

JAN 23 2020

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# A BILL FOR AN ACT

RELATING TO AUTONOMOUS VEHICLES.

**BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF HAWAII:**

1           SECTION 1. Chapter 286, Hawaii Revised Statutes, is  
2 amended by adding a new part to be appropriately designated and  
3 to read as follows:

4                   **"PART       .   AUTONOMOUS VEHICLE TESTING PROGRAM**

5           **§286-A Definitions.** As used in this part:

6           "Administrator" has the same meaning as in section 287-1.

7           "ADS-dedicated vehicle" means a vehicle designed to be  
8 operated exclusively by a level four or five ADS for all trips  
9 within the given operational design domain limitations of the  
10 ADS, if any.

11           "Automated driving system" or "ADS" means the hardware and  
12 software that are collectively capable of performing the entire  
13 dynamic driving task on a sustained basis, regardless of whether  
14 the ADS is limited to a specific operational design domain, if  
15 any. "Automated driving system" or "ADS" is used specifically  
16 to describe a level three, four, or five driving automation  
17 system.



1 "Conventional driver" means a human driver who is onboard  
2 the motor vehicle and manually performs some or all of the  
3 following actions in order to operate a vehicle:

- 4 (1) Braking;
- 5 (2) Accelerating;
- 6 (3) Steering; and
- 7 (4) Transmission gear selection input devices.

8 "Dispatch" means to place an ADS-equipped vehicle into  
9 service in driverless operation by engaging the ADS. "Dispatch"  
10 includes software-enabled dispatch of multiple ADS-equipped  
11 motor vehicles in driverless operation that may complete  
12 multiple trips involving pick-up and drop-off of passengers or  
13 goods throughout a day or other pre-defined periods of service,  
14 and which may involve multiple agents performing various tasks  
15 related to the dispatch function.

16 "Driverless operation" means the operation of an ADS-  
17 equipped vehicle in which:

- 18 (1) No on-board user is present; or
- 19 (2) No on-board user is a human driver or fallback-ready  
20 user.



1 "Driverless operation dispatcher" means a user who  
2 dispatches an ADS-equipped vehicle in driverless operation.

3 "Driving automation system" means the hardware and software  
4 collectively capable of performing part or all of the dynamic  
5 driving task on a sustained basis.

6 "Driving automation system feature" means a specific  
7 function of a driving automation system.

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

- 11 (1) Lateral vehicle motion control through steering;
- 12 (2) Longitudinal motion control through acceleration and  
13 deceleration;
- 14 (3) Monitoring the driving environment through object and  
15 event detection, recognition, classification, and  
16 response preparation;
- 17 (4) Object and event response execution;
- 18 (5) Maneuver planning; and
- 19 (6) Enhancing conspicuity with lighting, signaling, and  
20 gesturing.



1 "Dynamic driving task" does not include strategic functions such  
2 as trip scheduling and selection of destinations and waypoints.

3 "Engage", as it pertains to the operation of a vehicle by a  
4 driving automation system, means to cause a driving automation  
5 system feature to perform part or all of the dynamic driving  
6 task on a sustained basis.

7 "External event" is a situation in the driving environment  
8 that necessitates a response by a human driver or driving  
9 automation system.

10 "Fallback-ready user" means the user of a vehicle equipped  
11 with an engaged level three ADS who is:

- 12 (1) A human driver; and
- 13 (2) Ready to operate the vehicle if:
  - 14 (A) A system failure occurs; or
  - 15 (B) The ADS issues a request to intervene.

16 "Level five automated driving system" or "level five ADS"  
17 means an ADS feature that has the capability to perform on a  
18 sustained basis the entire dynamic driving task under all  
19 conditions that can reasonably be managed by a human driver, as  
20 well as any maneuvers necessary to respond to a system failure,



1 without any expectation that a human user will respond to a  
2 request to intervene.

3 "Level four automated driving system" or "level four ADS"  
4 means an ADS feature that, without any expectation that a human  
5 user will respond to a request to intervene, has:

6 (1) The capability to perform on a sustained basis the  
7 entire dynamic driving task within its operational  
8 design domain; and

9 (2) The capability to perform any maneuvers necessary to  
10 achieve a minimal risk condition in response to:

11 (A) An exit from the operational design domain of the  
12 ADS; or

13 (B) A system failure.

