

TITLE 13: DEPARTMENT OF MOTOR VEHICLES

Division 1, Chapter 1

Article 3.7- Testing of Autonomous Vehicles

Article 3.8 - Deployment of Autonomous Vehicles

NOTICE IS HEREBY GIVEN

The Department of Motor Vehicles (department) proposes amendments to Sections 227.00, 227.02, 227.04, 227.14, 227.16, 227.18, 227.20, 227.22, 227.24, 227.26, 227.28, 227.30, 227.32, 227.34, 227.36, 227.38, 227.40, 227.42, 227.44, 227.46, 227.48, 227.50, 227.52, and 227.54, and adopt Sections 227.56, 227.58, 227.60, 227.62, 227.64, 227.66, 227.68, 227.70, and 227.72 in Article 3.7, and amendments to Sections 228.02, 228.04, 228.06, 228.08, 228.10, 228.12, 228.14, 228.16, 228.18, 228.20, 228.22, 228.24, 228.26, 228.28, 228.30, and 228.32, adopt Sections 228.34, 228.36, 228.38, 228.40, 228.42, and 228.44 in Article 3.8, Chapter 1, Division 1, Title 13 of the California Code of Regulations, related to the testing and deployment of autonomous vehicles.

PUBLIC HEARING

The department will conduct a public hearing to provide interested parties an opportunity to provide statements on this proposed regulatory action. The department will hold the hearing beginning at 9:00 AM on June 10, 2025, at the California Public Utility Commission's Auditorium, 505 Van Ness Avenue, San Francisco, CA 94102. The public hearing will conclude once all attendees who wish to comment have had the opportunity to do so. If necessary, the department reserves the right to limit the duration of each participant's comments.

DEADLINE FOR WRITTEN COMMENTS

Any interested party or his or her duly authorized representative may submit written comments relevant to the proposed regulations to the contact person identified in this notice. All written comments must be received at the department no later than **June 9, 2025**, the final day of the written comment period, in order for them to be considered by the department before it adopts the proposed regulation.

AUTHORITY AND REFERENCE

The department proposes to adopt this regulation under the authority granted by Vehicle Code section 1651, to implement, interpret, or make specific Vehicle Code sections 38750, 38751 and 38752.

INFORMATIVE DIGEST/POLICY STATEMENT OVERVIEW

Current law requires the department, upon application and payment of fees, to register vehicles that are being operated in the state. The department's Operations Division is responsible for registration and licensing activities, as well as issuing occupational license or permits to applicants. The department's Policy Division is responsible for establishing requirements, including the Autonomous Vehicles Program.

Senate Bill 1298 (Chapter 570; Statutes of 2012) enacted Vehicle Code section 38750 which requires the department to adopt regulations necessary to ensure the safe operation of autonomous vehicles on public roads, with or without the presence of a driver inside the vehicle. Vehicle Code Section 38750 also requires that the regulations include requirements that the department concludes are necessary for the safe operation of autonomous vehicles on public roads.

The department initially adopted regulations for the testing of autonomous vehicles that require the presence of a driver inside the vehicle in 2014. In 2018, the department adopted regulations allowing for testing without the presence of safety driver and for deployment of autonomous technology. In 2019, the department adopted a third set of regulations allowing for light duty autonomous motortrucks to test and deploy. Currently there are 31 manufacturers testing autonomous vehicles with test drivers behind the wheel on public streets in California, six manufacturers are authorized to test without a safety driver and three manufacturers are authorized to deploy.

Since the adoption of the current regulations, an additional use case for autonomous technology has emerged in states like Texas, Arizona, and Arkansas where manufacturers are testing heavy-duty autonomous commercial motor vehicles. Currently, California is the only state that has a regulation in place explicitly prohibiting the operation of an autonomous vehicle with a gross vehicular weight rating of 10,001 pounds or greater. The proposed regulations remove the current prohibition and create a regulatory path for manufacturers to test and deploy heavy-duty autonomous vehicles on public roads.

The proposed regulations will also require manufacturers to provide additional data elements and more frequent reporting than currently required. For example, requirements will include reporting vehicle immobilizations, which occur when a vehicle stops in an active travel lane and is unable to continue the driving task due to challenges in the driving environment (e.g., unwanted public interaction, product or mapping issue, or loss of network connectivity). When these events occur, manufacturers may send out a retrieval team to

remove the vehicle from the road. In addition, crash reporting will align with existing guidelines set forth by the United States Department of Transportation (US DOT) National Highway Traffic Safety Administration (NHTSA). The regulations also bolster the department's enforcement authority by adding the ability to assess incremental enforcement measures against a manufacturer where the department determines that the circumstances of an incident do not require a full suspension of the permit.

