

115TH CONGRESS  
1ST SESSION

# S. 1885

To support the development of highly automated vehicle safety technologies,  
and for other purposes.

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## IN THE SENATE OF THE UNITED STATES

SEPTEMBER 28, 2017

Mr. THUNE (for himself, Mr. PETERS, Mr. BLUNT, and Ms. STABENOW) in-  
troduced the following bill; which was read twice and referred to the Com-  
mittee on Commerce, Science, and Transportation

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## A BILL

To support the development of highly automated vehicle  
safety technologies, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*  
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE; TABLE OF CONTENTS.**

4 (a) **SHORT TITLE.**—This Act may be cited as the  
5 “American Vision for Safer Transportation through Ad-  
6 vancement of Revolutionary Technologies Act” or the “AV  
7 START Act”.

8 (b) **TABLE OF CONTENTS.**—The table of contents of  
9 this Act is as follows:

- Sec. 1. Short title; table of contents.
- Sec. 2. Definitions.

- Sec. 3. Relationship to other laws.
- Sec. 4. Expedited resolution of highly automated vehicles conflicts with standards.
- Sec. 5. Highly automated vehicles testing.
- Sec. 6. Highly automated vehicles exemptions.
- Sec. 7. Inoperative controls.
- Sec. 8. Levels of driving automation.
- Sec. 9. Safety evaluation report.
- Sec. 10. Highly Automated Vehicles Technical Safety Committee.
- Sec. 11. Highly automated vehicles rulemaking.
- Sec. 12. Consumer education.
- Sec. 13. Traffic safety and law enforcement.
- Sec. 14. Cybersecurity.
- Sec. 15. Savings provision.

1 **SEC. 2. DEFINITIONS.**

2 (a) IN GENERAL.—In this Act:

3 (1) AUTOMATED DRIVING SYSTEM; DEDICATED  
 4 HIGHLY AUTOMATED VEHICLE; HIGHLY AUTOMATED  
 5 VEHICLE; MANUFACTURER; MOTOR VEHICLE; MOTOR  
 6 VEHICLE EQUIPMENT.—The terms “automated driv-  
 7 ing system”, “dedicated highly automated vehicle”,  
 8 “highly automated vehicle”, “manufacturer”, “motor  
 9 vehicle”, and “motor vehicle equipment” have the  
 10 meanings given such terms in section 30102 of title  
 11 49, United States Code, as amended by subsection  
 12 (b).

13 (2) NHTSA.—The term “NHTSA” means the  
 14 National Highway Traffic Safety Administration.

15 (3) SECRETARY.—The term “Secretary” means  
 16 the Secretary of Transportation.

17 (b) MOTOR VEHICLE SAFETY CHAPTER.—Section  
 18 30102(a) of title 49, United States Code, is amended—

1           (1) by redesignating paragraphs (5) through  
2           (13) as paragraphs (8) through (16) respectively;

3           (2) by redesignating paragraphs (3) and (4) as  
4           paragraphs (5) and (6), respectively;

5           (3) by redesignating paragraphs (1) and (2) as  
6           paragraphs (2) and (3), respectively;

7           (4) by inserting before paragraph (2), as redesi-  
8           gnated, the following:

9           “(1) AUTOMATED DRIVING SYSTEM.—In de-  
10          scribing a Level 3, 4, or 5 automated driving system  
11          (as defined by SAE International standard J3016,  
12          published on September 30, 2016, or subsequently  
13          adopted by the Secretary), the term ‘automated driv-  
14          ing system’ means the hardware and software that  
15          is collectively capable of performing the entire dy-  
16          namic driving task on a sustained basis, regardless  
17          of whether the system is limited to a specific oper-  
18          ational design domain.”;

19          (5) by inserting after paragraph (3), as redesi-  
20          gnated, the following:

21          “(4) DEDICATED HIGHLY AUTOMATED VEHI-  
22          CLE.—The term ‘dedicated highly automated vehicle’  
23          means a highly automated vehicle designed to be op-  
24          erated exclusively (as defined by the SAE Inter-  
25          national standard J3016, published on September

1 30, 2016) by a Level 4 or 5 automated driving sys-  
 2 tem (as defined by the SAE International standard  
 3 J3016, published on September 30, 2016, or subse-  
 4 quently adopted by the Secretary) for all trips.”; and

5 (6) by inserting after paragraph (6), as redesign-  
 6 nated, the following:

7 “(7) HIGHLY AUTOMATED VEHICLE.—The term  
 8 ‘highly automated vehicle’ means a motor vehicle  
 9 with a gross vehicle weight of 10,000 pounds or less  
 10 that is equipped with a Level 3, 4, or 5 automated  
 11 driving system (as defined by SAE International  
 12 standard J3016, published on September 30, 2016,  
 13 or subsequently adopted by the Secretary).”.

14 **SEC. 3. RELATIONSHIP TO OTHER LAWS.**

15 (a) IN GENERAL.—Section 30103 of title 49, United  
 16 States Code, is amended—

17 (1) in subsection (b), to read as follows:

18 “(b) PREEMPTION.—

19 “(1) HIGHLY AUTOMATED VEHICLES.—No  
 20 State or political subdivision of a State may main-  
 21 tain, enforce, prescribe, or continue in effect any law  
 22 or regulation regarding the design, construction, or  
 23 performance of highly automated vehicles, auto-  
 24 mated driving systems, or components of automated  
 25 driving systems unless such law or regulation is

1 identical to a standard prescribed under this chap-  
2 ter.

3 “(2) MOTOR VEHICLE STANDARD.—When a  
4 motor vehicle safety standard is in effect under this  
5 chapter, a State or political subdivision of a State  
6 may prescribe or continue in effect a standard appli-  
7 cable to the same aspect of performance of a motor  
8 vehicle or motor vehicle equipment only if the stand-  
9 ard is identical to the standard prescribed under this  
10 chapter.

