



# 自動／自律運転コネクテッド車両 の国際調和－米国の見解

日本、東京  
2022年12月

# NHTSAの使命

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教育、研究、安全基準および対策執行を通じて、命を救い、傷害を予防し、かつ道路交通事故による経済的損害を減少させる。

# NHTSAのアプローチ

## 車両安全

### 連邦自動車安全基準

North Highway Traffic Safety Admin., DOT

PART 571—FEDERAL MOTOR VEHICLE SAFETY STANDARDS

Subpart A—General

Sec. 571.1 Scope.

571.2 Definitions.

571.3 Application of laws.

571.4 Motor incorporated by reference.

571.5 Applicability.

571.6 Effective date.

571.7 Interpretation.

571.10 Interpretation of existing positions.

Subpart B—Federal Motor Vehicle Safety Standards

571.101 Standard No. 101: Controls and displays.

571.102 Standard No. 102: Transmission shift position, accelerator pedal, parking brake, and transmission locking effect.

571.103 Standard No. 103: Windshield.

571.104 Standard No. 104: Windshield wiper and washer systems.

571.105 Standard No. 105: Headlamps and electric lamp systems.

571.106 Standard No. 106: Bumpers, reflective devices, and associated equipment.

571.107 (Reserved).

571.108 Standard No. 108: Lamps, reflective devices, and associated equipment.

571.109 Standard No. 109: Low pneumatic tires and certain specialty tires.

571.110 Tire selection and use and gear load capacity limitations for motor vehicles with a GVWR of 4,536 kilograms (10,000 pounds) or less.

571.111 Standard No. 111: Rearview mirrors.

571.112 (Reserved).

571.113 Standard No. 113: Hood latch system.

571.114 Standard No. 114: Theft protection.

571.115 (Reserved).

571.116 Standard No. 116: Motor vehicle body shells.

571.117 Standard No. 117: Retained pedestrian tires.

571.118 Standard No. 118: Power-operated windows, partitions, and roof panel operation.

571.119 Standard No. 119: New pneumatic tires for motor vehicles with a GVWR of more than 4,536 kilograms (10,000 pounds) and motorcycles.

571.120 Tire selection and use and gear load capacity limitations for motor vehicles with a GVWR of more than 4,536 kilograms (10,000 pounds).

571.121 Standard No. 121: Air brake systems.

571.122 Standard No. 122: Air brake systems.

(1) Inspection procedure. Check wheel nuts at the area of greatest wear.

(2) Tires. Vehicles should be equipped with tires on the same axle that are matched in construction and tire size designation, and dual tires shall be matched for overall diameter within one-half inch.

(3) Inspection procedure. Examine visually. A mismatch in size and construction between tires on the same axle, or a major deviation from the size recommended by the vehicle or tire manufacturer, is a cause for rejection. On a dual-tire arrangement the diameter of one of the disks must be within one-half inch of the other as measured by a gauge block inserted between the tire and a caliper.

(4) General condition. Tires shall be free from chalking, bumps, knots, or lumps extending over, or through, separation from the casing.

(5) Inspection procedure. Examine visually for the conditions indicated.

(6) Damage. Tire cords or belting materials shall not be exposed, either to the naked eye or when cuts on the tire are probed. Reinforcement repairs to the cord body are allowable on tires other than front-mounted tires.

(7) Inspection procedure. Examine visually for the conditions indicated, using a blunt instrument, if necessary, to probe cuts and abrasions.

(8) Speed reserve tire. This mark "No. 1 for Highway Use" or "Farm Use Only" or other such restrictions shall not be used on any motor vehicle operating on public highways.

(9) Inspection procedure. Examine visually for tires labeled with specific restrictions.

§ 571.62 Wheel assemblies.

(a) Wheel integrity. A tire rim, wheel disc or spider shall have no visible cracks, elongated bolt holes, or indications of in-service repair by welding.

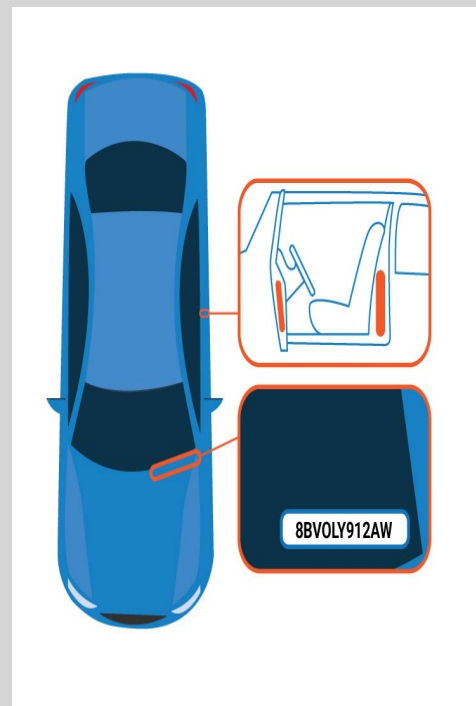
(1) Inspection procedure. Examine visually for the conditions indicated.

(b) Curb wheels. Curb wheels shall not be cracked or show evidence of excessive wear in the clamp area.

