in which an autonomous vehicle is protected from cyber threats to electrical or electronic components.

(k) "Cyber security management system" means a systematic risk-based approach that defines measures to treat risk associated with cyber threats to an autonomous vehicle and protect the vehicle from cyberattacks.

~~(e)~~ (l) "Designee" means the natural person identified by the manufacturer to the department as an autonomous vehicle test driver authorized by the manufacturer to drive or operate the manufacturer's autonomous test vehicles or automated driving system on public roads.

~~(f)~~ (m) "Driver" means the natural person who is operating an autonomous vehicle when it is not operating in the autonomous mode.

(n) "Drivered Testing Permit" means an Autonomous Vehicle Testing (AVT) Program Manufacturer Permit, form OL 315 (Rev. 9/2023), which is hereby incorporated by reference, that is issued by the department to a manufacturer that operates an autonomous test vehicle and which requires the presence of an autonomous vehicle test driver to operate on public roads.

(o) "Drivered Testing Permit Application" means an Autonomous Vehicle Tester (AVT) Program Application for Manufacturer's Testing Permit, form OL 311 (Rev. 9/2023), which is hereby incorporated by reference, that is submitted by the manufacturer and must be approved by the department in order to issue a Drivered Testing Permit.

(p) “Driverless Testing Permit” means an Autonomous Vehicle Testing (AVDT) Program Manufacturer Permit – Driverless Vehicles, form OL 315A, (Rev. 9/2023), which is hereby incorporated by reference, that is issued by the department to a manufacturer that operates an autonomous test vehicle and which does not require the presence of an autonomous vehicle test driver to operate on public roads.

(q) “Driverless Testing Permit Application” means an Autonomous Vehicle Tester (AVT) Program Application for Manufacturer’s Testing Permit Driverless Vehicles, form OL 318 (Rev. 9/2023), which is hereby incorporated by reference, that is submitted by the manufacturer and must be approved by the department in order to issue a Driverless Testing Permit.

~~(g)~~ (r) “Dynamic driving task” means all of the real-time functions required to operate a vehicle in on-road traffic, excluding selection of final and intermediate destinations, and including without limitation: object and event detection, recognition, and classification; object and event response; maneuver planning; steering, turning, lane keeping, and lane changing, including providing the appropriate signal for the lane change or turn maneuver; and acceleration and deceleration.

(s) “Dynamic driving task fallback” is the response by a natural person or an automated driving system to either perform the dynamic driving task or achieve a minimal risk condition after occurrence of a dynamic driving task performance-relevant system failure(s), operational design domain exit, or other event necessitating cessation of the dynamic driving task by the automated driving system.

(t) “Frontage street or road” is a public road auxiliary to and located alongside an arterial highway, providing access to abutting property and adjacent areas, and controlling access to the arterial highway.

~~(h)~~ (u) “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. A manufacturer does not include an end user of a vehicle that has agreed to an automated driving system service.

~~(i)~~ (v) “Minimal risk condition” is a low-risk operating condition that an autonomous vehicle automatically resorts to when either the automated driving systems fails or when the human driver fails to respond appropriately to a request to take over the dynamic driving task. stable, stopped condition minimizing risk of involvement in a crash or obstruction of traffic when an autonomous vehicle is unable to continue its trip for any reason, including because of a violation of its operational design domain limitations, a technology failure, or the failure of a natural person (autonomous vehicle test driver, remote driver, or remote assistant) to intervene when needed to perform the dynamic driving task fallback.

~~(j)~~ (w) “Operational ~~D~~ design ~~D~~ domain” is the specific operating domain(s) in which an automated ~~function or system~~ driving system or feature is designed to properly operate, including but not limited to, geographic area, driving routes, roadway type, speed range, and the requisite presence or absence of specific environmental conditions (weather, ~~daytime/nighttime, time-of-day restrictions, etc.~~), traffic, roadway characteristics, and other known domain constraints.

~~(k)~~ (x) “Passenger” means an occupant of a vehicle who has no role in the operation of that vehicle when the autonomous technology is engaged. A passenger may summon a vehicle or input a destination, but does not engage the technology, monitor the vehicle, or drive or operate the vehicle. A member of the public may ride as a passenger in an autonomous test vehicle if there are no fees charged to the passenger or compensation received by the manufacturer.

~~(l)~~ (y) “Personal information” means information that the autonomous vehicle collects, generates, records, or stores in an electronic form that is retrieved from the vehicles, that is not necessary for the safe operation of the vehicle, and that is linked or reasonably capable of being linked to the vehicle's registered owner or lessee or passengers using the vehicle for transportation services.

~~(m)~~ (z) “Public road” means “highway” as defined in Vehicle Code section 360, “off-street public parking facility” as defined in Vehicle Code section 4000, and “street” as defined in Vehicle Code section 590.

(aa) “Remote assistant” is a natural person who: possesses the proper class of license for the type of vehicle being operated; is not physically located in the driver’s seat of the vehicle; is able to communicate with passengers through a two-way communication link; and is able to provide information or advice to the automated driving system through a two-way communication link with the vehicle. This may include providing an automated driving system with guidance to facilitate trip continuation of the vehicle, but does not include remote driving.

~~(n)~~ (bb) “Remote operator driver” is a natural person who: possesses the proper class of license for the type of test vehicle being operated; is not seated physically located in the driver’s seat of the vehicle; engages and monitors the autonomous vehicle; is able to communicate with occupants in the vehicle passengers through a two-way communication link with the vehicle; A remote operator also has the ability to is able to perform the dynamic driving task for the vehicle and ~~or~~ cause the vehicle to achieve a minimal risk condition.

(cc) “Remote support” includes any functions provided by a remote assistant or remote driver.

(dd) “Request for Information” is a request by the department to obtain substantive information from the manufacturer that addresses or identifies an incident(s) that occurred involving the operation of an autonomous vehicle on public roads.

(ee) “Safety Case” is the manufacturer’s structured argument, supported by a body of relevant evidence, that provides a compelling, comprehensible, and valid case that an automated driving system, for a given operational design domain, does not pose an unreasonable risk to the safety of vehicle occupants, other road users, and the public. The Safety Case shall include evidence and narrative supporting claims regarding at least:

(1) Organizational Safety, which addresses the manufacturer’s approach to promote safety culture, implement a safety management system, assess and manage safety risk, conduct independent safety assessments, certify to industry standards and best practices, evaluate risk control strategy effectiveness, and support organizational safety principles, policies, and objectives.

The manufacturer shall provide an organizational chart that identifies the filled position(s), which addresses the manufacturer’s approach to safety, describes each position’s functional role, and defines the reporting relationship to the executive-level position(s) within the organization.

(2) Autonomous Vehicle Safety, which addresses the manufacturer’s approach to identifying, analyzing, and mitigating safety risks posed by operation of the automated driving system and integration with the base vehicle platform, including, but not limited to, vehicle platform safety, identification, tracking, and mitigation of hazards that may be encountered in the operational design domain, implementing appropriate operational safety risk controls, automated driving system design, behavioral competencies, fault management and minimal risk conditions, mitigating risks from departures of the operational design domain, misuse by the vehicle driver, and actions by other road users, automated driving system interface, interactions with vehicle occupants, other road users, and the public, traffic collision response, safety-critical processes for software and system engineering, cybersecurity, verification, validation and testing, tracking and analysis of safety performance indicators and corresponding threshold values, and including processes for updating the Safety Case when the operational design domain changes.

(3) Operational Safety, which addresses the manufacturer’s measures to manage the safety risks to vehicle occupants, other road users, and the public that may arise during the fleet lifecycle and operations including, but not limited to, autonomous vehicle test drivers, remote drivers, and remote assistants, incident response and data collection, communication latencies, fleet operations and maintenance.

~~(e)~~ (ff) “Testing” means the operation of an autonomous vehicle on public roads by employees, contractors, or designees of a manufacturer for the purpose of assessing, demonstrating, and validating the autonomous automated driving system’s technology’s capabilities.

(gg) "Preliminary Information Notice" is a request by the department to obtain preliminary information from the manufacturer that addresses or identifies incident(s) involving the operation of an autonomous vehicle(s) on public roads.

NOTE: Authority cited: Sections 1651 and 38750, Vehicle Code. Reference: Sections 305, 360, 470, 590, 672, 4000 and 38750, Vehicle Code.

§ 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) Except as provided in Section 227.38, when 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 Drivered Testing Permit or a Driverless Manufacturer's Testing Permit – ~~Driverless Vehicles~~ to conduct autonomous vehicle testing on public roads in California.

Note: Authority cited: Sections 1651 and 38750, Vehicle Code. Reference: Sections 305 and 38750, Vehicle Code.

§ 227.06. Evidence of Financial Responsibility.

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.

Note: Authority cited: Sections 1651 and 38750, Vehicle Code. Reference: Section 38750, Vehicle Code.

§ 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.

Note: Authority cited: Sections 1651 and 38750, Vehicle Code. Reference: Section 1765.1, Insurance Code; Section 38750, Vehicle Code.

§ 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.

(g) The bond shall be submitted to the department on the Autonomous Vehicle Manufacturer Surety Bond, form OL 317 (Rev. 7/2020), which is hereby incorporated by reference and has been approved by the California Attorney General under Government Code sections 11110 through 11113.