14 "Level three automated driving system" or "level three ADS"  
15 means an ADS feature that:

16 (1) Has the capability to perform on a sustained basis the  
17 entire dynamic driving task within its operational  
18 design domain; and

19 (2) Requires a fallback-ready user to operate the vehicle  
20 after receiving a request to intervene or in response  
21 to a system failure.



1 "Minimal risk condition" means a condition to which a user  
2 or an ADS may bring a motor vehicle in order to reduce the risk  
3 of an accident when a given trip cannot or should not be  
4 completed.

5 "Object and event detection and response" means the  
6 subtasks of the dynamic driving task that include:

- 7 (1) Monitoring the driving environment; and
- 8 (2) Executing an appropriate response in order to perform  
9 the dynamic driving task.

10 "On-demand autonomous vehicle network" means a  
11 transportation service network that uses a software application  
12 or other digital means to dispatch or otherwise enable the  
13 prearrangement of transportation with motor vehicles that have a  
14 level four or level five ADS in driverless operation for the  
15 purpose of transporting persons, including for-hire  
16 transportation and transportation for compensation.

17 "Operate" means collectively, the activities performed in  
18 order to perform the entire dynamic driving task for a given  
19 motor vehicle by an operator. "Operate" includes testing of an  
20 automated driving system.



1 "Operational design domain" means the operating conditions  
2 under which a given ADS or feature thereof is specifically  
3 designed to function, including:

- 4 (1) Speed range, environmental, geographical, and time-of-  
5 day restrictions; or  
6 (2) The requisite presence or absence of certain traffic  
7 or roadway characteristics.

8 "Operator" means a human driver or an automated driving  
9 system.

10 "Passenger" means a user on board a vehicle who has no role  
11 in the operation of that vehicle.

12 "Program" means the autonomous vehicle testing program  
13 established by the director pursuant to this part.

14 "Remote driver" means a human driver who is not located in  
15 a position to manually exercise in-vehicle braking,  
16 accelerating, steering, or transmission gear selection input  
17 devices, but operates the vehicle.

18 "Request to intervene" means the notification by an ADS to  
19 a fallback-ready user indicating that the fallback-ready user  
20 should promptly begin or resume operation of the vehicle.

21 "Special mobile equipment" means every vehicle:



1 (1) Not designed or used primarily for the transportation  
2 of persons or property;

3 (2) Not designed to operate in traffic; and

4 (3) Only incidentally operated or moved over the highways.

5 "Special mobile equipment" includes:

6 (1) Farm tractors;

7 (2) Off-road motorized construction or maintenance  
8 equipment including backhoes, bulldozers, compactors,  
9 graders, loaders, road rollers, tractors, and  
10 trenchers; and

11 (3) Ditch-digging apparatus.

12 "Special mobile equipment" does not include a commercial  
13 vehicle.

14 "Sustained operation of a motor vehicle" means the  
15 performance of part or all of the dynamic driving task both  
16 between and across external events, including response to  
17 external events and continued performance of part or all of the  
18 dynamic driving task in the absence of external events.

19 "System failure" means a malfunction in a driving  
20 automation system or other vehicle system that prevents the ADS  
21 from reliably performing the portion of the dynamic driving task





1 on a sustained basis, including the complete dynamic driving  
2 task, that the ADS would otherwise perform.

3 "User" means a:

- 4 (1) Human driver;
- 5 (2) Passenger;
- 6 (3) Fallback-ready user; or
- 7 (4) Driverless operation dispatcher.

8 **§286-B Testing of motor vehicles equipped with an**  
9 **automated driving system.** (a) The director shall establish, no  
10 later than January 1, 2021, an autonomous vehicle testing  
11 program, to be administered by the department of transportation.  
12 The department shall adopt rules pursuant to chapter 91  
13 necessary for the purpose of this part.

14 (b) The program shall authorize a motor vehicle equipped  
15 with a level three ADS to be deployed on a highway in the State  
16 for purposes of testing if:

- 17 (1) The motor vehicle is operated, whether by the ADS or  
18 human driver, in compliance with the applicable  
19 traffic and motor vehicle safety laws and rules of the  
20 State, unless an exemption has been granted;



1           (2) When required by federal law, the motor vehicle has  
2           been certified as being in compliance with all  
3           applicable motor vehicle safety standards and bears  
4           the required certification label, including reference  
5           to any exemption granted under federal law;

6           (3) The ADS achieves a minimal risk condition or makes a  
7           request to intervene if a system failure occurs that  
8           renders the ADS unable to perform the entire dynamic  
9           driving task relevant to the intended operational  
10          design domain of the ADS; and

11          (4) The motor vehicle is titled and registered in  
12          compliance with section 286-F.