11 “(3) RULES OF CONSTRUCTION.—

12 “(A) IN GENERAL.—Nothing in this sub-  
13 section may be construed to prohibit a State or  
14 a political subdivision of a State from maintain-  
15 ing, enforcing, prescribing, or continuing in ef-  
16 fect any law or regulation regarding registra-  
17 tion, licensing, driving education and training,  
18 insurance, law enforcement, crash investiga-  
19 tions, safety and emissions inspections, conges-  
20 tion management of vehicles on the street with-  
21 in a State or political subdivision of a State, or  
22 traffic unless the law or regulation is an unrea-  
23 sonable restriction on the design, construction,  
24 or performance of highly automated vehicles,

1 automated driving systems, or components of  
2 automated driving systems.

3 “(B) MOTOR VEHICLE DEALERS.—Nothing  
4 in this subsection may be construed to prohibit  
5 a State or political subdivision of a State from  
6 maintaining, enforcing, prescribing, or con-  
7 tinuing in effect any law or regulation regard-  
8 ing the sale, distribution, repair, or service of  
9 highly automated vehicles, automated driving  
10 systems, or components of automated driving  
11 systems by a dealer, manufacturer, or dis-  
12 tributor.

13 “(C) CONFORMITY WITH FEDERAL LAW.—  
14 Nothing in this subsection shall be construed to  
15 preempt, restrict, or limit a State or political  
16 subdivision of a State from acting in accordance  
17 with any other Federal law.

18 “(4) HIGHER PERFORMANCE REQUIREMENT.—  
19 However, the United States Government, a State, or  
20 a political subdivision of a State may prescribe a  
21 standard for a motor vehicle, motor vehicle equip-  
22 ment, highly automated vehicle, or automated driv-  
23 ing system obtained for its own use that imposes a  
24 higher performance requirement than that required

1 by the otherwise applicable standard under this  
2 chapter.

3 “(5) STATE ENFORCEMENT.—A State may en-  
4 force a standard that is identical to a standard pre-  
5 scribed under this chapter.”; and

6 (2) in subsection (e), to read as follows:

7 “(e) COMMON LAW LIABILITY.—

8 “(1) IN GENERAL.—Compliance with a motor  
9 vehicle safety standard prescribed under this chapter  
10 does not exempt a person from liability at common  
11 law.

12 “(2) RULE OF CONSTRUCTION.—Nothing in  
13 this section shall be construed to preempt common  
14 law claims.”.

15 (b) LICENSING.—Notwithstanding section 30103 of  
16 title 49, United States Code, as amended by subsection  
17 (a), a State may not issue a motor vehicle operator’s li-  
18 cense for the operation or use of a dedicated highly auto-  
19 mated vehicle in a manner that discriminates on the basis  
20 of disability (as defined in section 3 of the Americans with  
21 Disabilities Act of 1990 (42 U.S.C. 12102)).

22 **SEC. 4. EXPEDITED RESOLUTION OF HIGHLY AUTOMATED**  
23 **VEHICLES CONFLICTS WITH STANDARDS.**

24 (a) DEFINITIONS.—In this section:

1           (1) DIRECTOR.—The term “Director” means  
2           the Director of the John A. Volpe National Trans-  
3           portation Systems Center of the Department of  
4           Transportation.

5           (2) DYNAMIC DRIVING TASK.—The term “dy-  
6           namic driving task” has the meaning given the term  
7           by SAE International standard J3016, published on  
8           September 30, 2016.

9           (3) SAFETY STANDARD.—The term “safety  
10          standard” means a Federal motor vehicle safety  
11          standard prescribed under chapter 301 of title 49,  
12          United States Code.

13          (b) REFERENCES TO HUMAN DRIVERS.—Not later  
14          than 180 days after the date of the enactment of this Act,  
15          the Director or other designated entity, after consultation  
16          with stakeholders, shall prepare and submit to the Sec-  
17          retary a report that identifies each provision, requirement,  
18          specification, or procedure in a safety standard with a ref-  
19          erence to features of the equipment that—

20                 (1) are necessary only for the performance of  
21                 the dynamic driving task by a human driver;

22                 (2) specify a location or reference point within  
23                 a vehicle by reference to the position of a human  
24                 driver; or



1           (3) serve a purpose of providing information to,  
2           or receiving input from, a human driver engaged in  
3           performing the dynamic driving task.

4           (c) SUBSTITUTION OF CONFORMING REFERENCES TO  
5 AUTOMATED SYSTEMS.—

6           (1) IN GENERAL.—In each provision of the re-  
7           port prepared under subsection (b) identifying the  
8           text of a regulation from a safety standard, a test  
9           procedure, or a method for determining compliance  
10          with a safety standard, the Director or designated  
11          entity shall include—

12                   (A) an alternative reference to an auto-  
13                   mated system that is suitable for assessing,  
14                   through an objective test procedure, the compli-  
15                   ance of a dedicated highly automated vehicle, or  
16                   of a highly automated vehicle operating in auto-  
17                   mated mode, with the safety standard; or

18                   (B) a determination that—

19                           (i) the relevant regulatory text applies  
20                           to features of the motor vehicle equipment  
21                           that are only necessary for the perform-  
22                           ance of a dynamic driving task by a human  
23                           driver; and

24                           (ii) no alternative reference to an  
25                           automated system is practicable.

1           (2) CONDITIONS.—In carrying out paragraph  
2 (1), the Director or designated entity—

3           (A) shall ensure that all requirements re-  
4 main objective and practicable;

5           (B) may not modify the purpose of any  
6 safety standard; and

7           (C) may specify different references for—

8           (i) dedicated highly automated vehi-  
9 cles that are intended for human occu-  
10 pancy; and

11           (ii) dedicated highly automated vehi-  
12 cles that are not designed, intended, or  
13 marketed for human occupancy.