Note: Authority cited: Sections 1651, and 38750, Vehicle Code. Reference: Section 995.010, Code of Civil Procedure; Sections 11110, 11111, 11112 and 11113, Government Code; and Section 38750, Vehicle Code.

227.12. Certificate of Self-Insurance.

(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 (REV 2/2017), 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 collision.

(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.

(g) Any suspension, revocation, or other involuntary termination of the permission to satisfy the requirements of Vehicle Code section 38750(b)(3) shall be subject to the hearing requirements provided in these regulations for the suspension or revocation of permits or authorizations under Vehicle Code section 38750.

Note: Authority cited: Sections 1651 and 38750, Vehicle Code. Reference: Sections 16053 and 38750, Vehicle Code.

§ 227.14. Autonomous Test Vehicles Proof of Financial Responsibility.

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

(b) A manufacturer shall maintain in its test vehicles 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).

Note: Authority cited: Sections 1651 and 38750, Vehicle Code. Reference: Section 38750, Vehicle Code.

§ 227.16. Identification of Autonomous Test Vehicles.

(a) A manufacturer shall not operate an autonomous test vehicle on public roads unless the manufacturer has ~~provided the department, in writing, the identification~~ all of the autonomous vehicle(s) to be used for testing on public roads at the time of submission of a Drivered Testing Permit Application or a Driverless Testing Permit Application. 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, or other identifying information if such is not available.
- (2) The full vehicle identification number, or other identifying information if such is not available.
- (3) The license plate number and state of issuance.
- (4) The software version number of the automated driving system equipped to the vehicle.

(b) In addition to the information identified in subsection (a), for each autonomous commercial motor vehicle so identified, the manufacturer shall provide to the department all of the following:

- (1) A valid United States Department of Transportation number.
- (2) An active carrier identification number (California number) issued by the Department of the California Highway Patrol.
- (3) Valid registration as a California International Registration Plan interstate motor carrier, if applicable.

~~(b)~~ (c) 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.

(d) For each vehicle identified on an Autonomous Vehicle Testing (AVT) Program Test Vehicle Permit, form OL 313 (Rev. 9/2023), which is hereby incorporated by reference, the manufacturer shall certify that a physical copy of the permit will be maintained in the vehicle at all times while the vehicle is operating on public roads.

(e) For each vehicle identified on a Driverless Testing Permit, the manufacturer shall certify that an electronic display of the permit will be maintained in the vehicle at all times while the vehicle is operating on public roads.

NOTE: Authority cited: Sections 1651 and 38750, Vehicle Code. Reference: Section 38750, Vehicle Code.

§ 227.18. Manufacturer's Testing Permit and Manufacturer's Testing Permit -- Driverless Vehicles.

(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~~ Drivered Testing Permit or a Manufacturer's Testing Permit – Driverless Vehicles 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, each ~~operational design domain~~ in which the manufacturer intends the vehicles to operate on public roads and the manufacturer has reasonably determined that it is safe to operate the vehicles in each ~~operational design domain~~.

(c) Manufacturers of autonomous commercial motor vehicles are limited to conducting testing in an operational design domain that only allows operation on frontage streets or roads and on roads where the posted speed limit is 50 miles per hour or greater.

NOTE: Authority cited: Sections 1651 and 38750, Vehicle Code. Reference: Section 38750, Vehicle Code.

§ ~~227.22~~ 227.20. Term of Permit.

(a) Every Drivered Manufacturer's Testing Permit or ~~Manufacturer's Testing Permit – Driverless Vehicles Testing Permit~~, issued under this article shall be valid for a period of ~~two one~~ years from midnight of the last day of the month of issuance unless sooner suspended, revoked, restricted, or surrendered. Renewal of the permit for the ensuing ~~two one~~-year period 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 Drivered Manufacturer's Testing Permit or a Driverless Manufacturer's Testing Permit – Driverless Vehicles, which expires pursuant to this section shall be made by the manufacturer to whom the permit was issued at least 60 days prior to the expiration date, and shall be made by submitting the completed renewal application form to the department and payment of TBD ~~three thousand six hundred dollars (\$3,600)~~ annual renewal fee.

Note: Authority cited: Sections 1651 and 38750, Vehicle Code. Reference: Section 38750, Vehicle Code.

§ ~~227.24~~ 227.22. 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.

Note: Authority cited: Sections 1651 and 38750, Vehicle Code. Reference: Sections 1808.1 and 38750, Vehicle Code.

§ ~~227.26~~ 227.24. Prohibitions on Operation on Public Roads.

A manufacturer shall not permit any of its autonomous test 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.

(b) By a person who does not meet the requirements of Section 227.32 of this Article.

(c) Except as provided in section 227.38, when an autonomous vehicle test driver is not seated in the vehicle's driver seat and monitoring its operations and able to take over physical control of the vehicle in the event of an autonomous technology failure or other emergency.

(d) 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.

(e) When the Drivered Manufacturer's Testing Permit or the Driverless Testing Permit is revoked, suspended, expired, or otherwise not in full force and effect.

(f) When members of the public who are not employees, contractors, or designees of the manufacturer are charged a fee to ride in the vehicle, or the manufacturer receives compensation for providing a ride to the members of the public.

~~(g) When members of the public are charged a fee or the manufacturer receives compensation for transporting property in motortrucks as defined in Section 227.28 of this article.~~

Note: Authority cited: Sections 1651 and 38750, Vehicle Code. Reference: Sections 16000 and 38750, Vehicle Code.

§ ~~227.28~~ 227.26. Vehicles Excluded from Testing and Deployment.

(a) The following vehicles shall not be approved for testing or deployment 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.~~

~~(5) (4) Vehicles described in Vehicle Code sections 31309 and section 34500, excluding motor trucks as defined in Vehicle Code section 410 with a gross vehicle weight rating of less than 10,001 pounds which require a Hazardous Materials Transportation License, pursuant to Vehicle Code section 32000.5, or are required to display placards, pursuant to Vehicle Code section 27903.~~

(5) Vehicles used by Household movers, as defined in the Business and Professions Code section 19225.5, under the Household Mover Permit, pursuant to section 19237 of that code.

(6) Commercial motor vehicles used to transport oversize loads (i.e., any combination of vehicles that require a permit issued by the California Department of Transportation or a local agency). This does not apply to vehicle equipment that is permanently attached and required for safe operation of a vehicle. When a permit is required for equipment permanently attached to the vehicle, the manufacturer shall provide the department with evidence of a permit that has been approved by the authorized issuing entity.

(7) Commercial motor vehicles used to transport passengers.

(8) Commercial motor vehicles used to transport bulk liquids, requiring a tank endorsement, as defined in the Vehicle Code section 15278.

(9) Vehicles described in the Vehicle Code sections 431 and 544 that are not able to perform the dynamic driving task in a manner that is consistent with the definition of SAE International levels 3, 4, or 5.

(b) A permit to test or deploy autonomous vehicles is not a substitute for and does not replace any other license or permit requirement that may be necessary for a manufacturer's intended operation of vehicles on public roads.

Note: Authority cited: Sections 1651 and 38750, Vehicle Code. Reference: Sections 242, 260, 324, 400, 410, 635, 8050-8058 and 38750, Vehicle Code.

§ ~~227.30~~ 227.28. Manufacturer's Testing Permit Application.

(a) A manufacturer desiring to conduct testing of autonomous vehicles on public roads in California shall submit a Drivered Testing Permit Application ~~an application to the department on Autonomous Vehicle Tester Program (AVT) Application for Manufacturer's Testing Permit, form OL 311 (Rev. 7/2020), which is hereby incorporated by reference, for a permit to conduct testing.~~ A manufacturer submitting an original, modification, or renewal of the Drivered Testing Permit Application may also choose to submit the form electronically via the department's web portal.

~~(1) The manufacturer shall submit a fee of three thousand six hundred dollars (\$3,600) TBD 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. Drivered Testing Permit.~~

~~(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 additional set of 1 to 10 vehicles and 1 to 20 drivers.~~

(b) Within ten (10) days of any change to the contact information or the name of the manufacturer provided on the Drivered Testing Permit Application ~~for Manufacturer's Testing Permit~~, a manufacturer shall notify the department in writing on the manufacturer's letterhead of the change, including changes in contact names, telephone numbers or mailing address.

(c) Any changes or modifications to the Drivered Manufacturer's Testing Permit required by the manufacturer during the term of the permit shall be accomplished by submitting a revised Drivered Testing Permit Application form OL 311 and submitting the fee of ~~seventy dollars (\$70)~~ TBD for the processing of the modification.

(d) A manufacturer submitting either an original or renewal of a Drivered Testing Permit Application, or an original, renewal or modification, that is intended to implement changes as defined in section 227.38, subsection (o), of a Driverless Testing Permit Application shall provide the Safety Case for the subject autonomous vehicle for testing on public roads in the intended operational design domain. Within 10 days of the adoption of any modifications to the Safety Case, the manufacturer shall provide the department with the modified version, including a summary of the modifications made.

(e) In addition to the requirements of section 227.28, subsection (d), a manufacturer submitting an original Drivered Testing Permit Application or a Driverless Testing Permit Application shall submit all unredacted reports pursuant to the National Highway Traffic Safety Administration Standing General Order (MAY2023) for any traffic collision involving an autonomous vehicle, which includes any incident occurring in any state prior to the date of application, and a full description of the cause of each collision and measures taken to remediate the cause of each collision, where applicable.

