



American Association of  
Motor Vehicle Administrators

# Northeast Autonomous and Connected Vehicle Summit

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AAMVA



American Association of  
Motor Vehicle Administrators

# AAMVA Mission and Vision

## **OUR MISSION**

serve North American  
motor vehicle & law enforcement agencies  
to accomplish their missions

## **OUR VISION**

safe drivers  
safe vehicles  
secure identities  
saving lives!

- Founded in 1933, the American Association of Motor Vehicle Administrators (AAMVA) represents to Motor Vehicle Administrators of all 69 states, provinces and territories of the U.S. and Canada
- Support uniformity and reciprocity among jurisdictions

Autonomous Vehicles are a high priority for AAMVA.

Established an Autonomous Vehicle Working Group in 2014.

16 US members

2 Canadian members

3 AAMVA staff

NHTSA and FMCSA representation

The report is based on a combination of research, experience, and knowledge accumulated over the last four years by the members of the AAMVA Autonomous Vehicles Working Group.

Professional staff members of different motor vehicle and law enforcement agencies throughout North America.



# Guiding Principles

- Facilitating a consistent and balanced oversight approach by motor vehicle administrators to avoid inconsistent regulatory practices
- Supporting the research and development of technology which has the potential to improve traffic safety while providing mobility options for underserved populations
- Supporting the safe testing and deployment of HAVs
- Confirming the roles and responsibilities of jurisdictions and the federal

# AAMVA's Autonomous Vehicle Working Group

1. Provided significant input for the NHTSA *Automated Vehicles Policy*; Section 2 -Model State Policy - Published September 20, 2016

That input was carried forward in the NHTSA publication 2017  
*"A Vision for Safety 2.0"*



2. Concurrent with the Model State Policy development, the Working Group completed a *Guidelines for the Regulation of Highly Automated Vehicles*, a final piece of its work. It is consistent with the work the group did with NHTSA in 2016- 2017.



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# Autonomous Vehicles Working Group

## Report: “Jurisdictional Guidelines for the Safe Testing and Deployment of Highly Automated Vehicles”

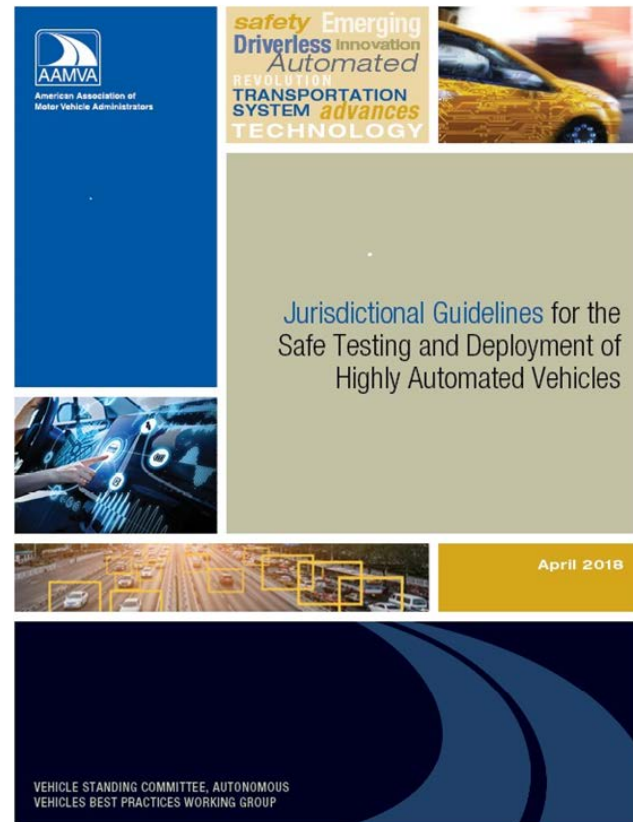
### Purpose:

Provides voluntary recommended guidelines regarding motor vehicle administration and law enforcement for the safe testing and deployment of HAVs.

Published May 2018

Now available on the AAMVA website!