14 (d) RULEMAKING.—

15           (1) COMMENCEMENT.—Not later than 90 days  
16 after the date on which the Director or designated  
17 entity submits the report under subsection (b), the  
18 Secretary shall commence a rulemaking proceeding  
19 to incorporate the report by reference into the rel-  
20 evant safety standards, except as provided in para-  
21 graph (3).

22           (2) FINAL RULE.—Not later than 1 year after  
23 the Director or other entity submits the report  
24 under subsection (b), the Secretary shall issue a  
25 final rule to incorporate the report by reference into

1 the relevant safety standards, except as provided in  
2 paragraph (3).

3 (3) ALTERNATIVE TEXT.—If the Secretary de-  
4 termines that one or more of the revisions to a regu-  
5 lation contained in the report submitted under sub-  
6 section (b) is not objective, is not practicable, or  
7 does not meet the need for motor vehicle safety, the  
8 Secretary shall incorporate alternative regulatory  
9 text.

10 (4) INCORPORATION BY REFERENCE.—If the  
11 Secretary does not complete the rulemaking pro-  
12 ceeding under this subsection within 1 year after the  
13 submission of the report under subsection (b), the  
14 revisions to regulations contained in such report  
15 shall be incorporated by reference into the relevant  
16 safety standards.

17 (e) SAVINGS PROVISION.—Nothing in this section  
18 may be construed to prohibit the Secretary from maintain-  
19 ing different test procedures for highly automated vehicles  
20 that retain the capability to be operated by a human driver  
21 when such vehicles are not operating in an automated  
22 mode.

23 **SEC. 5. HIGHLY AUTOMATED VEHICLES TESTING.**

24 Section 30112(b) of title 49, United States Code, is  
25 amended—

1           (1) in paragraph (9), by striking “or” at the  
2       end;

3           (2) in paragraph (10)—

4                (A) in the matter preceding subparagraph  
5       (A), by inserting “(except for a highly auto-  
6       mated vehicle)” after “the introduction of a  
7       motor vehicle”; and

8                (B) in subparagraph (C), by striking the  
9       period at the end and inserting “; or”; and

10          (3) by adding at the end the following:

11               “(11) the introduction of a motor vehicle into  
12       interstate commerce solely for the purposes of test-  
13       ing, evaluation, or demonstration of a highly auto-  
14       mated vehicle or automated driving system if—

15                   “(A) the testing, evaluation, or demonstra-  
16       tion of the vehicle is only conducted by employ-  
17       ees, agents, or fleet management contractors of  
18       the manufacturer of the highly automated vehi-  
19       cle, the automated driving system, or any com-  
20       ponent thereof;

21                   “(B) such manufacturer agrees not to sell,  
22       lease, or offer for sale or lease, the vehicle or  
23       system at the conclusion of the testing, evalua-  
24       tion, or demonstration; and

1           “(C) such manufacturer has submitted ap-  
2           propriate manufacturer identification informa-  
3           tion that is similar to information submitted by  
4           manufacturers subject to a Federal motor vehi-  
5           cle safety standard under part 566 of title 49,  
6           Code of Federal Regulations, before the com-  
7           mencement of such testing or evaluation.”.

8 **SEC. 6. HIGHLY AUTOMATED VEHICLES EXEMPTIONS.**

9           (a) IN GENERAL.—Section 30113 of title 49, United  
10 States Code, is amended—

11           (1) in subsection (a)—

12           (A) by striking “this section,” and insert-  
13           ing the following: “this section—

14           “(1) the term”;

15           (B) by striking the period at the end and  
16           inserting “; and”; and

17           (C) by adding at the end the following:

18           “(2) the term ‘new motor vehicle safety feature’  
19           includes any feature that enables a highly automated  
20           vehicle or an automated driving system, regardless  
21           of whether an exemption has already been granted  
22           for a similar feature on another model or models.”;

23           (2) in subsection (b)—

24           (A) by amending paragraph (2) to read as  
25           follows:

1       “(2) The Secretary may begin a proceeding under  
2 this subsection when a manufacturer applies for an exemp-  
3 tion or a renewal of an exemption. The Secretary shall  
4 publish notice of the application and provide an oppor-  
5 tunity to comment. An application for an exemption or  
6 for a renewal of an exemption shall be filed at a time and  
7 in the way, and contain such information, this section and  
8 the Secretary require. The Secretary shall grant or deny  
9 an exemption for a highly automated vehicle not later than  
10 180 days after receiving an application for such exemption  
11 from a manufacturer.”; and

12               (B) in paragraph (3)(B)(iv), by inserting  
13       “or introducing or delivering into interstate  
14 commerce” after “selling”;

15       (3) in subsection (d)—

16               (A) by inserting “(1)” after “ELIGI-  
17 BILITY.—”; and

18               (B) by striking the second sentence and in-  
19 serting the following:

20       “(2) A manufacturer is eligible for an exemp-  
21 tion under clause (ii), (iii), or (iv) of subsection  
22 (b)(3)(B) only if the Secretary determines that—

23               “(A) the exemption is for not more than  
24 2,500 vehicles to be sold in the United States  
25 in any 12-month period; or

1           “(B) the vehicle is a highly automated ve-  
2 hicle; and

3           “(i) during the 12-month period be-  
4 ginning on the date of the enactment of  
5 the AV START Act, the exemption is for  
6 not more than 50,000 vehicles to be sold  
7 or introduced into interstate commerce in  
8 the United States;

9           “(ii) during the 12-month period im-  
10 mediately following the period described in  
11 clause (i), the exemption is for not more  
12 than 75,000 vehicles to be sold or intro-  
13 duced into interstate commerce in the  
14 United States; and

15           “(iii) during any 12-month period fol-  
16 lowing the period described in clause (ii),  
17 the exemption is for not more than  
18 100,000 vehicles to be sold or introduced  
19 into interstate commerce in the United  
20 States.