(f) In addition to the requirements of section 227.28, subsections (d) and (e), a manufacturer submitting a Drivered Testing Permit Application or a Driverless Testing Permit Application for an autonomous commercial motor vehicle shall adhere to all of the following:

(1) Compliance with required inspections pursuant to Vehicle Code sections 2800, 2813, and 21461, subdivision (a). Autonomous commercial motor vehicles shall be subject to this paragraph notwithstanding the term “driver” when inspection stops are required.

(2) The Basic Inspection of Terminals program requirements contained in Vehicle Code section 34501.12 and periodic vehicle inspection requirements in Vehicle Code section 34505.5.

(3) Applicable safety requirements contained in Title 13, Division 2, including but not limited to inspections conducted by the California Highway Patrol pursuant to Chapter 6.5, Article 1, Section 1202 (a), notwithstanding the terminal inspection selection criteria contained in Vehicle Code section 34501.12, subdivision (c)(2).

Note: Authority cited: Sections 1651 and 38750, Vehicle Code. Reference: Section 38750, Vehicle Code.

§ ~~227.20~~ 227.30. Review of Application.

(a) The department shall review the ~~Drivered Testing Permit Application-Autonomous Vehicle Tester Program (AVT) Application for Manufacturer's Testing Permit, or the Driverless Testing Permit Application-a Manufacturer's Testing Permit—Driverless Vehicles~~, and notify the manufacturer within 10 business 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~~ After the initial 10-day review, the department will conduct a substantive review of the contents submitted by the manufacturer. Following this review, if it is determined that the application is sufficient and all requirements are met. ~~The, the department shall approve an~~ the application and issue an Autonomous Vehicle Testing (AVT) Program Manufacturer Permit, form OL 315 (Rev. 7/2020 9/2023), Drivered Testing Permit or an Autonomous Vehicle Testing (AVT) Program Manufacturer Permit —Driverless Vehicles, form OL 315A, (Rev. 7/2020 9/2023), which are hereby incorporated by reference Testing Permit.

(b) The department shall notify the manufacturer of any deficiency in the application 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.

NOTE: Authority cited: Sections 1651 and 38750, Vehicle Code. Reference: Section 38750, Vehicle Code.

§ 227.32. Requirements for Autonomous Vehicle Test Drivers, Remote Drivers, and Remote Assistants.

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

(a) ~~Each The~~ Each autonomous vehicle test driver, remote driver, or remote assistant is either ~~in~~ capable of taking over immediate physical control of the vehicle or is actively monitoring the vehicle's operations and ~~capable of taking over immediate physical control~~ providing remote support to the vehicle.

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

(c) ~~Each The~~ Each autonomous vehicle test driver, remote driver, or remote assistant shall obey all provisions of the Vehicle Code, California Code of Regulations, and local regulation applicable to the operation of motor vehicles, whether the vehicle is in autonomous mode or conventional mode, except when necessary for the safety of the vehicle's occupants and/or others ~~road~~ users.

(d) ~~Each The~~ Each autonomous vehicle test driver, remote driver, or remote assistant 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, or can reasonably be expected to encounter, on public roads.

(e) Each autonomous vehicle test driver, remote driver, or remote assistant is physically located in the State of California.

NOTE: Authority cited: Sections 1651 and 38750, Vehicle Code. Reference: Section 38750, Vehicle Code.

§ 227.34. Qualifications for Autonomous Vehicle Test Driver, Remote Drivers, and Remote Assistants-Qualifications.

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

(a) The manufacturer has identified each the autonomous vehicle test driver, remote driver, and remote assistant 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 test driver has been issued an Autonomous Vehicle Testing (AVT) Program Test Vehicle Operator Permit, form OL 314 (Rev. 7/2020), the remote driver has been issued an Autonomous Vehicle Driverless Testing (AVDT) Program Remote Assistant / Remote Driver Permit, form OL 323 (Rev. 9/2023), or the remote assistant has been issued an Autonomous Vehicle Driverless Testing (AVDT) Program Remote Assistant / Remote Driver Permit, form OL 323 (Rev. 9/2023), which ~~is~~ are hereby incorporated by reference.

(1) For each autonomous vehicle test driver, the manufacturer shall maintain a physical copy of the Autonomous Vehicle Testing (AVT) Program Test Vehicle Operator Permit in the vehicle the autonomous vehicle test driver is operating at all times while the vehicle is operating on public roads.

(2) The manufacturer shall provide an electronic display in the vehicle of the Autonomous Vehicle Driverless Testing (AVDT) Program Remote Assistant / Remote Driver Permit, form OL 323 (Rev. 9/2023), issued to the remote driver and/or remote assistant operating the vehicle on public roads, whereby the electronic display is visible to, and interpretable by, law enforcement officers upon request.

(b) The manufacturer has certified to the department, for each autonomous vehicle test driver, remote driver, and remote assistant permitted by the manufacturer to operate its autonomous vehicles on public roads, that the ~~driver~~ natural person meets all of the following requirements:

(1) Each ~~The~~ autonomous vehicle test driver, remote driver, and remote assistant has been maintained a valid licensed to drive a for the type of motor vehicle being driven or operated for the three years immediately preceding application to the department; and, at that time ~~the driver~~ each autonomous vehicle test driver, remote driver, and remote assistant:

(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) Each ~~The~~ autonomous vehicle test driver, remote driver, and remote assistant has completed the manufacturer's autonomous vehicle test driver training program, remote driver training program, or remote assistant training program and the date the ~~driver~~ program was completed ~~the program~~.

(3) Each autonomous vehicle test driver, remote driver, and remote assistant is enrolled in the manufacturer's Employer Pull Notice Program and must meet all eligibility requirements described in this article on a continuous basis while holding an active permit issued by the department.

(4) The manufacturer shall immediately remove any autonomous vehicle test driver, remote driver, and remote assistant who no longer meets the eligibility requirements in this article. The person may not be reinstated to the Autonomous Vehicle Tester (AVT) Program until the manufacturer has verified the person now meets the eligibility requirements in this article.

(5) Absent any inconsistent requirements imposed by the Federal Motor Carrier Safety Administration:

(A) Each autonomous vehicle test driver, remote driver, and remote assistant that drives, operates, or provides remote support to an autonomous commercial motor vehicle shall comply with the hours-of-service regulations, for the type of vehicle being driven or operated, set forth in the Title 49 Code of Federal Regulations, Part 395, for vehicles engaged in interstate commerce, or Title 13 California Code of Regulations, Division 2, Chapter 6.5, for vehicles engaged in intrastate commerce, as those terms are defined in Title 13 California Code of Regulations, Section 1201.

(B) Each autonomous vehicle test driver, remote driver, or remote assistant that drives, operates, or provides remote support to an autonomous commercial motor vehicle, for a type of commercial motor vehicle defined in Title 49 Code of Federal Regulations, Section 382.107, shall be enrolled in a Controlled Substance and Alcohol Testing Program meeting the requirements of Title 49 Code of Federal Regulations, Part 382, and shall comply with Vehicle Code section 34520.

(C) Each autonomous vehicle test driver, remote driver, or remote assistant that drives, operates, or provides remote support to an autonomous commercial motor vehicle, for a type of commercial motor vehicle that is not defined in Title 49 Code of Federal Regulations, Section 382.107, shall be enrolled in a Controlled Substance and Alcohol Testing Program which is substantially similar to federal drug testing regulations contained in Title 49 Code of Federal Regulations, Part 382.

(D) The manufacturer shall immediately remove any autonomous vehicle test driver, remote driver, or remote assistant who engages in conduct prohibited by the Controlled Substance and Alcohol Testing Program, pursuant to Title 49 Code of Federal Regulations, Section 382.501. The person may not be reinstated to the Autonomous Vehicle Tester (AVT) Program by the department until that person has met the return-to-duty requirements contained in Title 49 Code of Federal Regulations, Part 40, Subpart O.

NOTE: Authority cited: Sections 1651 and 38750, Vehicle Code. Reference: Sections 12810 and 38750, Vehicle Code.

§ 227.36. Autonomous Vehicle Test Driver Training Program, Remote Driver Training Program, and Remote Assistant Training Program.

A manufacturer conducting testing of autonomous vehicles on public roads shall maintain a training program for its autonomous vehicle test drivers, remote drivers, and remote assistants and shall provide the department with a course outline and description of the ~~autonomous vehicle test driver~~ training program. Within 10 days of the adoption of any modifications, the manufacturer shall provide the department with the modified version of the course outline and description of the training program, including a summary of the modifications. The autonomous vehicle test driver training program, remote driver training program, and remote assistant 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 227.324, 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, remote driver's, and/or remote assistant's experience operating the specific type of automated driving system technology with the level of technical maturity of the automated system.

(d) Instruction for how the remote driver and/or remote assistant that provides remote support to an autonomous commercial motor vehicle shall communicate and interact with law enforcement, including during traffic stops or vehicle inspections.

(e) Instruction for how the remote assistant and/or remote driver will be notified to perform the dynamic driving task fallback if an automated driving system issues a request to intervene.

(f) The results of human fatigue assessment, the maximum number of vehicles that each remote driver and remote assistant will be assigned at any one time per shift, and description of how the manufacturer determines this acceptable limit and how it will reduce or prevent human fatigue, error, or other adverse effects of working beyond this limit.