The proposed regulations promote the continued development of autonomous technology that has the potential to increase safety and enhance mobility, while focusing on issues related to roadway safety, compliance with California laws, driver licensing, and vehicle registration.

In 2023, the department conducted two workshops that were attended by autonomous vehicle manufacturers, technology companies, members of academia, and special interest and labor stakeholders. In addition, the department facilitated two first responder roundtable workshops in Northern and Southern California to gather feedback regarding interactions with autonomous vehicles operating on public roads. On August 30, 2024, the department released draft regulations for informal stakeholder input and received input on the draft regulations through October 2024. As a result of the workshops and input on the draft regulations, the department has created the following regulatory action that allows for the testing and public deployment of autonomous heavy duty commercial motor vehicles, enhances existing data reporting, creates a staged application process, and creates additional enforcement authority.

The following are some key aspects of the department's proposed regulatory approach:

Operation of Autonomous Commercial Motor Vehicles

The regulations remove the current prohibition on operation of autonomous vehicles with a gross vehicle weight rating of 10,001 pounds or greater and create a regulatory path for manufacturers to test and deploy autonomous commercial motor vehicles (heavy-duty autonomous vehicles) on public roads (Section 227.26).

Manufacturers of autonomous heavy-duty commercial motor vehicles are limited to conducting driverless testing and deployment within an operational design domain that only allows operation on specified routes that are legal for the size, weight and loading of the vehicle or vehicle combination. Operation on local roads with a posted speed limit of 25 miles per hour or less is also

prohibited unless those roads fall within the shortest distance to freeways from hubs, motor carrier and shipper facilities, distribution centers, fueling and charging stations, and end points, while using arterial roadways wherever possible. Manufacturers shall provide the department with the specific routes associated with the operational design domain and identify any local roads associated with accessing the primary routes within the operational design domain (Sections 227.18, 228.08).

For safety reasons, certain commercial vehicle operations are also excluded from the draft regulatory framework, including household movers, commercial vehicles used to transport passengers, oversize loads, hazardous materials, and bulk liquids requiring a tank endorsement (Section 227.26).

Manufacturers would be required to meet existing state and federal commercial vehicle requirements for the type of vehicle being operated and the type of commerce being carried out, including compliance with all California weigh-station regulatory signs and devices and vehicle inspections requirements (Section 227.28). Autonomous commercial vehicle test drivers, remote drivers, and remote assistants would need to comply with any applicable state and federal commercial driver requirements, including licensing and hours-of-service restrictions (Sections 227.32, 227.38, 227.40). Manufacturers would be allowed to receive compensation for transporting goods during testing.

Phased Permit Process

For both light-duty and heavy-duty operations, manufacturers will be required to initially hold a permit to test with a safety driver in the vehicle and then apply in subsequent phases for a Driverless Testing Permit and a Deployment Permit. Manufacturers will be required to conduct testing for a minimum number of miles prior to applying for a driverless testing permit and a deployment permit. To further document their overall safety approach, manufacturers are required to submit a Safety Case with each permit application that describes how they are comprehensively addressing safety at an organizational, operational and vehicle level (Sections 227.28, 228.08). For deployment, the manufacturer's safety case shall include evidence demonstrating that operation of the subject automated driving system does not pose an unreasonable risk of accident, death, injury, or exacerbating injury. and explain why that evidence supports the claim.

Light-Duty Operations

To apply for a Driverless Testing Permit for light-duty operations, a manufacturer will be required to conduct testing with a Driven Testing Permit within the proposed operational design domain for a minimum of 50,000 miles, as well as provide the department with an assessment supporting the manufacturer's safety claims (Section 227.42).

To apply for a Deployment Permit, a manufacturer would be required test a minimum of 50,000 miles throughout the intended operational design domain with a valid Driven Testing permit for vehicles that require a driver physically located in the driver's seat or with a valid Driverless Testing permit for vehicles that are capable of operating without the presence of a driver physically located in the driver's seat (Section 228.08).