21           “(C) A manufacturer of a highly auto-  
22 mated vehicle may petition the Secretary to ex-  
23 pand the exemption under paragraph (2)(B) to  
24 more than 100,000 vehicles in any 12-month

1 period after the exemption has been in place for  
2 5 years.”; and

3 (4) in subsection (e), by inserting “, unless the  
4 vehicle is a highly automated vehicle” before the pe-  
5 riod at the end.

6 (b) SUNSET.—A manufacturer’s eligibility for an ex-  
7 emption from a provision, clause, sentence, or paragraph  
8 in a motor vehicle safety standard under section  
9 30113(d)(2)(B) of title 49, United States Code, as amend-  
10 ed by subsection (a), shall end on the date on which a  
11 standard (except for a standard promulgated under sec-  
12 tion 4 of this Act) that amends the provision, clause, sen-  
13 tence, or paragraph from which an exemption is sought  
14 takes effect, with due consideration for any lead time spec-  
15 ified for compliance.

16 **SEC. 7. INOPERATIVE CONTROLS.**

17 Section 30122(b) of title 49, United States Code, is  
18 amended—

19 (1) by inserting “(1)” before “A manufac-  
20 turer”; and

21 (2) by adding at the end the following:

22 “(2) The prohibition under paragraph (1) shall not  
23 apply to a manufacturer that intentionally allows a device  
24 or element of design installed on or in a motor vehicle or  
25 item of equipment in compliance with an applicable motor



1 vehicle safety standard to be temporarily disabled during  
2 the time that an automated driving system is performing  
3 the entire dynamic driving task.”.

4 **SEC. 8. LEVELS OF DRIVING AUTOMATION.**

5 (a) USE OF SAE INTERNATIONAL’S TAXONOMY AND  
6 DEFINITIONS.—The Secretary shall use the taxonomy and  
7 definitions for automated driving systems set forth in SAE  
8 International standard J3016, published on September  
9 30, 2016, for the various levels of automation for motor  
10 vehicles.

11 (b) REVIEW.—

12 (1) IN GENERAL.—The Secretary—

13 (A) shall review the taxonomy and defini-  
14 tions for automated driving systems set forth by  
15 SAE International to ensure that such tax-  
16 onomy and definitions are clear and objective;  
17 and

18 (B) may provide feedback to SAE Inter-  
19 national for potential updates.

20 (2) USE OF REVISED STANDARD.—

21 (A) DETERMINATION.—Not later than 120  
22 days after SAE International revises the stand-  
23 ard referred to in subsection (a), the Secretary,  
24 after publishing notice of the revision in the  
25 Federal Register, shall determine whether to

1           adopt the revised standard to identify the var-  
2           ious levels of automation for motor vehicles.

3                   (B) EFFECT OF DECISION NOT TO ADOPT  
4           THE REVISED STANDARD.—If the Secretary de-  
5           cides not to adopt the revised standard—

6                   (i) the Secretary shall notify SAE  
7           International of the Secretary’s decision;  
8           and

9                   (ii) the definitions referred to in sub-  
10          section (a) shall remain in effect.

11 **SEC. 9. SAFETY EVALUATION REPORT.**

12          (a) IN GENERAL.—Subchapter I of chapter 301 of  
13 title 49, United States Code, is amended by adding at the  
14 end the following:

15 **“§ 30107. Highly automated vehicles safety evaluation**  
16 **report**

17          “(a) IN GENERAL.—

18                  “(1) REQUIREMENT.—Each manufacturer in-  
19          troducing a new highly automated vehicle or auto-  
20          mated driving system into interstate commerce shall  
21          provide a safety evaluation report, in accordance  
22          with this section, that describes how the manufac-  
23          turer is addressing the safety of such vehicle or sys-  
24          tem.

1           “(2) SUBMISSION.—Each manufacturer de-  
2           scribed in paragraph (1) shall—

3                   “(A) submit a report to the Secretary—

4                           “(i) upon testing a highly automated  
5                           vehicle or automated driving system; and

6                           “(ii) not later than 90 days before  
7                           selling, offering for sale, or otherwise com-  
8                           mercializing a highly automated vehicle or  
9                           automated driving system; and

10                   “(B) annually submit, until the vehicle or  
11                   system is no longer being sold, offered for sale,  
12                   or otherwise introduced into interstate com-  
13                   merce by the manufacturer or until the system  
14                   is no longer being incorporated into new motor  
15                   vehicles by the manufacturer, an updated report  
16                   to the Secretary that—

17                           “(i) may disclose that no significant  
18                           changes were made to the vehicle or sys-  
19                           tem; and

20                           “(ii) shall provide aggregate results of  
21                           any significant safety deviation from ex-  
22                           pected performance disclosed in the pre-  
23                           vious report.

24                   “(3) REVIEW.—The Secretary—

1           “(A) shall review each report submitted  
2           under paragraph (2); and

3           “(B) may require that the manufacturer  
4           submit additional or clarifying information.

5           “(4) LIMITATION.—The Secretary may not con-  
6           dition the manufacture, testing, sale, offer for sale,  
7           or introduction into interstate commerce of a highly  
8           automated vehicle or automated driving system  
9           based on a review of a safety evaluation report or  
10          additional information submitted under this section.

11          “(b) SAFETY EVALUATION REPORT SUBJECT  
12          AREAS.—Each report submitted by a manufacturer under  
13          subsection (a) shall describe how the manufacturer is ad-  
14          dressing, through a documented assessment, testing, and  
15          validation process, each of the subject areas described in  
16          paragraphs (1) through (9).