13          (c) The program shall authorize a motor vehicle equipped  
14          with a level four or level five ADS to operate in driverless  
15          operation on a highway in the State if:

16           (1) The ADS is capable of operating in compliance with  
17           applicable traffic and motor vehicle laws and rules of  
18           the State, unless an exemption has been granted;

19           (2) When required by federal law, the motor vehicle is  
20           certified as being in compliance with all applicable  
21           federal motor vehicle safety standards and regulations



1 and bears the required certification label including  
2 reference to any exemption granted under federal law;

3 (3) The ADS achieves a minimal risk condition or makes a  
4 request to intervene if a system failure occurs that  
5 renders the ADS unable to perform the entire dynamic  
6 driving task relevant to the intended operational  
7 design domain of the ADS; and

8 (4) The motor vehicle is titled and registered in  
9 compliance with section 286-F.

10 (d) A vehicle operated by an ADS or a remote driver shall  
11 not be considered unattended.

12 (e) The director of finance of the county in which the  
13 vehicle is to be operated may revoke the registration and  
14 privilege for a vehicle equipped with an ADS to operate on a  
15 state highway if the department of transportation or the  
16 department of public safety determines and notifies the director  
17 of finance that the ADS is operating or being engaged in an  
18 unsafe manner.

19 (f) Special mobile equipment equipped with a level three,  
20 level four, or level five ADS, may be moved or operated  
21 incidentally over a highway.



1           (g) Nothing in this chapter shall prohibit or restrict a  
2 human driver from operating a vehicle equipped with an ADS and  
3 equipped with controls that allow for the human driver to  
4 perform all or part of the dynamic driving task.

5           **§286-C Licensing; responsibility for compliant operation**  
6 **of ADS-equipped vehicles.** For the purpose of assessing  
7 compliance with applicable traffic or motor vehicle laws, when  
8 an ADS is operating a motor vehicle under the program, the ADS  
9 shall be the operator, and shall satisfy electronically all  
10 physical acts required by a conventional driver in operation of  
11 the vehicle. The ADS shall be responsible for the compliant  
12 operation of the vehicle and shall not be required to be  
13 licensed to operate the vehicle. If a vehicle with an engaged  
14 level three ADS issues a request to intervene, the ADS shall be  
15 responsible for the compliant operation of the vehicle until  
16 disengagement of the ADS. If a vehicle with an engaged level  
17 four or level five ADS issues a request to intervene, the ADS  
18 shall be responsible for the compliant operation of the vehicle  
19 until or unless a human user begins to operate the vehicle. The  
20 ADS shall be responsible for compliant operation of an ADS-  
21 dedicated vehicle.



1           §286-D Duties following accidents involving motor vehicles  
2 equipped with an automated driving system. (a) In the event of  
3 an accident involving a vehicle with the ADS engaged:

4           (1) The ADS-equipped vehicle shall remain on the scene of  
5 the accident, consistent with the vehicle's ability to  
6 achieve a minimal risk condition as described in  
7 section 286-B; and

8           (2) The owner of the ADS-equipped vehicle, or a person on  
9 behalf of the vehicle owner, shall report any accident  
10 as required by section 287-4.

11           (b) If the owner or person on behalf of the owner is not  
12 on board the vehicle at the time of the accident, the owner  
13 shall ensure that the following information is immediately  
14 communicated or made available to the persons involved in the  
15 accident or to a law enforcement officer upon request:

16           (1) The contents of the vehicle's registration card; and

17           (2) The name of the insurance provider for the vehicle,  
18 including the phone number of the agent or provider.

19           (c) The administrator may require that an accident report  
20 specify whether:



1 (1) A vehicle equipped with an ADS was involved in the  
2 accident; and

3 (2) The ADS was engaged at the time of the accident.

4 **§286-E On-demand autonomous vehicle network.** (a) Except  
5 as provided in subsection (b), an on-demand autonomous vehicle  
6 network may only operate pursuant to the program, this part, and  
7 applicable state laws governing the operation of ground  
8 transportation for hire.