Heavy-Duty Operations

To apply for a Driverless Testing Permit for heavy-duty operations, a manufacturer would be required to conduct testing with a Driven Testing Permit within the proposed operational design domain for a minimum of 500,000 autonomous miles and provide the department with an assessment supporting the manufacturer's safety claims. Up to 400,000 of these miles may occur in other jurisdictions contingent on the manufacturer providing a summary of testing from that jurisdiction, including collisions, disengagements, and braking events. 100,000 miles must occur within the intended operational design domain in California (Section 227.42).

To apply for a Deployment Permit, a manufacturer would be required to test a minimum of 500,000 autonomous miles throughout the intended operational design domain with a valid Driverless Testing Permit. Up to 400,000 of these miles may occur in other jurisdictions contingent upon the manufacturer providing a summary of testing. 100,000 miles must occur within the intended operational design domain in California (Section 228.08)

Expanded Data Reporting Requirements

In support of the department's role related to monitoring and tracking the safe operation of autonomous vehicles on public roads, the regulations expand both the frequency and type of data reported to the department during testing and deployment. For both light-duty and heavy-duty operations, changes to data reporting requirements includes aligning crash reporting with the current requirements of the National Highway Traffic Safety Administration's Standing General Order (Sections 227.54, 228.34), as well as requiring monthly reporting on disengagements (Section 227.56), vehicle immobilizations (Sections 227.58,

228.36), hard braking events (Section 227.46), and Dynamic Driving Task Performance Relevant System Failures (Section 228.38). This expanded data reporting will increase public transparency and enhance conversations and coordination with local entities.

Incidents Involving Operation of Autonomous Vehicles on Public Roads

The regulations further define the department's processes for obtaining information from a manufacturer regarding any incidents involving the operation of their autonomous vehicles and for reviewing what steps the manufacturer has taken to address the cause(s) of any incidents. The "Preliminary Information Notice" process would require manufacturers to provide preliminary information on an incident (Sections 227.68, 228.42). The additional "Request for Information" process would require manufacturers to submit any additional substantive information within 10 business days (Sections 227.70, 228.44). A manufacturer's failure to comply with the department's requests for information could serve as a basis for a permit suspension, revocation, or restriction.

The regulations also define the process and create the form associated with the AV Notice of Noncompliance, whereby a peace officer may issue a notice to the manufacturer when an alleged traffic violation is observed. A peace officer may indicate a need for priority review of an incident if the officer observes that the autonomous vehicle exhibited driving behavior which reasonably led the officer to believe that the operation presented a clear or potential danger or risk of injury to others. If a priority review is marked on the form, the manufacturer shall submit the notice to the department within 24 hours of issuance.

Testing and Deployment Permit Restrictions

In addition to the department's current authority to suspend or revoke a permit, the regulations provide greater discretion to assess incremental enforcement measures against a manufacturer where the department determines that the circumstances of the incident do not require a full suspension or revocation to address or mitigate the precipitating issue. These temporary operational restrictions could include reductions in the manufacturer's fleet, hours of operation, or geographic area of operation. Such restrictions could be lifted after the manufacturer provides the department with data verifying that the circumstances initially prompting the operational restriction have been remediated (Sections 227.46, 228.22).

Interactions with First Responders

The regulations include provisions to further enhance interactions between first responders and driverless autonomous vehicles, including the vehicle's ability to recognize emergency vehicles and respond to directions from first responders. To enable ongoing communication and coordination with first responders, manufacturers would be required to review and update their First Responder Interaction Plan more frequently and provide ongoing training to first responders in their geographic area of operation (Section 227.42). The regulations also include requirements associated with the issuance of a Notice of Autonomous Vehicle Noncompliance in instances where a peace officer observes an alleged violation of the Vehicle Code, or a local traffic ordinance adopted pursuant to the Vehicle Code (Sections 227.66, 228.40).

Requirements for Autonomous Vehicle Remote Drivers and Remote Assistants

Remote operations personnel may provide support to an autonomous vehicle in certain circumstances, such as when the vehicle achieves a minimal risk condition or while interacting with first responders. The regulations create a standardized framework of requirements, training, and qualifications for both remote assistants (Sections 227.40, 228.06) and remote drivers (Sections 227.38, 228.06).

PROBLEMS THIS DEPARTMENT INTENDS TO ADDRESS AND BENEFITS ANTICIPATED FROM THE REGULATORY ACTION

The Department intends to make specific the requirements that must be satisfied for issuance of a permit to test and deploy autonomous vehicles with or without a driver inside the vehicle on the public roadways of the State of California, as set forth in the Vehicle Code. These regulations are expanded to implement application and other requirements for driverless vehicles, expand provisions related to the suspension of an autonomous vehicles testing permit, implement application and other requirements for the deployment of autonomous vehicles, and provide clarification to existing autonomous vehicle regulations.