17          “(1) SYSTEM SAFETY.—The avoidance of un-  
18          reasonable risks to safety, including—

19                  “(A) assurance that systems, including  
20                  hardware and software, perform intended func-  
21                  tions;

22                  “(B) the mitigation of unreasonable risks  
23                  to safety caused by a malfunction of the auto-  
24                  mated driving system; and

1           “(C) sense of objects, motorcycleists,  
2 bicyclists, pedestrians, and animals in or cross-  
3 ing the path of travel through the automated  
4 driving system.

5           “(2) DATA RECORDING.—The collection by the  
6 vehicle of automated driving system performance in-  
7 formation and incident and crash data—

8           “(A) to record the occurrence of malfunc-  
9 tions, disengagements, degradations, or failures;

10           “(B) to aid in the analysis of the cause of  
11 any issues described in subparagraph (A);

12           “(C) to enable efforts to work with other  
13 entities to address data recording and sharing;  
14 and

15           “(D) with respect to event data recorder  
16 information, that complies with the collection  
17 and sharing requirements under the FAST Act  
18 (Public Law 114–94).

19           “(3) CYBERSECURITY.—The minimization of  
20 cybersecurity risks to safety and the exchange of in-  
21 formation about any vulnerabilities discovered from  
22 field incidents, internal testing, or external security  
23 research.

24           “(4) HUMAN-MACHINE INTERFACE.—

1           “(A) The methods of informing the human  
2 driver or operator about whether the automated  
3 driving system is functioning properly.

4           “(B) For a Level 3 vehicle, the methods to  
5 address driver reengagement.

6           “(C) The use of a human-machine inter-  
7 face by people with disabilities through visual,  
8 auditory, or haptic displays, or other methods.

9           “(5) CRASHWORTHINESS.—Practicable protec-  
10 tion for all occupants given any planned seating po-  
11 sitions or interior configurations.

12           “(6) CAPABILITIES.—The capabilities and limi-  
13 tations of the highly automated vehicle or automated  
14 driving system.

15           “(7) POST-CRASH BEHAVIOR.—The post-crash  
16 behavior of the highly automated vehicle or auto-  
17 mated driving system if sensors or critical systems  
18 are damaged in a crash.

19           “(8) ACCOUNT FOR APPLICABLE LAWS.—The  
20 account of applicable traffic laws and rules of the  
21 road, based on operational design domain, in the de-  
22 velopment of a highly automated vehicle or auto-  
23 mated driving system.

24           “(9) AUTOMATION FUNCTION.—

1           “(A) The expected operational design do-  
2           main in which the highly automated vehicle or  
3           automated driving system is designed to oper-  
4           ate, including any roadway and infrastructure  
5           assets required for the operation of the highly  
6           automated vehicle or automated driving system,  
7           such as roadside equipment, pavement mark-  
8           ings, signage, and traffic signals, and how it  
9           will respond if that operational design domain  
10          unexpectedly changes.

11          “(B) The automated driving system’s ex-  
12          pected object and event detection and response  
13          capabilities, including behavioral competencies  
14          and crash avoidance capability.

15          “(C) The ability of the highly automated  
16          vehicle or automated driving system to transi-  
17          tion to a minimal risk condition when a mal-  
18          function is encountered.

19          “(D) The performance of the vehicle  
20          through the manufacturer’s development and  
21          implementation of tests, including simulation,  
22          test track, and on-road testing.

23          “(c) CERTIFICATION OF INAPPLICABLE CAT-  
24          EGORIES.—A manufacturer that is solely testing a vehicle

1 or system may certify that one or more of the categories  
2 set forth in subsection (b) do not apply.

3 “(d) PUBLICLY AVAILABLE.—The Secretary shall  
4 make any report submitted by a manufacturer under this  
5 section publicly available as soon as practicable, except the  
6 Secretary may not make publicly available any information  
7 relating to a trade secret or confidential business informa-  
8 tion, or which is privileged. The manufacturer may submit  
9 information related to a trade secret or confidential busi-  
10 ness information separately from the report.

11 “(e) OFFICIAL SIGNATURE.—Each report submitted  
12 by an entity under this section shall be reviewed by a sen-  
13 ior official of the entity who—

14 “(1) is knowledgeable about the information  
15 contained in the report; and

16 “(2) shall certify that, based on the official’s  
17 knowledge, the report does not contain any untrue  
18 statement of a material fact.

19 “(f) TERMINATION OF OBLIGATION TO DISCLOSE IN-  
20 FORMATION.—

21 “(1) IN GENERAL.—A manufacturer’s obliga-  
22 tion to provide information on a specific category  
23 under subsection (b) shall end on the effective date  
24 of a motor vehicle safety standard applicable to the  
25 same aspect of vehicle or system performance as is



1 covered by the category, with due consideration for  
2 any lead time specified for compliance.

3 “(2) EFFECT OF NEW STANDARD.—In adopting  
4 any standard applicable to highly automated vehicle  
5 performance, the Secretary shall—

6 “(A) identify the category under subsection  
7 (b) to which the standard relates, if any; and

8 “(B) specify what information is no longer  
9 required to be included in the report as a result  
10 of the new standard.

11 “(g) RULE OF CONSTRUCTION.—

12 “(1) SUBMISSIONS.—A manufacturer may sub-  
13 mit a safety evaluation report for vehicles introduced  
14 into interstate commerce before the date of the en-  
15 actment of the AV START Act.

16 “(2) SAVINGS PROVISIONS.—Nothing in this  
17 section may be construed to amend, limit the au-  
18 thority, or prohibit the use of the information in-  
19 cluded in the report under chapter 301 of title 49,  
20 United States Code.”.

21 (b) CLERICAL AMENDMENT.—The analysis for chap-  
22 ter 301 of title 49, United States Code, is amended by  
23 inserting after the item relating to section 30106 the fol-  
24 lowing:

“30107. Highly automated vehicles safety evaluation report.”.

