



Model Automated Driving Laws

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The draft statutes below are intended to accommodate automated driving within existing law. There may other tools for accommodation, and there may be goals other than accommodation; see *How Governments Can Promote Automated Driving* at newlypossible.org. These models address (1) both automated and remote operation, (2) both dedicated automated vehicles and mixed automated-conventional vehicles, and (3) both closed systems in vertically integrated business models and open systems in complex multiplayer business models. Some definitions are adapted from SAE J3016; see standards.sae.org/j3016_201609.

Model Federal Law

- Overview**
- Endorses the safety-conscious development and deployment of automated driving systems.
 - Supports the conclusion that automated driving is consistent with international legal obligations.
 - Provides greater flexibility to the National Highway Traffic Safety Administration (NHTSA) in setting standards.
 - Automatically exempts dedicated automated vehicles (i.e., truly driverless vehicles) from any existing part of any Federal Motor Vehicle Safety Standard (FMVSS) that concerns only conventional human driving.
 - Authorizes NHTSA to grant other FMVSS exemptions for an unlimited number of vehicles if the overall safety level of those vehicles is at least equal to those of other vehicles.

- Language**
- Background**
- It is the intent of Congress to facilitate the development and deployment of automated driving in a way that improves highway safety.
 - Congress hereby finds that the automated operation of an automated vehicle under the conditions prescribed herein is consistent with article 8 of the Convention on Road Traffic because automated driving systems perform the operational and tactical functions otherwise performed by conventional drivers and have the potential to advance an object of the Convention by significantly improving highway safety.
- Definitions**
- Automated driving system* means the hardware and software that are collectively capable of performing the entire dynamic driving task on a sustained basis.
 - Automated operation* means the performance of the entire dynamic driving task by an automated driving system, a remote driver, or a combination of automated driving system and remote driver.
 - Automated vehicle* means a motor vehicle with an automated driving system, regardless of whether the vehicle is under automated operation.
 - Conventional driver* means a natural person who performs part of or the entire dynamic driving task while seated in a position to manually exercise in-vehicle braking, accelerating, steering, and transmission gear selection input devices.
 - Dedicated automated vehicle* means an automated vehicle designed for exclusively automated operation.
 - Dynamic driving task* means all of the real-time operational and tactical functions required to operate a vehicle in on-road traffic, excluding the strategic functions such as trip scheduling and selection of destinations and waypoints, and
- including without limitation controlling lateral vehicle motion, controlling longitudinal vehicle motion, monitoring the driving environment, executing responses to objects and events, planning vehicle maneuvers, and enhancing vehicle conspicuity.
- Remote driver* means a natural person who performs part of or the entire dynamic driving task while not seated in a position to manually exercise in-vehicle braking, accelerating, steering, and transmission gear selection input devices.
- Objectivity**
- Section 30111 of this Title is amended by striking: “The Secretary of Transportation shall prescribe motor vehicle safety standards. Each standard shall be practicable, meet the need for motor vehicle safety, and be stated in objective terms.” and inserting: “The Secretary of Transportation shall prescribe motor vehicle safety standards. Each standard shall be practicable, meet the need for motor vehicle safety, and be stated in objective terms. A standard may be stated in objective terms even if it specifies a test procedure that involves conditions or produces results that cannot be precisely replicated.”
- Automatic exemptions**
- A dedicated automated vehicle shall be exempt from any provision, including any requirement, specification, procedure, or portion thereof, of a motor vehicle safety standard or bumper standard prescribed under this Title if:
 - such provision applies to motor vehicle equipment necessary only for the performance of the dynamic driving task by a conventional driver; and
 - such standard, including any change thereto, was promulgated prior to the effective date of this Act.
 - A dedicated automated vehicle that is not designed, intended, or marketed for human occupancy shall be exempt from any provision, including any requirement, specification, procedure, or portion thereof, of a motor vehicle safety standard or bumper standard prescribed under this Title if:
 - such provision applies to motor vehicle equipment necessary only for the protection of human occupants of the vehicle on which such equipment is installed; and
 - such standard, including any change thereto, was promulgated prior to the effective date of this Act.
- Discretionary exemptions**
- Section 30113(d) of this Title is amended by striking: “A manufacturer is eligible for an exemption under subsection (b)(3)(B)(ii), (iii), or (iv) of this section only if the Secretary determines the exemption is for not more than 2,500 vehicles to be sold in the United States in any 12-month period.” and inserting: “A manufacturer is eligible for an exemption under subsection (b)(3)(B)(ii) or (iii) of this section only if the Secretary determines the exemption is for not more than 2,500 vehicles to be sold in the United States in any 12-month period.”
 - Section 30113(e) of this Title is amended by striking: “An exemption or renewal under subsection (b)(3)(B)(i) of this section may be granted for not more than 3 years. An exemption or renewal under subsection (b)(3)(B)(ii), (iii), or (iv) of this section may be granted for not more than 2 years.” and inserting: “An exemption or renewal under subsection (b)(3)(B)(i) of this section may be granted for not more than 3 years. An exemption or renewal under subsection (b)(3)(B)(ii) or (iii) of this section may be granted for not more than 2 years. An exemption or renewal under subsection (b)(3)(B)(iv) of this section may be granted for not more than 5 years.”