9 (b) Any provision of state law that reasonably applies  
10 only to a human driver shall not apply to the operation of a  
11 vehicle by an engaged level four or level five ADS that is part  
12 of an on-demand autonomous vehicle network.

13 **§286-F Registration, title, and insurance of motor**  
14 **vehicles equipped with an automated driving system.** (a) Any  
15 owner of a vehicle equipped with an ADS who is a resident of the  
16 State, shall properly register and title the vehicle in  
17 accordance with part III of chapter 286. An automated driving  
18 system shall not be required to have a driver's license.

19 (b) Before operating an ADS vehicle on a state highway,  
20 the owner of the vehicle shall ensure that the vehicle complies



1 with all applicable motor vehicle insurance laws under article  
2 10C of chapter 431.

3       **§286-G Controlling authority.** No political subdivision of  
4 the State, county agency, or other entity may prohibit the  
5 testing of a vehicle equipped with a driving automation system,  
6 an ADS, or an on-demand autonomous vehicle network under the  
7 program, or otherwise enact or keep in force a rule or ordinance  
8 that would impose a tax, fee, performance standard, or other  
9 requirement specific to the testing of a vehicle equipped with a  
10 driving automation system, an ADS, or an on-demand autonomous  
11 vehicle network that is in addition to the requirements of the  
12 program, this part, or other applicable state law."

13       SECTION 2. Section 249-1, Hawaii Revised Statutes, is  
14 amended by amending the definition of "motor vehicle" to read as  
15 follows:

16       "Motor vehicle" means every vehicle which is self-  
17 propelled and every vehicle which is propelled by electric power  
18 but which is not operated upon rails, including vehicles  
19 equipped with an automated driving system as defined in section  
20 286-A, but excludes mopeds."



1 SECTION 3. Section 286-102, Hawaii Revised Statutes, is  
2 amended by amending subsection (a) to read as follows:

3 "(a) No person, except one:

- 4 (1) Exempted under section 286-105;
- 5 (2) Who holds an instruction permit under section 286-110;
- 6 (3) Who holds a limited purpose driver's license, limited  
7 purpose provisional driver's license, or limited  
8 purpose instruction permit under section 286-104.5;
- 9 (4) Who holds a provisional license under section  
10 286-102.6;
- 11 (5) Who holds a commercial driver's license issued under  
12 section 286-239; or
- 13 (6) Who holds a commercial driver's license instruction  
14 permit issued under section 286-236,

15 shall operate any category of motor vehicles listed in this  
16 section without first being appropriately examined and duly  
17 licensed as a qualified driver of that category of motor  
18 vehicles. An automated driving system as defined in section  
19 286-A shall not be required to have a driver license."

20 SECTION 4. Section 431:10C-701, Hawaii Revised Statutes,  
21 is amended by amending the definitions of "transportation





1 network company" and "transportation network company driver" to  
2 read as follows:

3 "Transportation network company" means an entity that uses  
4 a digital network or software application service to connect  
5 passengers to transportation network company drivers; provided  
6 that the entity:

- 7 (1) ~~[Does]~~ Except in certain cases involving a motor  
8 vehicle with a level four or level five automated  
9 driving system, as defined in section 286-A, does not  
10 own, control, operate, or manage the personal vehicles  
11 used by transportation network company drivers; and  
12 (2) Is not a taxicab association or a for-hire vehicle  
13 owner.

14 "Transportation network company driver" means ~~[an]~~ :

- 15 (1) An individual who operates a personal vehicle used to  
16 transport a passenger between points chosen by the  
17 passenger and prearranged through a transportation  
18 network company and that is:

19 ~~[+1]~~ (A) Owned, leased, or otherwise authorized for use by  
20 the individual;

21 ~~[+2]~~ (B) Not a taxicab or for-hire vehicle; and







# S.B. NO. 3060

**Report Title:**

Autonomous Vehicles Testing Program

**Description:**

Requires the director of transportation to establish the autonomous vehicles testing program. Requires the program to authorize the testing of a vehicle in the State by an automated driving system. Exempts a vehicle with an engaged automated driving system from licensure. Provides protocol in case of an accident involving an autonomous vehicle. Requires a vehicle equipped with an automated driving system to be properly titled, registered, and insured. Preempts the counties from regulating the testing of autonomous vehicles that is in addition to regulation provided in state statute.

*The summary description of legislation appearing on this page is for informational purposes only and is not legislation or evidence of legislative intent.*