1 (c) EFFECTIVE DATE.—The amendments made by  
2 this section shall take effect on the date that is 90 days  
3 after the date of the enactment of this Act.

4 **SEC. 10. HIGHLY AUTOMATED VEHICLES TECHNICAL COM-**  
5 **MITTEE.**

6 (a) ESTABLISHMENT.—Not later than 180 days after  
7 the date of the enactment of this Act, the Secretary shall  
8 establish a Highly Automated Vehicles Technical Com-  
9 mittee (referred to in this section as the “Committee”)  
10 to provide a forum for stakeholders to discuss, prioritize,  
11 and make technical recommendations for highly auto-  
12 mated vehicle and automated driving system safety.

13 (b) MEMBERSHIP.—

14 (1) VOTING MEMBERS.—The Secretary—

15 (A) shall appoint 15 voting members to the  
16 Committee who—

17 (i) are specially qualified to serve on  
18 the Committee because of their technical  
19 knowledge of automated driving systems,  
20 vehicle-to-vehicle infrastructure systems, or  
21 the impact of such systems on Federal  
22 motor vehicle safety standards; and

23 (ii) shall include representatives of  
24 SAE International, automated vehicle  
25 proving grounds designated by the Depart-

1           ment of Transportation, highly automated  
2           vehicle and automated driving system man-  
3           ufacturers, safety organizations, State and  
4           local government agencies, and other orga-  
5           nizations directly or indirectly impacted by  
6           NHTSA regulations; and

7           (B) may appoint new members to the  
8           Committee at any time.

9           (2) COMPENSATION.—Members of the Com-  
10          mittee shall serve without compensation.

11          (3) CHAIRPERSON.—The Secretary, or the Sec-  
12          retary’s designee, shall act as Chairperson of the  
13          Committee, but will not have voting rights, except to  
14          break a tie.

15          (c) DUTIES.—

16           (1) RECOMMENDATIONS.—The Committee shall  
17           provide consensus-based recommendations to the  
18           Secretary on rulemaking, policy, and guidance re-  
19           garding highly automated vehicle safety, including—

20           (A) the identification and creation of per-  
21           formance standards; and

22           (B) the harmonization of national highly  
23           automated vehicle safety standards with inter-  
24           national standards.

1           (2) SCOPE.—The Committee shall study issues  
2 relating to highly automated vehicles, including—

3                   (A) system safety;

4                   (B) automated steering and braking;

5                   (C) crashworthiness for vehicles with un-  
6 conventional seating positions or vehicles not in-  
7 tended for human occupancy;

8                   (D) event data recording and data access  
9 and sharing;

10                  (E) accessibility for people with physical,  
11 sensory, or other disabilities, including for those  
12 who rely on mobility devices;

13                  (F) potential conflicts with existing Fed-  
14 eral motor vehicle safety standards; and

15                  (G) any other issue the Secretary considers  
16 appropriate.

17           (3) SUPPORT.—The NHTSA Office of Rule-  
18 making and the NHTSA Office of Vehicle Safety  
19 Research shall provide support services to the Com-  
20 mittee.

21           (4) MEETINGS.—The Committee shall meet not  
22 less frequently than 4 times per year. Committee  
23 meetings shall be open to the public, except in cir-  
24 cumstances in which a meeting is likely to discuss—

1 (A) internal personnel rules and practices  
2 of the NHTSA;

3 (B) matters specifically exempted from dis-  
4 closure by statute;

5 (C) trade secrets or confidential or privi-  
6 leged business information;

7 (D) matters involving criminal accusation  
8 or official censure;

9 (E) information of a personal nature that,  
10 if disclosed, would constitute an unwarranted  
11 invasion of personal privacy; or

12 (F) investigatory records that might inter-  
13 fere with enforcement proceedings.

14 (5) WORKING GROUPS.—

15 (A) IN GENERAL.—The Committee may  
16 establish temporary working groups, as nec-  
17 essary, to address specific issues. Each working  
18 group shall include at least 1 member who rep-  
19 represents a manufacturer of highly automated ve-  
20 hicles or automated driving systems and other  
21 individuals who are subject matter experts on  
22 the issue before the working group.

23 (B) DISABILITY ACCESS.—The Committee  
24 shall establish a working group to develop vol-  
25 untary best practices regarding highly auto-

1 mated vehicle accessibility for people with phys-  
2 ical, sensory, or other disabilities, including for  
3 those who rely on mobility devices. Such best  
4 practices shall address the physical accessibility  
5 of highly automated vehicles and human-ma-  
6 chine interface accessibility through visual, au-  
7 ditory, or haptic displays or other methods. The  
8 working group shall include representatives  
9 from national organizations representing indi-  
10 viduals with disabilities.

11 (d) RECOMMENDATIONS FOR HIGHLY AUTOMATED  
12 VEHICLES.—

13 (1) IN GENERAL.—On a periodic basis, the  
14 Committee shall release recommendations on vol-  
15 untary standards regarding highly automated vehicle  
16 safety.

17 (2) WORK PLAN.—Not later than 180 days  
18 after the Committee is established under subsection  
19 (a), the Committee shall submit a work plan to the  
20 Secretary for carrying out this section.

21 (3) REPORT.—Not later than 5 years after the  
22 date of the enactment of this Act, the Committee  
23 shall submit a report containing recommendations of  
24 consensus-based, feasible, and objective standards to  
25 the Secretary for potential rulemaking governing

1 highly automated vehicles that meet the need for  
2 motor vehicle safety.

3 (e) CONSULTATION AND PUBLICATION OF RE-  
4 PORTS.—

5 (1) IN GENERAL.—The Secretary shall consult  
6 with the Committee, as appropriate, on highly auto-  
7 mated vehicle safety matters, including the develop-  
8 ment and implementation of relevant policies, pro-  
9 grams, and rulemaking.