- Overview**
- Expressly authorizes automated driving.
 - Establishes an interstate database for automated driving systems.
 - Requires the automated driving provider to make certain safety-relevant representations.
 - Requires the automated driving provider to maintain additional insurance that covers vehicle-related injuries without regard to fault.
 - Requires the automated driving provider to maintain a bond or deposit that covers the owner of an automated vehicle if that vehicle is deemed unsafe.
 - Conditions vehicle registration on the automated driving provider’s satisfaction of these requirements.
 - Exempts automated vehicles from existing requirements that concern only conventional human driving.
 - Requires the automated driving provider to take reasonable steps to ensure reasonable (rather than absolute) compliance with traffic laws.
 - Holds the automated driving provider liable for noncompliance.
 - Specifies when a user of an automated vehicle is and is not a legal driver/operator.
 - Requires remote drivers to be licensed.
 - Specifically prohibits the intentionally or recklessly dangerous tampering with an automated vehicle.

- Language**
- Background**
- It is the intent of the Legislature to facilitate the development and deployment of automated driving in a way that improves highway safety.
 - The Legislature hereby finds that the automated operation of an automated vehicle under the conditions prescribed herein is consistent with article 8 of the Convention on Road Traffic because automated driving systems perform the operational and tactical functions otherwise performed by conventional drivers and have the potential to advance an object of the Convention by significantly improving highway safety.
- Implementation**
- The Department of Motor Vehicles and the Department of Insurance may make rules, issue interpretations, and take other lawful actions to administer and enforce this Act.
- Definitions**
- Automated driving provider* means the natural or legal person that for the purpose of registering an automated vehicle warrants that the automated operation of such vehicle is reasonably safe.
 - Automated driving system* means the hardware and software that are collectively capable of performing the entire dynamic driving task on a sustained basis.
 - Automated operation* means the performance of the entire dynamic driving task by an automated driving system, a remote driver, or a combination of automated driving system and remote driver. Automated operation begins at the moment of such performance and continues until the moment that a driver or operator intentionally terminates such performance for a reason other than a reasonable perception of imminent harm.
 - Automated operation insurance* means an insurance policy that covers damages to the person or property of another arising from the automated operation of an automated vehicle without regard to fault.
 - Automated vehicle* means a motor vehicle with an automated driving system, regardless of whether the vehicle is under automated operation.
 - Automated vehicle owner* means the owner of the automated vehicle, as the term owner is defined in this Title.
 - Automation continuation guarantee* means a surety bond or cash deposit that specifically covers diminution in the value of an automated vehicle arising from revocation of that vehicle’s registration.
 - Dedicated automated vehicle* means an automated vehicle designed for exclusively automated operation.
 - Drive and operate* each mean as provided in the vehicle code, except that an automated driving system exclusively drives and operates a vehicle under automated operation.
 - Driver and operator* each mean as provided in the vehicle code, except that an automated driving system is the exclusive driver and operator of a vehicle under automated operation.
 - Dynamic driving task* means all of the real-time operational and tactical functions required to operate a vehicle in on-road traffic, excluding the strategic functions such as trip scheduling and selection of destinations and waypoints, and including without limitation controlling lateral vehicle motion, controlling longitudinal vehicle motion, monitoring the driving environment, executing responses to objects and events, planning vehicle maneuvers, and enhancing vehicle conspicuity.
 - Participating agency* means the Department of Motor Vehicles, an administrative agency of another state that shares automated vehicle registration information with this State, or an administrative agency of the United States that shares automated vehicle registration information with this State.
 - Remote driver* means a natural person who performs part of or the entire dynamic driving task while not seated in a position to manually exercise in-vehicle braking, accelerating, steering, and transmission gear selection input devices.
- Driving licensing**
- A person who uses an automated vehicle without driving or operating such vehicle shall not be required to hold a driving license.
 - A remote driver shall hold a driving license that is valid in this State.
 - A remote driver who is employed, contracted, or compensated as such shall hold a commercial driving license that is valid in this State.
- Vehicle registration**