(g) Certification that each test driver, remote assistant, and remote driver of an autonomous commercial motor vehicle shall comply with the hours-of-service regulations set forth in the Title 49 Code of Federal Regulations, Part 395 and Title 13 of the California Code of Regulations Section 1212.5 for the type of vehicle being driven or operated.

(h) A manufacturer submitting an application for renewal of a Drivered Testing Permit, or a Driverless Testing Permit shall provide the department with the course outline, and description of the manufacturer's refresher training program, and certify that each autonomous vehicle test driver, remote driver, and remote assistant has successfully completed a refresher training program at least annually.

NOTE: Authority cited: Sections 1651 and 38750, Vehicle Code. Reference: Section 38750, Vehicle Code.

§ 227.38. Manufacturer's Permit to Test Autonomous Vehicles That Do Not Require a Driver.

A manufacturer desiring to conduct testing of autonomous vehicles designed to be capable of operating on public roads in California in a specific operational design domain without the presence of a driver physically located in the driver's seat of inside the vehicle on public roads in California shall submit a Driverless Testing Permit Application ~~an application for a permit to conduct driverless testing to the department on an Autonomous Vehicle Tester (AVT) Program Application for a Manufacturer's Testing Permit—Driverless Vehicles, form OL 318 (Rev. 7/2020 9/2023), which is hereby incorporated by reference.~~ A manufacturer submitting an original, modification, or renewal of the Driverless Testing Permit Application may also choose to submit the form electronically via the department's web portal.

Notwithstanding the requirements of Sections 227.04(b), 227.224, 227.246(a) and (b), 227.32, 227.34, and 227.36, a manufacturer may conduct testing of autonomous vehicles designed to be capable of operating on public roads in California in a specific operational design domain without the presence of a driver physically located in the driver's seat of inside the vehicle on public roads in California if all of the following requirements are met:

(a) In order to apply for a Driverless Testing Permit, a manufacturer, except a manufacturer of autonomous commercial motor vehicles as described in (b), for at least X days prior to the date of the application, is required to conduct at least X total miles of autonomous vehicle testing with a valid Drivered Testing Permit on public roads throughout the operational design domain and in all conditions under which the subject automated driving system is intended to operate with a Driverless Testing Permit. The manufacturer shall provide the department with the results of an assessment, representing at least X days of operational data from testing with a valid Drivered Testing Permit under the testing parameters in this subsection, which demonstrates evidence supporting all of the manufacturer's safety claims in the Safety Case for the subject automated driving system to operate throughout the intended operational design domain, and in all conditions that can reasonably be expected to be encountered, and explain how the manufacturer will continuously improve the Safety Case to account for updates within the operational design domain. The department may request additional information from the manufacturer that it deems necessary to assess the safety of an autonomous vehicle capable of operating without the presence of a driver inside the vehicle. At all times, a valid Drivered Testing Permit is a condition for maintenance of a Driverless Testing Permit.

(b) In order to apply for a Driverless Testing Permit, a manufacturer of autonomous commercial motor vehicles, for at least X months prior to the date of application, is required to conduct at least X total miles of autonomous commercial motor vehicle testing with a valid Drivered Testing Permit on public roads throughout the operational design domain and in all conditions under which the subject automated driving system is intended to operate with a Driverless Testing Permit. The manufacturer shall provide the department with the results of an assessment, representing at least X months of operational data from testing with a valid Drivered Testing Permit under the testing parameters in this subsection, which demonstrates evidence supporting all of the manufacturer's safety claims in the Safety Case for the subject automated driving system to operate throughout the intended operational design domain, and in all conditions that can reasonably be expected to be encountered, and explain how the manufacturer will continuously improve the Safety Case to account for updates within the operational design domain. The department may request additional information from the manufacturer that it deems necessary to assess the safety of an autonomous commercial motor vehicle capable of operating without the presence of a driver inside the vehicle. At all times, a valid Drivered Testing Permit is a condition for maintenance of a Driverless Testing Permit. Manufacturers of autonomous commercial motor vehicles are limited to conducting driverless testing in an operational design domain that only allows operation on frontage streets or roads and on roads where the posted speed limit is 50 miles per hour or greater.

(c) A manufacturer shall provide a report of testing conducted with a Drivered Testing Permit on public roads in an operational design domain that is the same or comparable to that which is intended for testing with a Driverless Testing Permit. This shall include:

(1) The total number of miles each autonomous vehicle operated in autonomous mode on public roads prior to the date of application, in an operational design domain that is the same or comparable to that which is intended for testing with a Driverless Testing Permit. The total number of disengagements that occurred in autonomous mode in the year prior to the date of application, if any, and a full description of all contributing factors that led to or caused each disengagement and measures taken to remediate the cause of each disengagement, where applicable.

(2) Any traffic collision occurring during the operation of an autonomous vehicle in autonomous mode on public roads in an operational design domain that is the same or comparable to that which is intended for testing with a Driverless Testing Permit resulting in damage of property in excess of one thousand dollars (\$1,000), bodily injury, or death, and a full description of all contributing factors that led to or caused each traffic collision and measures taken to remediate the cause of each traffic collision, where applicable.

(3) Any braking event, as defined in section 227.58, subsection (a), occurring during the operation of an autonomous vehicle in autonomous mode on public roads in the operational design domain that is the same or comparable to that which is intended for testing with a Driverless Testing Permit, and a full description of all contributing factors that led to or caused each braking event and measures taken to remediate the cause of each braking event, where applicable.

~~(a-d)~~ The manufacturer certifies that the local authorities, as defined in Vehicle Code section 385, within the jurisdiction where the vehicle will be tested have been provided a written notification, a copy of which must be submitted to the department, that contains all of the following:

- (1) The operational design domain of the test vehicles.
- (2) A list of all public roads in the jurisdiction where the vehicles will be tested.
- (3) The date that testing will begin.
- (4) The days and times that testing will be conducted on public roads.
- (5) The number of vehicles to be tested and the types of vehicles to be tested.
- (6) Contact information, including name, telephone number, address, and email for the contact person for the manufacturer conducting the testing.

(b-e) The manufacturer certifies that the autonomous test vehicle(s) complies with ~~the~~ all of the following:

(1) There is a communication link between the vehicle and the remote ~~operator~~ assistant and/or remote driver to provide information on the vehicle's location and status and allow two-way communication between the remote ~~operator~~ assistant and/or remote driver and any passengers if the vehicle experiences any failures or other conditions that would endanger the safety of the vehicle's passengers or other road users, or otherwise prevent the vehicle from functioning as intended, while operating without a driver physically located in the driver's seat of the vehicle. The certification shall include:

(A) That the manufacturer will utilize a communications network dedicated to continuously monitor the status of the vehicle and the two-way communication link while the autonomous test vehicle is being operated without a driver physically located in the driver's seat of the vehicle.

(B) A description of how the manufacturer will continuously monitor the status of the vehicle and communication link, and what type of data will be monitored.

~~(C) An explanation of how all of the vehicles tested by the manufacturer will be monitored.~~

(C) A description of what redundancies are in place to ensure the remote assistant and/or remote driver will be able to continuously monitor the status and provide remote support to the vehicle in the event there is a loss or degradation of the communication link.

(D) A description of how the manufacturer will support the vehicle in the event the automated driving system executes an automated fallback to a minimal risk condition, including, but not limited to, response time, number of personnel, location of personnel, and roles and responsibilities of personnel.

(E) A description and photographic evidence of the type of control input devices the remote driver and/or remote assistant will use to continuously monitor the status of the vehicle and the communication link.

(2) There is a process to display or communicate vehicle owner or operator information as specified in Vehicle Code section 16025 in the event that the vehicle is involved in a collision or if there is a need to provide that information to a law enforcement officer for any reason.

(3) There is an external microphone and speaker that enables two-way communication between first responders and the remote assistant and/or remote driver when the vehicle is approached from any direction by first responders.

(4) The autonomous vehicle has an indicator that is visible and interpretable to first responders and identifies when the vehicle is operating in autonomous mode, when the vehicle is operating conventional mode, and when the vehicle will remain stopped.

(5) The subject autonomous vehicles comply with all required Federal Motor Vehicle Safety Standards, Title 49 Code of Federal Regulations, Part 571 and the California Vehicle Code, Division 12 (Equipment of Vehicles), except for manufacturers exempt from such requirements pursuant to 49 U.S.C. § 30112(b)(10). Alternatively, the manufacturer shall provide evidence of an exemption that has been approved by the National Highway Traffic Safety Administration or the Federal Motor Carrier Safety Administration for an autonomous commercial motor vehicle. The manufacturer shall provide a copy of the exemption to law enforcement upon request.

(6) The automated driving system is designed to detect and respond to roadway situations in compliance with all provisions of the California Vehicle Code and local regulation applicable to the performance of the dynamic driving task in the vehicle's operational design domain, except when necessary to enhance the safety of the vehicle's occupants and/or others.

(~~e~~f) The manufacturer certifies that the autonomous vehicles are capable of operating without the presence of a driver ~~inside~~ physically located in the driver's seat of the vehicle and that the autonomous technology meets the description of a level 4 or level 5 automated driving system under SAE International's Taxonomy and Definitions for Terms Related to Driving Automation Systems for On-Road Motor Vehicles, standard J3016 (~~SEP2016~~ APR2021), which is hereby incorporated by reference.