<https://www.aamva.org/GuidelinesTestingDeploymentHAVs-May2018/>



Executive Summary

Chapter 1 Introduction

Chapter 2 Automated Vehicles Classifications, Terms and Technologies

Chapter 3 Administrative Considerations

Chapter 4 Vehicle Credentialing Considerations

Chapter 5 Driver Licensing Considerations

Chapter 6 Law Enforcement Considerations

Chapter 7 Next Steps

Appendix A Summary of recommendations to Jurisdictions

Appendix B Summary of recommendations to Manufacturers

Appendix C Working Group Roster





# Chapters 3. – 6. Guideline Formatting

Chapters 3 thru 6 include a comprehensive discussion of considerations in Administration, Vehicle, Driver and Law Enforcement. Each chapter includes:

- ✓ A background discussion
- ✓ Guideline(s) for testing and/or deployment of HAVs
- ✓ Benefits of implementing the guideline(s)
- ✓ Challenges that jurisdictions may face

There are a total of **88 recommendations** contained in these chapters. Some are directed at the jurisdictions (65), and others at Manufacturers and Other Entities (23).





# Chapter 3. Administrative Considerations

## There are 6 recommendations in Chapter 3, including ...

3.1.1 Identify a lead agency to manage an HAV committee and its work.

3.1.2 Establish an HAV committee.

3.1.3 The HAV committee should develop strategies for addressing testing and deployment in their jurisdiction.

3.1.4 Examine laws and regulations to address unnecessary barriers to safe testing, deployment and operation of HAVs.

3.1.5 Jurisdictions which regulate the testing of HAVs are encouraged to take necessary steps to establish statutory authority





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# Chapter 4. Vehicle Credentialing Considerations

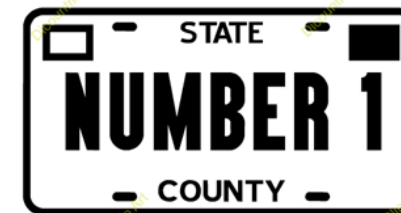
There are a total 20 recommendations in  
Chapter 4, Including ...



## Chapter 4. Vehicle Credentialing Considerations

Describes how to establish an application and permit process for HAV testing.

- 4.1 Application for Permit to test HAVs
- 4.2 Vehicle Registration
- 4.3 Title and Branding New and Aftermarket HAVs
- 4.4 License Plates
- 4.5 Manufacturer Certificates of Origin
- 4.6 Financial Responsibility
- 4.7 Federal Motor Vehicle Safety Standards





# Chapter 4. Vehicle Credentialing Considerations (continued)

4.1.1 Require all manufacturers and other entities testing Level 3, 4 or 5 HAVs to apply for and be issued vehicle specific permits prior to testing on public roadways.

4.1.4 Require test registration permits to be carried in the test vehicle while on public roadways within their jurisdiction. Permit information should be made readily available to law enforcement via electronic means by the issuing jurisdiction.

4.3.1 Record and maintain the test vehicle information in its vehicle record either through the normal titling process, through a titling exception process unique to HAVs or recording vital information in the database without titling. If a jurisdiction titles a HAV, the brand should indicate "*highly automated vehicle*."

4.4.1 Jurisdictions should not require a special license plate for HAVs. However, if a jurisdiction chooses to require a special license plate for HAVs, those plates should adopt the administrative, design and manufacturing specifications contained in the *AAMVA License Plate Standard*.

4.6.1 Require all HAVs permitted for on road testing to have minimum liability insurance, in the form and manner required by the MVA authority.





**There are 24 recommendations in Chapter 5, including ...**

5.1 Driver and Passenger Roles Defined

5.2 Driver License Requirements for Testing by Manufacturers and Other Entities

5.3 Driver Training for Consumers for Deployed Vehicles

5.4 HAV Driver Training for Motor Vehicle Agency Examiners, Driver Education Programs and Private Instructors

5.5 Driver License Skills Testing with Automated Vehicle Technologies

5.6 Endorsements and Restrictions for Deployed Vehicles



5.2.2 Require test HAVs be operated solely by employees, contractors, or other persons designated by the manufacturer of the HAV.

5.2.5 Support the safe testing without a human driver inside of the vehicle, by requiring a user designated by the manufacturer of the ADS technology or any such entity involved in the driverless testing of the HAV, to be capable of assuming control of the vehicle's operations.

5.3.2 Encourage communication between dealers and consumers including, but not limited to, acknowledgement of the sections in the vehicle "owner's manual" that relate to the HAV functions.

