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HOUSE BILL NO. 2627

Offered January 13, 2025

A BILL to amend the Code of Virginia by adding in Title 46.2 a chapter numbered 14.2, consisting of sections numbered 46.2-1420 through 46.2-1425, relating to automated driving systems and remotely operated vehicles.

Patron—Glass

Referred to Committee on Transportation

Be it enacted by the General Assembly of Virginia:

1. That the Code of Virginia is amended by adding in Title 46.2 a chapter numbered 9, consisting of sections numbered 46.2-950 through 46.2-955, as follows:

CHAPTER 14.2.

AUTOMATED DRIVING SYSTEMS AND REMOTELY OPERATED VEHICLES.

§ 46.2-1420. Definitions.

As used in this chapter, unless the context requires a different meaning:

"Automated driving system" means hardware and software that are collectively capable of performing the entire dynamic driving task on a sustained basis, regardless of whether it is limited to a specific operational design domain.

"DDT fallback" means the response by:

1. The person or human driver to either perform the DDT or achieve a minimal risk condition after occurrence of a DDT performance relevant system failure, or upon operational design domain exit; or

2. An automated driving system to achieve minimal risk condition, given the same circumstances identified in subdivision 1.

"Dynamic driving task" or "DDT" means all of the real-time operational and tactical functions required to operate a vehicle in on-road traffic, including:

1. Lateral vehicle motion control via steering;

2. Longitudinal motion control via acceleration and deceleration;

3. Monitoring the driving environment via object and event detection, recognition, classification, and response preparation;

4. Object and event response execution;

5. Maneuver planning; and

6. Enhancing conspicuity via lighting, signaling, and gesturing.

"Dynamic driving task" or "DDT" does not include strategic functions such as trip scheduling and the selection of destinations and waypoints.

"Fully autonomous vehicle" means a motor vehicle equipped with an automated driving system designed to function without a human driver as a level 4 or 5 system under SAE J3016;

"Human driver" means a natural person in the vehicle with a valid driver's license who controls all or part of the dynamic driving task.

"Minimal risk condition" means a condition to which a person, human driver, or an automated driving system may bring a vehicle after performing the DDT fallback in order to reduce the risk of a crash when a given trip cannot or should not be completed.

"Operational design domain" or "ODD" means the operating conditions under which a given automated driving system is specifically designed to function, including (i) environmental, geographical, and time-of-day restrictions and (ii) the requisite presence or absence of certain traffic and roadway characteristics.

"Request to intervene" means a notification by an automated driving system to a human driver that the human driver should promptly begin or resume performance of part of or all of the dynamic driving task.

"SAE J3016" means the "Taxonomy and Definitions for Terms Related to Driving Automation Systems for On-Road Motor Vehicles" published by SAE International on June 15, 2018, as revised.

§ 46.2-1421. Use of fully autonomous vehicles and automated driving systems permissible.

A. A person may operate in the Commonwealth a fully autonomous vehicle or a motor vehicle equipped with an automated driving system capable of performing the entire dynamic driving task with the automated driving system engaged if the vehicle meets the following conditions:

1. The vehicle meets the requirements of this chapter and has been issued an autonomous operation license by the Department;

2. If a failure of the automated driving system occurs that renders that system unable to perform the entire dynamic driving task relevant to its intended operational design domain, the vehicle will achieve a minimal

59 risk condition and, if there is a human driver physically present in the vehicle, issue a request to intervene  
60 with the expectation that the human driver will respond appropriately to such request;

61 3. The vehicle is capable of operating in compliance with the applicable traffic and motor vehicle safety  
62 laws and regulations of the Commonwealth when reasonable to do so, unless an exemption has been granted  
63 by the Department; and

64 4. When required by federal law, the vehicle bears the required manufacturer's certification label  
65 indicating that at the time of its manufacture it has been certified to be in compliance with all applicable  
66 federal motor vehicle safety standards, including any exemptions granted by the National Highway Traffic  
67 Safety Administration.

68 B. From July 1, 2025, until July 1, 2027, a fully autonomous vehicle for which the declared gross weight  
69 of the vehicle and any towed unit is more than 62,000 pounds shall have a human driver, with the  
70 appropriate credentials to operate the vehicle, physically present in the vehicle to monitor the performance of  
71 the vehicle and intervene if necessary.

72 C. Prior to operating a fully autonomous vehicle in the Commonwealth without a human driver, a person  
73 shall submit a law-enforcement interaction plan to the Department of Transportation and the Department of  
74 State Police that describes (i) how to communicate with a fleet support specialist who is available during the  
75 times the vehicle is in operation, (ii) how to safely remove the fully autonomous vehicle from the highway and  
76 steps to safely tow the vehicle, (iii) how to recognize whether the automated driving system is engaged on the  
77 fully autonomous vehicle, and (iv) any additional information the manufacturer or owner deems necessary  
78 regarding hazardous conditions or public safety risks associated with the operation of the fully autonomous  
79 vehicle.

80 **§ 46.2-1422. Licensing, titling, and registration.**

81 A. The Department shall develop and issue autonomous operation licenses for fully autonomous vehicles  
82 and automated driving systems operated in the Commonwealth. The Department shall only issue such  
83 autonomous operation licenses to fully autonomous vehicles and automated driving systems that meet the  
84 requirements of this chapter.

85 B. A fully autonomous vehicle shall be properly titled and registered in accordance with the requirements  
86 of Chapter 6 (§ 46.2-600 et seq.). If a fully autonomous vehicle is registered in the Commonwealth, the  
87 vehicle shall be identified on the registration as a fully autonomous vehicle. The requirements under this title  
88 relating to exhibiting a driver's license and registration card are satisfied if the autonomous operation  
89 license and vehicle registration card are in the fully autonomous vehicle and available for inspection by a  
90 law-enforcement officer.

91 C. When an automated driving system installed on a motor vehicle is engaged, the automated driving  
92 system is considered the driver or operator for the purpose of assessing compliance with applicable traffic or  
93 motor vehicle laws and shall be required to satisfy all physical acts required by a driver or operator of the  
94 vehicle.

95 **§ 46.2-1423. Insurance requirements.**

96 The requirements of Chapter 3 (§ 46.2-300 et seq.) regarding proof of financial responsibility shall apply  
97 mutatis mutandis to fully autonomous vehicles and vehicles with an automated driving system engaged.

98 **§ 46.2-1424. Remotely operated vehicles.**

99 The provisions of this title apply mutatis mutandis to the operation of any motor vehicle by a human  
100 driver who is not physically present in the vehicle and operates a vehicle through remote means. No human  
101 driver shall operate a motor vehicle in the Commonwealth through remote means unless such person (i) has  
102 the appropriate credentials to operate the motor vehicle as if such person was physically operating such  
103 vehicle and (ii) is physically located in the Commonwealth. No motor vehicle shall operate in the  
104 Commonwealth through remote means unless the motor vehicle is capable of performing the dynamic driving  
105 task through remote operation.

106 **§ 46.2-1425. Limitations of chapter.**

107 Nothing in this chapter shall be construed to (i) prohibit a human driver from operating a fully  
108 autonomous vehicle to control all or part of the DDT, (ii) prohibit a fully autonomous vehicle from operating  
109 without a human driver except as provided in subsection B of § 46.2-1421, (iii) prohibit a human driver from  
110 operating a vehicle with an automated driving system that is not a fully autonomous vehicle with such system  
111 engaged or disengaged, or (iv) apply to toy vehicles.