These regulations will allow autonomous vehicle manufacturers, as defined in Vehicle Code Section 38750, to develop and test autonomous vehicles, including light-duty and heavy-duty vehicles that can operate without a driver inside the vehicle, on public roadways and to deploy those vehicles in a way that provides the assurance of safety to the public in general.

COMPARABLE FEDERAL AND STATE REGULATIONS:

The National Highway Traffic Safety Administration (NHTSA) establishes motor vehicle safety standards on the federal level. On May 30, 2013, NHTSA issued a "Preliminary Statement of Policy Concerning Automated Vehicles" to "help states implement this technology safely so that its full benefits can be realized." The NHTSA policy statement affirmed that "NHTSA is responsible for developing, setting, and enforcing Federal motor vehicle safety standards (FMVSSs) and regulations for motor vehicles and motor vehicle equipment." NHTSA indicated that the U.S Department of Transportation was researching the introduction of automated cars onto public roadways and advised states to leave safety (vehicle) standards up to federal regulators.

On September 20, 2016, NHTSA released the Federal Automated Vehicles Policy ("Policy") to establish a national framework for the safe testing and deployment of highly automated and autonomous vehicles. The US DOT has since released updates to the Policy - 2.0, 3.0, and 4.0, but these policies offer guidance and are not considered regulations. In 2021 and later amended in 2023, NHTSA, through their authority under the Safety Act, issued a Standing General Order to autonomous vehicle manufacturers requiring crash reporting.

On January 15, 2025, NHTSA released the Notice of Proposed Rulemaking (Docket NHTSA-2024-0100) on the Federal Register, seeking public comments by March 17, 2025, on the Automated Driving System (ADS)-equipped Vehicle Safety, Transparency, and Evaluation Program (AV STEP). This notice proposes federal rulemaking to establish a framework for a voluntary national program to enhance oversight on the operation of ADS-equipped vehicles, including those that operate under NHTSA-approved exemption. If adopted as proposed, participation in AV STEP would require manufacturers to report fleet (e.g., total vehicles, vehicles miles traveled in autonomous mode, location of operation), incident (e.g., complementary to California's reporting framework for collisions, disengagements, vehicle immobilizations, braking, Notices of AV Noncompliance), and independent assessments of ADS safety processes (e.g., safety cases, conformance to industry standards). This publicly available data would not only increase public transparency of autonomous vehicle operations but would also provide additional datapoints for the department to evaluate, track, and monitor the safety of autonomous vehicles operating or planning to operate on public roads in California. Moreover, AV STEP would establish new exemption processes, designed specifically for exemptions of domestic and import and ADS-equipped vehicles, thereby creating additional pathways for regulatory flexibility.

CONSISTENCY AND COMPATIBILITY WITH OTHER STATE REGULATIONS

During the process of developing these regulations, the department has conducted a search of any similar regulations on the topic of autonomous vehicles and has concluded that these regulations are neither inconsistent nor incompatible with existing state regulations.

DOCUMENTS INCORPORATED BY REFERENCE

The following documents are incorporated by reference:

- Autonomous Vehicle Tester (AVT) Program Application for Manufacturer's Testing Permit, form OL 311
- Autonomous Vehicle Testing (AVT) Program Test Vehicle Permit, form OL 313
- Autonomous Vehicle Testing (AVT) Program Test Vehicle Operator Permit, form OL 314
- Autonomous Vehicle Testing (AVT) Program Manufacturer Permit, form OL 315
- Autonomous Vehicle Testing (AVT) Program Manufacturer Permit-Driverless Vehicles, form OL 315A
- Autonomous Vehicle Tester (AVT) Program Application for Manufacturer's Testing Permit Driverless Vehicles, form OL 318
- Application for a Permit to Deploy Autonomous Vehicles on Public Streets, form OL 321
- Permit to Deploy Autonomous Vehicles on Public Streets, form OL 321A
- Remote Assistant/Remote Driver Permit, form OL 323
- Notice of Autonomous Vehicle Noncompliance, form OL 325

These documents will not be published in the California Code of Regulations because it would be impractical and cumbersome to do so; however, the documents are readily available to interested parties on the department's website or by contacting the department representative identified below.