10 (2) RECOMMENDED AGENDA.—The Secretary  
11 shall regularly provide recommendations to the Com-  
12 mittee regarding the agenda of the Committee and  
13 areas in which Committee activity would benefit and  
14 complement Department of Transportation efforts.

15 (3) REPORTS.—The Secretary shall make any  
16 report or recommendation developed under this sec-  
17 tion publicly available.

18 (f) FACA.—The Committee shall not be subject to  
19 the requirements under the Federal Advisory Committee  
20 Act (5 U.S.C. App.).

21 (g) TERMINATION.—The Committee shall terminate  
22 upon the submission of the final report required under  
23 subsection (d)(3) unless the Secretary determines that the  
24 Committee should continue.

1 **SEC. 11. HIGHLY AUTOMATED VEHICLES RULEMAKING.**

2 (a) IN GENERAL.—The Secretary shall review and  
3 seek public comment on the recommendations for stand-  
4 ards made by the Highly Automated Vehicles Technical  
5 Committee under section 10(d)(3).

6 (b) DETERMINATION.—Not later than 1 year after  
7 the receipt of the recommendations referred to in sub-  
8 section (a), the Secretary shall—

9 (1) make a determination whether to approve  
10 one or more of the recommendations, based on an  
11 identified need for motor vehicle safety; and

12 (2) begin a rulemaking proceeding on the rec-  
13 ommendations approved pursuant to paragraph (1)  
14 on the safety of highly automated vehicles.

15 (c) RULE OF CONSTRUCTION.—Nothing in this sec-  
16 tion may be construed to restrict the authority of the Sec-  
17 retary under section 30111 of title 49, United States  
18 Code. Any Federal motor vehicle safety standard adopted  
19 pursuant to this section shall meet the requirements under  
20 such section 30111.

21 **SEC. 12. CONSUMER EDUCATION.**

22 (a) ESTABLISHMENT.—Not later than 180 days after  
23 the date of the enactment of this Act, the Secretary shall  
24 establish a working group on responsible education efforts  
25 for advanced driver assist systems and automated driving  
26 systems.



1 (b) DUTIES.—The working group established under  
2 subsection (a) shall—

3 (1) identify recommended education and re-  
4 sponsible marketing strategies that may be volun-  
5 tarily employed by industry to inform consumers, ve-  
6 hicle owners and operators, and other stakeholders  
7 about advanced driver assistance systems and auto-  
8 mated driving systems as they become available or  
9 are soon to be introduced into interstate commerce;  
10 and

11 (2) submit a report containing the findings and  
12 recommendations of the working group to Congress  
13 and making such report available to the public.

14 (c) CONSIDERATIONS.—The working group shall con-  
15 sider topics pertaining to—

16 (1) intent, capabilities, and limitations of ad-  
17 vanced driver assistance systems and automated  
18 driving systems;

19 (2) engagement and disengagement methods,  
20 including methods to address driver engagement in  
21 lower levels of automation;

22 (3) human-machine interfaces;

23 (4) emergency fallback scenarios;

24 (5) operational boundary responsibilities;

1           (6) response in the event of a crash or system  
2 failure;

3           (7) potential mechanisms that could change  
4 function behavior in service; and

5           (8) consistent nomenclature and taxonomy for  
6 safety features and systems.

7 (d) MEMBERSHIP.—

8           (1) IN GENERAL.—The Secretary shall appoint,  
9 as members of the working group, individuals with  
10 expertise in automated driving systems and driver  
11 assistance systems, including—

12                   (A) representatives of—

13                           (i) motor vehicle manufacturers;

14                           (ii) manufacturers of automated driv-  
15 ing systems and driver assistance systems  
16 (including components);

17                           (iii) motor vehicle dealers;

18                           (iv) motor vehicle owners and opera-  
19 tors, including fleet managers, vehicle rent-  
20 al companies, and transportation network  
21 companies;

22                           (v) consumers or consumer advocacy  
23 groups;

1 (vi) automated vehicle proving  
2 grounds designated by the Department of  
3 Transportation;

4 (vii) public health organizations;

5 (viii) marketing professionals;

6 (ix) entities with national experience  
7 in consumer education; and

8 (x) enabling technology companies;  
9 and

10 (B) any other members the Secretary con-  
11 siders appropriate.

12 (2) COMPENSATION.—Members of the working  
13 group shall serve without compensation.

14 (3) CONSULTATION.—The Secretary shall con-  
15 sult with the Federal Trade Commission about the  
16 recommendations of the working group, as appro-  
17 priate.

18 (e) TERMINATION.—The working group established  
19 under this section shall terminate on the date that is 2  
20 years after the date of the enactment of this Act.

21 **SEC. 13. TRAFFIC SAFETY AND LAW ENFORCEMENT.**

22 (a) RESEARCH.—The Secretary, in coordination with  
23 State and local transportation and highway safety entities,  
24 State and local law enforcement entities, and other rel-

1 evant parties, shall research the traffic safety implications  
2 of highly automated vehicles, including—

3 (1) the intersection of conventional and highly  
4 automated vehicles; and

5 (2) law enforcement impacts, including—

6 (A) enforcing applicable laws;

7 (B) identifying whether a vehicle was in  
8 automated mode at the time of a crash;

9 (C) lawfully accessing event data informa-  
10 tion; and

11 (D) determining how a highly automated  
12 vehicle should respond to law enforcement.

13 (b) COORDINATION OF SAFETY.—The Secretary, in  
14 coordination with State, local, and law enforcement agen-  
15 cies, may develop a process for State and local entities  
16 to provide information, on a voluntary basis, to the Sec-  
17 retary to assist the Department of Transportation in iden-  
18 tifying defects related to motor vehicle safety of highly  
19 automated vehicles.