- An automated vehicle owner may register an automated vehicle in this State regardless of whether such owner is a resident thereof.
 - An automated vehicle owner shall register an automated vehicle in this State if such vehicle travels more than 80 percent of its miles therein as measured on a calendar year basis.
 - Registration of an automated vehicle may be granted, maintained, and renewed only if, by means of a current electronic record automatically retrievable by any participating agency, an automated driving provider:
 - identifies such vehicle by vehicle identification number;
 - describes the capabilities and limitations of such vehicle’s automated driving system;
 - provides proof of automated operation insurance for such vehicle;
 - provides proof of any required automation continuation guarantee for such vehicle;
 - represents to each participating agency that it believes the automated operation of such vehicle to be reasonably safe;
 - represents to each participating agency that clear and convincing evidence supports such belief;
 - warrants to the public that the automated operation of such vehicle is reasonably safe; and
 - irrevocably appoints each participating agency as a lawful agent upon whom any process may be served in any action arising from the automated operation of such vehicle.
 - The Department of Motor Vehicles may decline, suspend, revoke, or decline to renew the registration of any motor vehicle that it determines to be unreasonably dangerous, improperly equipped, insufficiently insured, noncompliant with any vehicle registration requirement, or otherwise unfit to be operated on a highway.
 - Registration of a motor vehicle shall create no presumption as to the safety of such vehicle or its equipment
- Equipment**
- This Title’s vehicle and equipment provisions shall be interpreted to facilitate the development and deployment of automated vehicles in a way that improves highway safety.
 - An automated vehicle shall be reasonably safe.
 - An automated driving system shall be reasonably safe.
 - Any provision of this Title requiring equipment necessary only for the performance of the dynamic driving task by a human driver shall not apply with respect to a dedicated automated vehicle.
- Rules of the road**
- This Title’s rules of the road shall be interpreted to facilitate the development and deployment of automated vehicles in a way that improves highway safety.
 - Automated operation of an automated vehicle in accordance with this Act and in a reasonably safe manner is lawful.
 - An automated driving provider shall take reasonable steps to ensure reasonable compliance with all provisions of this section while an associated automated vehicle is under automated operation and shall be liable as would a driver or operator in case of noncompliance.
 - A motor vehicle shall not be operated on a public highway if it is unreasonably dangerous, improperly equipped, insufficiently insured, noncompliant with any vehicle registration requirement, or otherwise unfit for such operation.
 - An automated vehicle that is under automated operation shall not be deemed unattended unless it is not lawfully registered in this State or another, poses a risk to public safety, or unreasonably obstructs other road users.
 - An automated vehicle that is under automated operation shall not be deemed abandoned unless it is not lawfully registered in this State or another, poses a risk to public safety, or unreasonably obstructs other road users.
 - Any provision of this Title restricting the use of electronic devices by a driver or operator shall not apply to the automated operation of an automated vehicle.
 - Any provision of this Title requiring a minimum following distance other than a reasonable and prudent distance shall not apply to operation of any nonleading vehicle traveling in a procession of vehicles if the speed of each vehicle is automatically coordinated.
 - Any natural or legal person who in willful or wanton disregard for the safety of persons or property initiates, continues, or impedes the automated operation of an automated vehicle shall be guilty of reckless driving.
- Insurance**
- The automated driving provider shall maintain automated operation insurance for each automated vehicle in an amount that is not less than the amount of third party liability insurance specified in this State’s financial responsibility statute.
 - The automated driving provider shall maintain an automation continuation guarantee for each automated vehicle in an amount that is not less than \$10,000, except that this requirement shall not apply if the automated driving provider is also the automated vehicle owner.
 - This Act does not displace any other insurance requirements.
- Penalties**
- Unless otherwise provided by this Act or by the laws of this State, a natural or legal person who fails to comply with any provision of this Act shall be liable for a civil infraction and fined not more than \$1000 for each day of each violation.
- Miscellaneous**
- The effective date of this Act shall be 30 days after its enactment.
 - The provisions of this Act are severable, and a declaration that any part thereof is unconstitutional or otherwise invalid shall not affect the part that remains.