ECONOMIC AND FISCAL IMPACT DETERMINATIONS

The department has made the following initial determinations concerning the proposed regulatory action:

- Cost or Savings to Any State Agency: The department anticipates a fiscal impact of \$2.4 million in the implementation year and \$2.2 million ongoing.
- Other Non-Discretionary Cost or Savings to Local Agencies: None.
- Costs or Savings in Federal Funding to the State: None.

- **Cost Impact on Representative Private Persons or Businesses:** The department does not expect any vehicle manufacturers to find the fees prohibitive, as there are no changes to the existing fee structure. The department estimates costs associated with manufacturers complying with data reporting requirements: Implementation Year \$5.8 million; Ongoing \$6.8 million.
- **Effects on Housing Costs:** None.
- **Local Agency/School District Mandates:** The proposed regulatory action will not impose a mandate on local agencies or school districts, or a mandate that requires reimbursement pursuant to Part 7 (commencing with Section 17500) of Division 4 of the Government Code.
- **Small Business Impact:** This proposed action may impact autonomous vehicle manufacturers that are small businesses.
- **Significant statewide adverse economic impact directly affecting businesses, including the ability of California businesses to compete with businesses in other states:** The department is not aware of a significant statewide adverse economic impact directly affecting businesses, including the ability of California to compete with businesses in other states.

RESULTS OF THE ECONOMIC IMPACT ASSESSMENT

The department has made the following determinations when assessing the economic impact associated with this proposed regulation:

This proposed action may lead to 1) the creation of jobs within the State of California, and 2) the expansion of businesses currently doing business in California. The department has determined this action is unlikely to impact the creation or elimination of existing businesses within California.

The department has also determined that the proposed regulatory action is not likely to impact the health and safety of workers, assurance of safety to the general public when technology manufacturers and researchers are developing, testing, and deploying automated vehicle driving systems on public roadways.

PUBLIC DISCUSSIONS OF PROPOSED REGULATIONS

As described in the Informative Digest, the department has conducted two workshops that were attended by vehicle manufacturers, technology companies, members of academia, insurance representatives, and privacy

advocates. In August 2024, the department also released draft regulations and sought informal comments.

ALTERNATIVES CONSIDERED

The department must determine that no reasonable alternative considered by the department or that has otherwise been identified and brought to the attention of the department would be more effective in carrying out the purpose for which the action is proposed, or would be as effective as and less burdensome to affected private persons than the proposed action, or would be more cost-effective to affected private persons and equally effective in implementing the statutory policy or other provisions of law.

CONTACT PERSON

Any inquiries or comments concerning the proposed rulemaking action may be addressed to:

Joseph Chapman, Assistant Chief Counsel

Department of Motor Vehicles

Legal Affairs Division

P.O. Box 932382, MS C-244

Sacramento, CA 94232-3820

Any inquiries or comments concerning the proposed rulemaking action requiring more immediate response may use:

Telephone: (916) 657-6469

Facsimile: (916) 657-6243

E-Mail: LADRegulations@dmv.ca.gov

In the event the contact person is unavailable, inquiries should be directed to the following back-up person:

Peggy Gibson, Attorney IV

Telephone: (916) 657-6469

AVAILABILITY OF STATEMENT OF REASONS AND TEXT OF PROPOSED REGULATIONS

The department has prepared an Initial Statement of Reasons for the proposed regulatory action and has available all the information upon which the proposal is based. The contact person identified in this notice shall make available to the

public upon request the Express Terms of the proposed regulatory action using underline or italics to indicate additions to, and strikeouts to indicate deletions from, the current California Code of Regulations.

The contact person identified in this notice shall also make available to the public, upon request, the Final Statement of Reasons and the location of public records, including reports, documentation, and other materials related to the proposed action. In addition, the above-cited materials (the Notice of Proposed Regulatory Action, the Initial Statement of Reasons, and the Express Terms) may be accessed at <https://www.dmv.ca.gov/portal/about-the-california-department-of-motor-vehicles/california-dmv-rulemaking-actions/>

AVAILABILITY OF MODIFIED TEXT

Following the written comment period, and the hearing, the department may adopt the proposed regulations substantially as described in this notice. If modifications are made which are sufficiently related to the originally proposed text, the fully modified text, with changes clearly indicated, shall be made available to the public for at least 15 days prior to the date on which the department adopts the resulting regulations. Request for copies of any modified regulations should be addressed to the department contact person identified in this notice. The department will accept written comments on the modified regulations for 15 days after the date on which they are first made available to the public.