(~~d~~g) The manufacturer informs the department of the intended operational design domains of the autonomous vehicle. The manufacturer shall identify all commonly-occurring or restricted conditions, including, but not limited to: inclement weather conditions and the specific measurement thresholds (e.g., snow, fog, ice, rain, sleet, hail, etc.), traffic, roadway characteristics, and other known domain constraints, and geo-fencing by location or roadway type, under which the vehicle is unable to operate reliably in autonomous mode, and state the mechanism for safely disengaging autonomous mode in the event the vehicle encounters any condition outside of its prescribed operational design domain.

(eh) The manufacturer provides a copy of a law enforcement interaction plan, which includes information that the manufacturer will make available to the law enforcement agencies and other first responders in the vicinity of the operational design domains of the autonomous vehicles that will instruct those agencies on how to interact with the vehicle in emergency and traffic enforcement situations. For the purposes of this section “first responder” means law enforcement, fire department, and emergency medical personnel.

(1) The law enforcement interaction plan shall include, but not be limited to the following:

(A) How first responders may ~~to~~ directly communicate and interact with a remote operator assistant and/or remote driver of the vehicle who is available at all times that the vehicle is in operation, including providing a ~~contact~~ telephone numbers to directly contact for the manufacturer, remote assistant, and/or remote driver, the physical location of the remote driver and/or remote assistant while the vehicle is in operation, the location of and how to use the external microphone and speaker that enables two-way communication between first responders and the remote assistant and/or remote driver when the vehicle is approached from any direction by first responders.

(B) How a manufacturer will contact local authorities and/or first responders in the event of an incident occurring on public roads as described in section 227.42 (a) (1) and (2).

~~(B)~~ (C) Where in the vehicle to obtain owner information, vehicle registration, and proof of insurance in the event of a collision or traffic violation involving the vehicle.

~~(C)~~ (D) How to safely interact with and remove the vehicle from the roadway.

~~(D)~~ (E) How to recognize whether the vehicle is in autonomous mode Certification that the autonomous vehicle, while operating on public roads in California, displays an indicator that is visible and interpretable to first responders and identifies when the vehicle is operating in autonomous mode, when the vehicle is operating conventional mode, when the vehicle will remain stopped, and if possible, how to safely disengage deactivate the autonomous mode and validate that the autonomous mode has been deactivated.

~~(E) How to detect and ensure that the autonomous mode has actually been deactivated,~~

(F) How to safely interact with electric, and hybrid, or any other vehicles with alternative fuel types, when applicable.

(G) A description of the operational design domain of the vehicle.

(H) Any additional information ~~the manufacturer deems necessary~~ regarding hazardous conditions or public safety risks associated with the operation of the autonomous vehicle.

(2) In addition to the requirements of section 227.38, subsection (h) (1), the law enforcement interaction plan for autonomous commercial motor vehicles shall include the following:

(A) Description of how the vehicle will maneuver to the designated location for a vehicle inspection without posing any risk to traffic safety, other vehicles being inspected, or pedestrians.

(B) Certification that the automated driving system and remote driver and/or remote assistant is able to recognize, respond to, and comply with law enforcement during a vehicle inspection.

(C) Description of how the automated driving system will recognize and respond to a vehicle inspection, including, but not limited to, verbal and non-verbal directions by law enforcement and vehicle inspectors, traffic control devices (e.g., signal lamps, changeable message signs, etc.), pavement markings, and zones designated for vehicle inspection without posing any risk to traffic safety, other vehicles being inspected, or pedestrians.

(D) Certification that each remote assistant and remote driver shall comply with an officer's commands during a vehicle inspection or traffic stop and will not cause the vehicle to move unless directed by a law enforcement officer.

~~(2)~~ (3) The law enforcement interaction plan shall be reviewed on a regular basis by the manufacturer and updated based on incidents involving interactions with first responders, including, but not limited to, traffic stops and emergency response scenes that occur on public roads, and as changes are needed, but no less than on a annual quarterly basis by the manufacturer.

(4) In jurisdictions (state, county, city) where avoidance zones are communicated by a public safety agency (e.g., police, fire, paramedic) to the manufacturer either electronically through a Computer Aided Dispatch technology or through any other medium, for an emergency requiring a code 3 response (lights and sirens), an avoidance zone of at least two blocks around the location of the emergency shall be placed immediately across the operating fleet. The avoidance zone shall remain in place until it is cleared by the same agency that initiated the avoidance zone request.

~~(3)~~ (5) Within 10 days of the approval of the testing application, the manufacturer shall submit the law enforcement interaction plan to the California Highway Patrol by E-mail to, AVUnit@chp.ca.gov.

(6) No later than 10 days prior to commencing testing, manufacturers shall provide the department and all other law enforcement agencies and first responders in the vicinity of the operational design domain where testing of driverless autonomous vehicles is being conducted and the department with a copy of the most current version of the law enforcement interaction plan and the internet web site address where the law enforcement interaction plan may be accessed.

(7) If the manufacturer intends to make any changes to their autonomous vehicle or testing operations that include a material change to how law enforcement and other first responders interact with the autonomous vehicle, the manufacturer shall submit a revised plan, prior to posting the plan, to the department and all other law enforcement and first responders within the operational design domain prior to operation of autonomous vehicles on public roads pursuant to the changes.

~~(f) The manufacturer shall maintain a training program for its remote operators and certify that each remote operator has completed training sufficient to enable him or her to safely execute the duties of a remote operator and possesses the proper class of license for the type of test vehicle being operated. The manufacturer shall provide the department with a course outline and description of the remote operator training program and the date that each remote operator completed the program. The remote operator training program shall include, but not be limited to the following:~~

~~(1) Instruction on the automated driving system technology being tested, including how to respond to emergency situations and hazardous driving scenarios that could be experienced by the vehicle or the vehicle's occupants.~~

~~(2) The instruction shall match the level and technical maturity of the automated driving system.~~

(i) When applying for a Driverless Testing Permit, the manufacturer shall provide:

(1) Certification that the automated driving system is able to positively recognize and respond to each type of emergency vehicle (e.g., law enforcement, fire department, emergency medical personnel) that travels in the operational design domain(s) in which the autonomous vehicle is authorized to operate.

(2) How the automated driving system, at any given moment, is able to positively recognize and respond to an active emergency vehicle, e.g., via line-of-sight only, audio only, or both line-of-sight and audio.

(3) At what confidence level, in percentage, and distance, approximated in feet, the automated driving system is able to positively recognize and respond to an active emergency vehicle's location relative to the autonomous vehicle, driving path or direction, speed, and emergency lights and sirens.

(4) How testing in simulation, on private roads, and/or on public roads is used to validate that the automated driving system is able to recognize and respond to all probable interactions involving an active emergency vehicle or in traffic-controlled situations (e.g., where first responders are directing traffic) in the operational design domain(s) in which the autonomous vehicle is authorized to operate. This shall include: testing methods, testing models, testing results, and number of tests conducted prior to application to conduct driverless testing.

(5) How the automated driving system achieves a minimal risk condition when it positively recognizes an active emergency vehicle.

(6) Certification that the autonomous vehicle shall not obstruct an active emergency vehicle and the zones where emergency vehicles enter, exit, or are parked.

(7) Description of how the automated driving system recognizes, responds to, and complies with first responders issuing non-verbal directions for traffic control.

(8) Certification that first responders will always be able to immediately communicate with the manufacturer in the event of a collision, traffic violation, or any other traffic enforcement or emergency situation, and an explanation of how the manufacturer will communicate with first responders.

(9) Certification that in the event of any interaction with first responders the autonomous vehicle will remain stopped at the nearest safe location, with emergency hazard lights engaged, until released by first responders and will not pose any risk to traffic or pedestrian safety.

(10) Certification that the manufacturer shall prevent autonomous vehicle operation in autonomous mode and/or shall comply with first responders directing traffic without posing any risk to safety or impediment to first responders when (i) at, or near, an active emergency response scene, (ii) on any roadway where operating a motor vehicle is prohibited by first responders, or (iii) near an emergency vehicle being operated under the provisions of the Vehicle Code section 21055.

(11) The manufacturer shall provide ongoing training to first responders located within the operational design domain on how to safely interact with the autonomous vehicle in the event of a collision, traffic violation, or any other traffic enforcement or emergency situation, and any incident whereby the vehicle is stopped in an active lane of traffic. The manufacturer shall provide the course outline and description of the training program, and the date each entity completed the training.

(g) Manufacturers that have publicly disclosed an assessment demonstrating their approaches to achieving safety shall provide the department with a copy of that assessment.

(h) The manufacturer shall disclose to any passenger in the vehicle that is not an employee, contractor, or designee of the manufacturer what personal information, if any, ~~that~~ may be collected about the passenger and how it will be used.

(i) The manufacturer shall describe how the automated driving system achieves a minimal risk condition, and how the vehicle uses a failure mitigation strategy to bring the vehicle to a controlled stop in the event of a system failure in which the automated driving system is unable to perform the dynamic driving task fallback and achieve a minimal risk condition.