20 (c) CRASH DATA.—Not later than 3 years after the  
21 date of the enactment of this Act, the Secretary shall re-  
22 vise the crash investigation data collection system to in-  
23 clude the collection of crash report data elements that dis-  
24 tinguish whether the vehicle involved in a crash is a highly  
25 automated vehicle, including the level of automation and

1 whether the vehicle was in automated mode at the time  
2 of a crash.

3 **SEC. 14. CYBERSECURITY.**

4 (a) IN GENERAL.—Subchapter I of chapter 301 of  
5 title 49, United States Code, as amended by section 9,  
6 is further amended by adding at the end the following:

7 **“§ 30108. Cybersecurity risks to the safety of highly**  
8 **automated vehicles**

9 “(a) DEFINITIONS.—In this section:

10 “(1) CYBERSECURITY INCIDENT.—The term  
11 ‘cybersecurity incident’ has the meaning given the  
12 term ‘incident’ in section 227(a) of the Homeland  
13 Security Act of 2002 (6 U.S.C. 148(a)).

14 “(2) CYBERSECURITY RISK.—The term ‘cyber-  
15 security risk’ has the meaning given the term in sec-  
16 tion 227(a) of the Homeland Security Act of 2002  
17 (6 U.S.C. 148(a)).

18 “(3) CYBERSECURITY VULNERABILITY.—The  
19 term ‘cybersecurity vulnerability’ has the meaning  
20 given the term ‘security vulnerability’ in section 102  
21 of the Cybersecurity Information Sharing Act of  
22 2015 (6 U.S.C. 1501).

23 “(b) CYBERSECURITY PLAN.—

24 “(1) IN GENERAL.—Each manufacturer of a  
25 highly automated vehicle or automated driving sys-

1       tem shall develop, maintain, and execute a written  
2       plan for identifying and reducing cybersecurity risks  
3       to the motor vehicle safety of such vehicles and sys-  
4       tems.

5               “(2) REQUIREMENTS.—The plan required  
6       under paragraph (1) shall include a process for—

7                       “(A) the risk-based prioritized identifica-  
8                       tion and protection of safety-critical vehicle con-  
9                       trol systems and the broader transportation  
10                      ecosystem, as applicable;

11                     “(B) the efficient detection and response  
12                     to potential vehicle cybersecurity incidents in  
13                     the field;

14                     “(C) facilitating expeditious recovery from  
15                     incidents as they occur;

16                     “(D) the institutionalization of methods  
17                     for the accelerated adoption of lessons learned  
18                     across industry through voluntary exchange of  
19                     information pertaining to cybersecurity inci-  
20                     dents, threats, and vulnerabilities, including the  
21                     consideration of a coordinated cybersecurity  
22                     vulnerability disclosure policy or other related  
23                     practices for collaboration with third-party cy-  
24                     bersecurity researchers;

1           “(E) the identification of the point of con-  
2           tact of the manufacturer with responsibility for  
3           the management of cybersecurity;

4           “(F) the use of segmentation and isolation  
5           techniques in vehicle architecture design, as ap-  
6           propriate; and

7           “(G) supporting voluntary efforts by indus-  
8           try and standards-setting organizations to de-  
9           velop and identify consistent standards and  
10          guidelines relating to vehicle cybersecurity, con-  
11          sistent, and to the extent appropriate, with the  
12          cybersecurity risk management activities de-  
13          scribed in section 2(e) of the National Institute  
14          of Standards and Technology Act (15 U.S.C.  
15          272(e)).

16          “(3) INSPECTION.—The Secretary may inspect  
17          any cybersecurity plan developed by a manufacturer  
18          under this subsection to enable the Secretary to de-  
19          cide whether the manufacturer has complied, or is  
20          complying, with this chapter or a regulation pre-  
21          scribed or order issued pursuant to this chapter.

22          “(4) PROTECTIONS FOR DISCLOSURE.—The  
23          Secretary may, by notice and comment rulemaking,  
24          establish a requirement that manufacturers subject

1 to subsection (b) develop a summary of its plan that  
2 is suitable for public disclosure, as appropriate.

3 “(c) COORDINATED CYBERSECURITY VULNER-  
4 ABILITY DISCLOSURE.—The Secretary may work coopera-  
5 tively with manufacturers of highly automated vehicles  
6 and automated driving systems to incentivize manufactur-  
7 ers to voluntarily adopt a coordinated vulnerability disclo-  
8 sure policy and practice in which a security researcher pri-  
9 vately discloses information related to a discovered vulner-  
10 ability to a manufacturer and allows the manufacturer  
11 time to confirm and remediate the vulnerability—

12 “(1) so that manufacturers build relationships  
13 with security researchers to mitigate cybersecurity  
14 risks; and

15 “(2) to discover and mitigate cybersecurity  
16 vulnerabilities in highly automated vehicles or auto-  
17 mated driving systems that present a risk to motor  
18 vehicle safety (as defined in section 30102 of title  
19 49, United States Code).

20 “(d) COORDINATION.—All Federal agencies under-  
21 taking research on cybersecurity risks associated with  
22 highly automated vehicles shall coordinate with the Sec-  
23 retary on their findings.”.

24 (b) CLERICAL AMENDMENT.—The analysis for chap-  
25 ter 301 of title 49, United States Code, is amended by



1 inserting after the item relating to section 30107, as  
2 added by section 9, the following:

“30108. Cybersecurity risks to the safety of highly automated vehicles.”.

3 (c) **EFFECTIVE DATE.**—The amendments made by  
4 this section shall take effect on the date that is 18 months  
5 after the date of the enactment of this Act.

6 **SEC. 15. SAVINGS PROVISION.**

7 Nothing in this Act may be construed to alter any  
8 existing authority under subtitle VI of title 49, United  
9 States Code, relating to motor vehicles with a gross vehicle  
10 weight of 10,001 pounds or more.

○