5.4.1 Provide training to driver license examiners on vehicle technologies including the operation of HAVs.





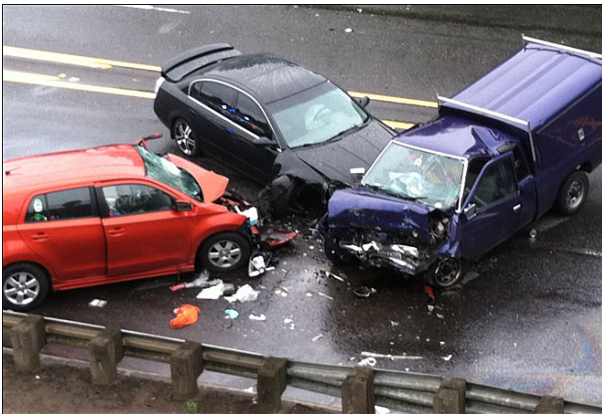
# Chapter 6. Law Enforcement Considerations

- 6.1 Crash/Incident Reporting
- 6.2 Criminal Activity
- 6.3 Distracted Driving
- 6.4 Enforcement of Permit Conditions
- 6.5 Establishing Operational Responsibility
- 6.6 First Responder Safety
- 6.7 Law Enforcement/First Responder Training
- 6.8 Vehicle Response to Emergency Vehicles, Manual Traffic Controls and Atypical Road Conditions
- 6.9 System Misuse and Abuse
- 6.10 Vehicle Identification
- 6.11 Adherence to Traffic Laws

## There are 16 jurisdiction recommendations and 18 MOE recommendations in Chapter 6, including ...

6.1.2 U.S. jurisdictions should adopt the MMUCC 5<sup>th</sup> Edition (August 2017) recommendation as soon as practicable.

MOE 6 Manufacturers should design HAVs to record vehicle behavior sensor data and the driver/vehicle interface. Law enforcement should be provided with access to this information as well as a minimum of 30-seconds of pre-crash and post-crash data for completing a proper investigation.





# Chapter 6. Law Enforcement Considerations (continued)

6.2.1 Jurisdictions that have HAV permitting requirements as described in Section 4.1 Application and Permit for Manufacturers or Other Entities to Test Vehicles on Public Roadways should require the designated test users (employees, contractors and other persons) to pass a background check, including, but not limited to, a driver history review and a criminal history check, prior to being authorized to operate a test HAV.

MOE 12 Manufacturers or other entities should prohibit users from all distracting activities when testing any HAV.



6.5.3 For vehicles classified as Levels 4 or 5, which may be operated without a licensed driver and where the driverless vehicle performs the DDT independent of human input, the registered owner should be responsible for its safe operation.

## MOE 1

4. Manufacturers should ensure HAVs are permanently labeled, at a minimum, on the rear and sides of the vehicle for the safety of first responders.

6.11.1 Monitor the progress of the Transportation Research Board project (NCHRP20-102(07) Implications of Automation for Motor Vehicle Codes to identify traffic and other laws that may need to be repealed or revised to accommodate HAV technology.



# Out of Scope

Some of these topics will be discussed in future versions of this report.

Commercial motor vehicles, as defined by the Federal Motor Carrier Safety Regulations (FMCSRs) (390.5)	Cybersecurity
Training for MVA staff	Enabling infrastructure
Jurisdictional safety inspection programs and criteria	Economic considerations
Data privacy and security, including personal identifiable information (PII)	Environmental impacts



# Chapter 7 Next Steps

Over the next few years the Working Group members will:

- Attend conferences, seminars and other forums focused on the technology as well as public policy to advance and share their expertise.
- Provide technical assistance to jurisdictions; currently developing a technical assistance plan.
- Provide support to updating driver licensing testing standards and training for driver license examiners.
- Work closely with industry and research stakeholders, state and federal government officials and national associations supporting transportation agencies.





# Final Thoughts

- A successful path to the safe testing and deployment of HAVs must include appropriate government oversight developed in coordination with strong stakeholder engagement and should include representatives from broad reaching government organizations, government support associations, industry, research institutes and advocacy groups.
- The document provides voluntary guidance and recommendations that balances public safety with the advancement of vehicle innovations that has the potential to reduce crashes, fatalities, injuries and property damages.





# Final Thoughts

- As jurisdictions address the use of Highly Automated Vehicles, they can choose to use these guidelines to ensure they are addressing the appropriate topics while giving consideration to creating a consistent regulatory approach across jurisdictions.
- Each jurisdiction will need to consider the recommendations within their legislative process, which will result in laws, regulations and policies that are best suited for them.



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Thank you for your time.

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