~~(j) (m) The manufacturer shall submit the fee of three thousand six hundred dollars (\$3,600.00) TBD for the processing of the Driverless Testing Permit Application application which will accommodate up to 10 driverless autonomous test vehicles. The manufacturer may supplement the application with additional pages to add more than 10 vehicles by submitting the additional fee of fifty dollars (\$50) for each set of 1 to 10 vehicles.~~

~~(j) (n) Within ten (10) days of any change to the contact information or the name of the manufacturer provided on the Application for Manufacturer's Testing Permit — Driverless Vehicles Driverless Testing Permit Application, a manufacturer shall notify the department in writing on the manufacturer's letterhead of the change, including changes in contact names, telephone numbers, or mailing address.~~

~~(k) (o) The manufacturer shall submit a revised Driverless Testing Permit Application form OL 318 as specified in subdivision ~~(m)~~ (p) of this section prior to implementing changes to:~~

(1) Make the vehicle capable of operation at a SAE International level that is different than ~~and/or in addition to~~ the level in the approved permit.

(2) Make the vehicle capable of operation on a roadway type that is different than ~~and/or in addition to~~ those in the approved permit.

(3) Increase the maximum speed of the vehicle by more than 15 miles per hour above that on the approved permit.

(4) Make the vehicle capable of operation in geographic areas different than ~~and/or in addition to~~ those in the approved permit.

(5) Modify the days of the week or hours of operation that were identified on the approved permit.

(6) Remove or modify any restricted conditions that were identified on the approved permit.

~~(h)~~ (p) Any changes or modifications to the Driverless Testing Permit ~~Manufacturer's Testing Permit—Driverless Vehicles~~ ~~requested~~ required by the manufacturer during the term of the permit to implement changes as defined in section 227.38, subsection (o) shall be accomplished by submitting a revised Driverless Testing Application form OL 318 and submitting the additional fee of ~~seventy dollars (\$70)~~ TBD for the processing of the modification.

~~(m)~~ (q) Any other changes or modifications to the Driverless Testing Permit requested by the manufacturer during the term of the permit that are not included in the requirements of section 227.38, subsection (o) shall be accomplished by submitting a revised Driverless Testing Application and submitting the additional fee of TBD for the processing of the modification.

NOTE: Authority cited: Sections 1651 and 38750, Vehicle Code. Reference: Sections 385, 16025 and 38750, Vehicle Code; and Title 49 Code of Federal Regulations, Part 571.

§ 227.40. ~~Refusal~~ Denial of Autonomous Vehicle Testing Permit or Testing Permit Renewal.

The department may ~~refuse~~ deny an application for an original or a renewal of a Drivered ~~Manufacturer's Testing Permit~~ or a Driverless Testing Permit ~~Manufacturer's Testing Permit—Driverless Vehicles~~:

(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.

(c) For any other reason giving the department good cause to find the conduct of autonomous vehicle testing on public roads by the manufacturer poses an unreasonable risk to the public. Reasons can include, but are not limited to, violations of the vehicle code, crashes or incidents involving injury to vulnerable road users.

~~(d)~~ (e) The department shall provide a written notice of a ~~refusal~~ denial to issue a Drivered Testing Permit ~~Manufacturer's Testing Permit~~, or a Driverless Testing Permit ~~Manufacturer's Testing Permit—Driverless Vehicles~~ as specified in Government Code section 11504.

Note: Authority cited: Sections 1651 and 38750, Vehicle Code. Reference: Section 11504, Government Code; and Section 38750, Vehicle Code.

§ 227.42. Restriction of Autonomous Vehicles Testing Permit.

(a) The department may restrict a Drivered Testing Permit or a Driverless Testing Permit if the manufacturer fails to meet any of the following requirements:

(1) The manufacturer shall ensure that within 60 seconds from the time the automated driving system executes a dynamic driving task fallback maneuver to transition the autonomous vehicle to a minimal risk condition, the vehicle shall achieve a minimal risk condition in a safe location whereby the travel lane is sufficiently cleared to allow traffic to pass through unimpeded in 95% of incidents.

(A) If clearing the autonomous vehicle from the travel lane within 60 seconds is not possible because doing so (i) poses an unreasonable risk to the safety of people in or outside the vehicle, (ii) will violate state or local laws, or (iii) first responders have directed the vehicle to remain stopped, then these safety-related circumstances may be taken into consideration when determining a manufacturer's compliance with the 95% threshold.

(B) Manufacturers shall notify the relevant local authorities or make notifications consistent with the law enforcement interaction plan for autonomous vehicles operating under a Driverless Testing Permit in situations where the vehicle is unable to clear the travel lane. Alternatively, if the circumstances preventing movement are resolved, the manufacturer shall remove the vehicle from the travel lane.

(C) If the department determines that a manufacturer has not met the 95% threshold or has not notified the relevant local authorities under circumstances when this threshold was unable to be met, the department may issue an immediate restriction on the permit, which shall be in place for a minimum of 30 days and until the manufacturer demonstrates that this threshold has been met during this period. Restrictions may include, but are not limited to, a requirement that the manufacturer ensures an autonomous vehicle test driver is present in all vehicles during all trips. The role of an autonomous vehicle test driver physically located in the vehicle shall not include intervention in performing the dynamic driving task fallback if the vehicle achieves a minimal risk condition and is unable to clear the travel lane in a manner consistent with the requirements of Section 227.42, subdivision (a)(1).

(D) In order to lift the restriction, the manufacturer must provide to the department data spanning at least 30 consecutive days demonstrating that at least 95% of minimal risk condition incidents have been cleared within 60 seconds.

(2) The manufacturer shall complete 90% of retrieval events occurring on public roads with a posted speed limit of 55 miles per hour or below within 20 minutes from the time when the vehicle stopped in the travel lane and 100% within 30 minutes. The manufacturer shall complete 90% of retrieval events occurring on public roads with a posted speed limit of greater than 55 miles per hour within 60 minutes and 100% within 90 minutes. A retrieval event means removing a disabled vehicle from the public road.

(A) If completing the retrieval event within the above thresholds is not possible because doing so (i) poses an unreasonable risk to the safety of people in or outside the vehicle, (ii) will violate state or local laws, or (iii) first responders have directed the vehicle to remain stopped, then these safety-related circumstances may be taken into consideration when determining a manufacturer's compliance with the 90% and 100% thresholds.

(B) If a manufacturer is unable to reach the vehicle on public roads with a posted speed limit of 55 miles per hour or less within 20 minutes, the manufacturer shall notify the relevant local authorities or make notifications consistent with the law enforcement interaction plan for autonomous vehicles operating under a Driverless Testing Permit.

(C) If a manufacturer is unable to reach the vehicle on public roads with a posted speed limit greater than 55 miles per hour within 60 minutes, the manufacturer shall notify the relevant local authorities or make notifications consistent with the law enforcement interaction plan for autonomous vehicles operating under a Driverless Testing Permit.

(D) If the department determines that a manufacturer does not meet either the 90% or 100% threshold or has not notified the relevant local authorities under circumstances when these thresholds were unable to be met, the department may issue a notice of immediate restriction on the permit, which shall be in place for a minimum of 30 days and until retrieval time thresholds are met during this period. Restrictions may include, but are not limited to, any or all of the following:

(i) Up to 50% reduction in daily fleet in an area determined by the department or any portion in the operational design domain as determined by the department.

(ii) Reduction in operational design domain (e.g., geographic area of operation, road type, weather, etc.).

(iii) Reduction in hours of operation.

(iv) Requirement that an autonomous vehicle test driver be present in the vehicle under certain conditions.

(E) In order to lift the restriction, the manufacturer shall submit information to the department describing the manufacturer's operational improvements, and data spanning at least 30 consecutive days demonstrating an ability to meet the applicable retrieval event thresholds.

(b) Upon initiation of an investigation, the department shall notify the manufacturer in writing of the cause for the investigation.

(1) The department may issue a notice of immediate restriction on a Drivered Testing Permit and/or Driverless Testing Permit. Restrictions may include, but are not limited to:

(A) Up to a 50% reduction in daily fleet within the impacted geographic location.

(B) Reduction in operational design domain (e.g., geographic area of operation, time of day, weather, etc.).

(C) Reduction in hours of operation.

(D) Requirement that an Autonomous Vehicle Test Driver be present in the vehicle under certain conditions.

(2) The manufacturer may request lifting of the operational restriction by submitting data to the department describing the operational improvements which remediate any deficiencies identified by the investigation.

Note: Authority cited: Sections 1651 and 38750, Vehicle Code. Reference: Section 11505, Government Code; and Section 38750, Vehicle Code.

§ ~~227.42~~ 227.44. Suspension, or Revocation, or Restriction of Autonomous Vehicle Testing Permit.

(a) The department may suspend or revoke the Drivered Manufacturer's Testing Permit or impose an operational restriction on the permit of any manufacturer for any of the following reasons.

(1) The manufacturer has failed to maintain financial responsibility in the amount required by Vehicle Code section 38750 and Sections 227.06, 227.08, or 227.12 of this Article.

(2) The manufacturer has violated Vehicle Code section 38750 or this Article.

(3) 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.

(4) The manufacturer failed to respond to a Preliminary Information Notice or Request for Information issued by the department or failed to respond in the manner specified.

(5) The United States Department of Transportation number associated with an autonomous commercial motor vehicle is placed on the list of Out-of-Service Orders by the Federal Motor Carrier Safety Administration for any of the reasons defined in the Title 49 Code of Federal Regulations, Parts 385.13, 386.72, and 386.83.

(6) The Motor Carrier Permit associated with an autonomous commercial motor vehicle has been suspended by the Department of Motor Vehicles for any of the reasons defined in Vehicle Code section 34623.

(7) For any other reason giving the department cause to find the conduct of autonomous vehicle testing on public roads by the manufacturer poses an unreasonable risk to public safety.

(b) The department may suspend or revoke or impose an operational restriction on the ~~Manufacturer's Testing Permit — Driverless Vehicles Testing Permit~~ of any manufacturer for any of the following reasons.

(1) The manufacturer has failed to maintain financial responsibility in the amount required by Vehicle Code section 38570 and Sections 227.06, 227.08, or 227.12 of this Article.

(2) The manufacturer has violated Vehicle Code section 38750 or this Article.

(3) The manufacturer's driverless autonomous vehicles are operating outside of operational design domain specified in the application submitted pursuant to Section 227.38 of this article.

(4) The manufacturer fails to make the disclosures required by subdivision (i) of Section 227.38.

(5) 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.

(6) The manufacturer failed to respond to a Preliminary Information Notice or Request for Information submitted by the department or failed to respond in the manner specified.

(7) The United States Department of Transportation number associated with an autonomous commercial motor vehicle is placed on the list of Out-of-Service Orders by the Federal Motor Carrier Safety Administration for any of the reasons defined in the Title 49 Code of Federal Regulations, Parts 385.13, 386.72, and 386.83.

(8) The Motor Carrier Permit associated with an autonomous commercial motor vehicle has been suspended by the Department of Motor Vehicles for any of the reasons defined in the Vehicle Code section 34623.

(9) For any other reason giving the department good cause to find the conduct of autonomous vehicle testing on public roads by the manufacturer an unreasonable risk to the public.

(c) The department will provide a 15-day written notice ~~and follow the procedures specified in Government Code section 11505,~~ to the manufacturer and follow the procedures specified in Government Code section 11505 before suspending or revoking the Drivered Manufacturer's Testing Permit, or a Manufacturer's Testing Permit—Driverless Vehicles Testing Permit, However, the department shall immediately suspend, ~~or revoke, or impose restrictions on~~ the Drivered Manufacturer's Testing Permit or a Manufacturer's Testing Permit—Driverless Vehicles Testing Permit, if a manufacturer is engaging in a practice in such a manner that immediate suspension action is required for public the safety of persons on a public road.

Note: Authority cited: Sections 1651 and 38750, Vehicle Code. Reference: Section 11505, Government Code; and Section 38750, Vehicle Code.

§ ~~227.44~~ 227.46. Demand for Hearing.

(a) Upon a ~~refusal~~ denial by the department to issue or renew a Drivered Manufacturer's Testing Permit or a Driverless Manufacturer's Testing Permit—Driverless Vehicles, or upon the suspension, ~~or revocation, or restriction~~ of either any permit by the department, 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~~ denial.

(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.

Note: Authority cited: Sections 1651 and 38750, Vehicle Code. Reference: Section 11500, Government Code; and 38750, Vehicle Code.

§ ~~227.46~~ 227.48. Reinstatement of Testing Permit.

Upon the suspension, ~~or~~ revocation, or restriction of a ~~Drivered~~ Manufacturer's Testing Permit or a ~~Driverless~~ Manufacturer's Testing Permit—~~Driverless Vehicles~~ by the department, the restriction shall remain in effect or, in the case of a suspension or revocation, the manufacturer shall cease all testing of autonomous vehicles on public roads until the department has verified determines that the manufacturer has taken appropriate action to correct the deficiencies that caused the suspension, ~~or~~ revocation, or restriction and the department has lifted the suspension, ~~or~~ revocation, or restriction.

Note: Authority cited: Sections 1651 and 38750, Vehicle Code. Reference: Section 38750, Vehicle Code.

§ ~~227.48~~ 227.50. Reporting Collisions.

~~A manufacturer whose autonomous vehicle while operating under a Manufacturer's Testing Permit or a Manufacturer's Testing Permit—Driverless Vehicles is in any manner involved in a collision 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 collision to the department, within 10 days after the collision, on Report of Traffic Collision Involving an Autonomous Vehicle, form OL 316 (Rev. 7/2020) which is hereby incorporated by reference. The manufacturer shall identify on the form, by name and current address, if available, all persons involved in the collision, and a full description of how the collision occurred. Nothing in this section relieves any person from compliance with any other statutory and/or regulatory collision reporting requirements.~~

(a) A manufacturer operating under a Drivered Testing Permit or a Driverless Testing Permit shall provide to the department the full National Highway Traffic Safety Administration Standing General Order crash report, including full content of the report, within the timeframes specified pursuant to the National Highway Traffic Safety Administration Standing General Order (MAY2023), which is hereby incorporated by reference, or the equivalent if such a requirement is revised.

(b) The department may request supplemental information at any time from the manufacturer in connection with the collision report. This may include, but is not limited to, technical information about the status and operation of the vehicle's sensors recorded 30 seconds prior to the time of the collision, including, but not limited to, plots of the distance and the speed difference relative to the relevant targets in the collision path, the speed and acceleration of the host vehicle and the acceleration, braking and steering commands that were issued by the automated driving system, and camera footage with target tracking representations.

(c) Nothing in this section relieves any person from compliance with any other statutory and/or regulatory collision reporting requirements.

NOTE: Authority cited: Sections 1651 and 38750, Vehicle Code. Reference: Section 38750, Vehicle Code.

§ ~~227.50~~ 227.52. Reporting Disengagement of Autonomous Mode.

(a) Upon receipt of a ~~Drivered Manufacturer's Testing Permit~~ or a ~~Manufacturer's Testing Permit~~ — Driverless Vehicles Testing Permit, a manufacturer shall commence retaining data related to the disengagement of the autonomous mode. All disengagements shall be reported, irrespective of the results of simulations that predict the likelihood of crashes, except any expected disengagements associated with a planned test or reaching the geographic boundary of the operational design domain. If no disengagement occurred during the reporting period, the manufacturer shall report such to the department.

(1) For the purposes of an autonomous vehicle operating under a Drivered Testing Permit this section, "disengagement" includes any of the following occurrences, which shall be classified by the following categories:

(A) ~~means a~~ A deactivation of the autonomous mode when an anomalous behavior failure of the automated driving system autonomous technology is detected by the automated driving system 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, or in; or

(B) A deactivation of the autonomous mode when the autonomous vehicle test driver determines it to be appropriate; or

(C) A deactivation of the autonomous mode to avoid operating outside the operational design domain of the automated driving system; or

(D) The automated driving system performs a dynamic driving task fallback maneuver to achieve a minimal risk condition; or

(E) A deactivation of the autonomous mode for some other reason.

(2) For the purposes of an autonomous vehicle operating under a Driverless Testing Permit, "disengagement" includes any of the following occurrences, which shall be classified by the following categories:

(A) The automated driving system deactivates autonomous mode because of an anomalous behavior or a failure that prevents the vehicle from successfully completing its trip; or

(B) The automated driving system performs a dynamic driving task fallback maneuver to achieve a minimal risk condition; or

(C) The remote driver or remote assistant requests that the automated driving system achieves a minimal risk condition; or

(D) The remote driver or remote assistant responds to a request from the automated driving system to intervene in the performance of the dynamic driving task; or

(E) The remote driver or remote assistant intervenes to perform the dynamic driving task or to achieve a minimal risk condition, even if the automated driving system did not request this intervention.

(b) Every manufacturer authorized under this article to test autonomous vehicles on public roads shall prepare and submit to the department an ~~annual~~ monthly report summarizing the information compiled pursuant to subsection (a) by ~~January the tenth day 1st, of each year the~~ following month.

(1) The first report shall be submitted on the tenth day of the month following ~~cover the period from the date of issuance of the Drivered Manufacturer's Testing Permit or a Manufacturer's Testing Permit—Driverless Vehicles Testing Permit to November 30th of the following year and cover all testing conducted on public roads up to that time.~~ A manufacturer that holds ~~both a Manufacturer's Testing Permit and a Manufacturer's Testing Permit—Driverless Vehicles~~ more than one testing permit may submit a single report that makes clear which disengagements occurred under each type of testing permit.

(2) After the first report, subsequent ~~annual~~ monthly reports shall be submitted by ~~cover the period December 1st of the current year to November 30th~~ tenth day of the following ~~year~~ month.

(3) The ~~annual~~ monthly report shall summarize disengagements as follows:

~~(A) An indication of whether the test vehicle is capable of operating without a driver,~~

(A) The circumstances or testing conditions at the time ~~of~~ the disengagement was initiated, including:

(i) The date and time of the occurrence.

~~(i)~~ (ii) The longitude and latitude coordinates of the location: interstate, freeway, highway, rural road, street, or parking facility.

~~(ii)(iii)~~ Whether the manufacturer was operating the vehicle was operating with a Drivered Testing Permit or a Driverless Testing Permit without a driver at the time of the disengagement.

~~(iv)(iv)~~ The party that initiated the disengagement: automated driving system (autonomous technology, autonomous vehicle test driver, remote operator assistant, remote driver, or passenger), law enforcement, or other.

~~(iii)~~ A description of the facts causing the disengagements, including: weather conditions, road surface or traffic conditions, construction, emergencies, accidents or collisions. The description should be written in plain language with enough detail that a non-technical person can understand the circumstances triggering the disengagement.

(v) The vehicle's distance (in feet) from the nearest intersection, if applicable.

(B) The vehicle identification number.

(C) The software version number engaged at the time of the disengagement.

(D) The primary cause of the disengagement, which shall be classified by one of the following categories:

(i) Software discrepancy

Localization/mapping discrepancy

Perception/data fusion discrepancy

Motion planning discrepancy

Prediction discrepancy

Other (lower-level) software fault

(ii) Lower-level technical fault

Hardware fault (specify which component or subsystem)

Vehicle motion control fault

Other low-level technical fault

(iii) Operational design domain constraint violation

Geographical boundary

Weather condition

Lighting condition

Traffic condition

Emergency / anomalous incident condition

Obstruction in vehicle's path

Other operational design domain condition

(iv) Action(s) by:

Other vehicle or driver

Pedestrian

Bicyclist

First responder

Micro-mobility device user

Animal

Other road user

(E) The secondary cause of the disengagement, if any, which shall be classified by one of the following categories described in subsection (D):

(F) The circumstances or actions taken after the disengagement was initiated, including:

(i) The post-disengagement action: the autonomous vehicle test driver immediately took over dynamic driving task to continue the vehicle's trip, the remote driver immediately took over the dynamic driving task to continue the vehicle's trip, or the vehicle stopped.

(ii) If the vehicle stopped, the report shall include the following:

(aa) The date and time of the occurrence.

(bb) The longitude and latitude coordinates of the location.

(cc) The location where the vehicle stopped: in an active traffic lane, in a parking lane or on a road shoulder, in a parking site off the road surface, in a bicycle lane, in a bus or taxi lane, in the path of a rail crossing, in another special-use roadway lane.

(dd) The vehicle's distance (in feet) from the nearest intersection, if applicable.

(ee) Length of time (in minutes) the vehicle was stopped before it was cleared from the travel lane and removed from the roadway.

(iii) The actions taken to remove the vehicle from where it stopped in the roadway: driven by the autonomous test vehicle driver, driven by the remote driver, moved by command issued by the remote assistant, driven by first responder, driven by manufacturer's designee dispatched to stop location, towed away, or other actions taken.

(iv) Remediation implemented to mitigate risk of any future occurrences: software update, training, change to operating procedures, or other measures taken.)

(4) The ~~annual~~ monthly report shall include the total number of miles each autonomous vehicle tested in autonomous mode on public roads each month, subdivided by drivered and driverless testing.

(c) The ~~annual~~ monthly report shall be submitted to the department on the ~~Annual~~ Monthly Report of Autonomous Vehicle Disengagements, form OL 311R (Rev. 9/2023), which is hereby incorporated by reference. Manufacturers may also choose to submit the form electronically via the department's web portal.

(d) The department may request supplemental information in connection with a disengagement from the manufacturer at any time. This may include, but is not limited to, technical information about the status and operation of the vehicle's sensors recorded up to 30 seconds prior to the time of the event, including, but not limited to, plots of the distance and the speed difference relative to the relevant targets in the vehicle's path, the speed and acceleration of the host vehicle and the acceleration, braking and steering commands that were issued by the automated driving system, and camera footage with target tracking representations.

NOTE: Authority cited: Sections 1651 and 38750, Vehicle Code. Reference: Section 38750, Vehicle Code.

§ ~~227.52~~ 227.54. Test Vehicle Registration and Certificates of Title.

(a) A person shall not drive, move, or leave standing an autonomous test 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 test 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.

(c) In addition to the requirements set forth in Vehicle Code section 5902, an application for transfer of ownership of an autonomous test vehicle shall include a written description of the autonomous technology or features integrated into the vehicle.

(d) An autonomous test 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 (Rev. ~~7/2020~~ 9/2023), which is incorporated by reference, and the Autonomous Vehicle Testing (AVT) Program Manufacturer Permit – Driverless Vehicles, form OL 315A (Rev. 9/2023), which is incorporated by reference issued by the department pursuant to this Article.

Note: Authority cited: Sections 1651 and 38750, Vehicle Code. Reference: Sections 672, 4150, 5902, 9255.1 and 38750, Vehicle Code.

§ ~~227.54~~ 227.56. Transfers of Interest or Title for an Autonomous Test Vehicle.

No person shall offer for sale, sell, transfer, or dispose of an autonomous test 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 ~~Drivered Manufacturer's Testing Permit~~ or a Driverless Manufacturer's Testing Permit – Driverless Vehicles.

(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.

(d) The manufacturer disposing of the vehicle has obtained a Nonrepairable Vehicle Certificate ensuring that the vehicle is not retitled or resold and the manufacturer has internally dismantled or disposed of its own vehicle and its major component parts.

Note: Authority cited: Sections 1651 and 38750; Vehicle Code. Reference: Section 38750; Vehicle Code.

§ 227.58. Reporting Braking Events.

(a) The manufacturer shall report to the department any automated driving system or human-initiated braking event exceeding 0.5g occurring during the operation of an autonomous vehicle in autonomous mode on public roads. The report shall include the latitude and longitude coordinates, magnitude and duration of the braking event, and description of all contributing factors that led to or caused each braking event. If no applicable braking event occurred during the reporting period, the manufacturer shall report such to the department.

(1) The first report shall cover the period from 30 days after issuance of the Drived Testing Permit or a Driverless Testing Permit. A manufacturer that holds both a Drived Testing Permit and a Driverless Testing Permit may submit a single report that makes clear which braking events occurred under each type of testing permit.

(2) After the first report, subsequent monthly reports shall be submitted by the tenth day of the following month.

NOTE: Authority cited: Sections 1651 and 38750, Vehicle Code. Reference: Section 38750, Vehicle Code.

§ 227.60. Preliminary Information Notice.

(a) The manufacturer shall respond to a Preliminary Information Notice in a manner that provides all information solicited by the department within 72 hours of the time the Notice is transmitted by email. When appropriate, the department may request the manufacturer provide information within 24 hours. Incidents requiring a response within 24 hours may include, but are not limited to, collisions involving a fatality or serious injury, unsafe driving behaviors (e.g., running through a red light), or any other incidents indicating a potential safety risk. The department may issue a Preliminary Information Notice to the manufacturer to obtain specific information about any incident, including, but not limited to, the following:

(1) Violation of the Vehicle Code and the requirements of the California Code of Regulations, Title 13, Division 1, Chapter 1, Article 3.7.

(2) Operation in a manner that was not approved by the department under the authorized Drived Testing Permit or Driverless Testing Permit.

(3) Operation outside of a known operational design domain constraint and/or upon operational design domain exit.

(4) Occurrence of a dynamic driving task performance-relevant system failure(s).

(5) Traffic collision as defined in the California Code of Regulations, Title 13, Division 1, Chapter 1, Article 3.7, section 227.50.

(6) Posing any risk to traffic safety or other road users, traffic delay, or impediment to first responders.

(7) Actions that do not comply with verbal and/or non-verbal directions from first responders.

(8) Obstruction of an active emergency vehicle and the zones where emergency vehicles enter, exit, or are parked.

(9) Operation at, near the vicinity, or in the direction of travel of an active emergency response scene, avoidance zone or any other roadway whereby operating a motor vehicle is prohibited by first responders, and an emergency vehicle being operated under the provisions of the Vehicle Code section 21055.

(10) Any other incident reported to the department by local, state, or federal agencies or the public, and or on publicly accessible platforms.

(b) In response to a Preliminary Information Notice the manufacturer shall provide all information requested by the department, which may include, but is not limited to, the following: identification of all incidents of the type described; full description of the incident(s), including all contributing factors that led to or caused the incident; visual evidence, such as photographs, videos, or other documentation; date and time of the incident; latitude and longitude coordinates; vehicle identification number; software version number of the automated driving system equipped to the vehicle; other vehicles and/or road users involved; measures taken to resolve the incident; and any remediation to mitigate risk of any future occurrence of the incident.

Note: Authority cited: Sections 1651 and 38750, Vehicle Code. Reference: Section 38750, Vehicle Code.

§ 227.62. Request for Information.

(a) The manufacturer shall respond to a Request for Information in a manner that provides all information solicited by the department within 10 calendar days of the date the Request for Information is transmitted by email. The department may issue a Request for Information to the manufacturer to obtain specific information on incidents involving operation of an autonomous vehicle on public roads that led to or caused, but is not limited to, the following:

(1) Violation of the Vehicle Code and the requirements of the California Code of Regulations, Title 13, Division 1, Chapter 1, Article 3.7.

(2) Operation in a manner that was not approved by the department under the authorized Drivered Testing Permit or Driverless Testing Permit.

(3) Operation outside of a known operational design domain constraint and/or upon operational design domain exit.

(4) Occurrence of a dynamic driving task performance-relevant system failure(s).

(5) Traffic collision as defined in the California Code of Regulations, Title 13, Division 1, Chapter 1, Article 3.7, section 227.50.

(6) Posing any risk to traffic safety or other road users, traffic delay, or impediment to first responders.

(7) Actions that do not comply with verbal and/or non-verbal directions from first responders.

(8) Obstruction of an active emergency vehicle and the zones where emergency vehicles enter, exit, or are parked.

(9) Operation at, near the vicinity, or in the direction of travel of an active emergency response scene, avoidance zone or any other roadway whereby operating a motor vehicle is prohibited by first responders, and an emergency vehicle being operated under the provisions of the Vehicle Code section 21055.

(10) Any other incident reported to the department by local, state, or federal agencies or the public, and or on publicly accessible platforms.

Note: Authority cited: Sections 1651 and 38750, Vehicle Code. Reference: Section 38750, Vehicle Code.