(2) Inspection procedure. Examine visually for the conditions indicated.

(3) Mounting. All wheel nuts shall be in place and tight.

### 車両リコール



### 衝突安全性能評価



### 先進技術





# 科学に基づくアプローチを推進

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- 内陸運輸委員会
- WP.1 – 道路安全
- WP.29 – 車両規則
- 高度道路交通システム
- 世界道路安全閣僚会議 – ストックホルム宣言
- ESV国際会議

# 省庁間および機関間の協調

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- OST-x
- EPA
- DOE
- USTR
- 商務省
- OMB
- NSC
- 財務省

# 米国のADS関連活動

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- NCAP、研究および規制活動
- 国際的な活動
- 常設の一般命令
- その他のADS活動
- 最近の公表物
- 対策執行

# 車両安全



## 新車アセスメントプログラム (NCAP)

- 意見公募
- ロードマップ要件

## 規則策定

- 少なくとも12の車両安全規則を追加策定する任務

## 車両安全研究のための補足的予算

- 政策およびNCAPロードマップ決定の裏付けとなる小型車および大型車の新興ADAS技術に関する研究の拡充
- 前面衝突用および側面衝突用女性ダミーの高度化

# 車両安全（続）

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## 衝突データ

- 新しい「州別電子データ伝送」の仕組みを用いて路上衝突データの報告を拡充する任務（5年間で7億5千万ドル）
- NHTSAの「衝突調査サンプリングシステム」の充実



# NHTSAによるADS関連規制活動

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秋期の規制アジェンダ：

<https://www.reginfo.gov/public/do/eAgendaMain>

- 衝突回避テストにおける新しいADS車両設計の促進に関するANPRM
- ADS搭載車両のテルテール、インジケータおよび警報装置の検討に関するANPRM
- ADSの乗員保護に関する最終規則
- ADS安全の枠組みに関するANPRM

# ADS安全の枠組みに関するANPRM – 公示履歴



78058 Federal Register / Vol. 85, No. 233 / Thursday, December 3, 2020 / Proposed Rules

or in any other area where the EPA or an Indian tribe has demonstrated that a tribe has jurisdiction. In those areas of Indian country, the proposed rule does not have tribal implications and will not impose substantial direct costs on tribal governments or preempt tribal law as specified by Executive Order 13175 (65 FR 67249, November 9, 2000).

#### List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Ammonia, Incorporation by reference, Intergovernmental relations, Nitrogen dioxide, Particulate matter, Reporting and recordkeeping requirements, Sulfur dioxide, Volatile organic compounds.

Authority: 42 U.S.C. 7401 *et seq.*  
Dated: November 17, 2020.

John Busterud,

Regional Administrator, Region IX,  
[FR Doc. 2020-26648 Filed 12-2-20; 8:45 am]

BILLING CODE 6560-50-P

#### DEPARTMENT OF TRANSPORTATION

##### National Highway Traffic Safety Administration

##### 49 CFR Part 571

[Docket No. NHTSA-2020-0106]

RIN 2127-AM15

##### Framework for Automated Driving System Safety

AGENCY: National Highway Traffic Safety Administration (NHTSA), Department of Transportation (DOT).

ACTION: Advance notice of proposed rulemaking (ANPRM).

**SUMMARY:** NHTSA is requesting comment on the development of a framework for Automated Driving System (ADS) safety. The framework would objectively define, assess, and manage the safety of ADS performance while ensuring the needed flexibility to enable further innovation. The Agency is seeking to draw upon existing Federal and non-Federal foundational efforts and tools in structuring the framework as ADS continue to develop. NHTSA seeks specific feedback on key components that can meet the need for motor vehicle safety while enabling innovative designs, in a manner consistent with agency authorities.

**DATES:** Written comments are due no later than February 1, 2021.

**ADDRESSES:** Comments must refer to the docket number above and be submitted by one of the following methods:

• **Federal eRulemaking Portal:** Go to <http://www.regulations.gov>. Follow the online instructions for submitting comments.

• **Mail:** Docket Management Facility, M-30, U.S. Department of Transportation, West Building, Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

• **Hand Delivery or Courier:** U.S. Department of Transportation, West Building, Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC, between 9 a.m. and 5 p.m. Eastern time, Monday through Friday, except Federal holidays. To be sure someone is there to help you, please call (202) 366-9322 before coming.

• **Fax:** 202-493-2251.

Regardless of how you submit your comments, you must include the docket number identified in the heading of this document.

Note that all comments received, including any personal information provided, will be posted without change to <http://www.regulations.gov>. Please see the "Privacy Act" heading below.

You may call the Docket Management Facility at 202-366-9322. For access to the docket to read background

documents or comments received, go to <http://www.regulations.gov> or the street address listed above. To be sure someone is there to help you, please call (202) 366-9322 before coming. We will continue to file relevant information in the Docket as it becomes available.

**Privacy Act:** In accordance with 5 U.S.C. 553(c), DOT solicits comments from the public to inform its decision-making process. DOT posts these comments, without edit, including any personal information the commenter provides, to <http://www.regulations.gov>, as described in the system of records notice (DOT/ALL-14 FDMS), which can be reviewed at <https://www.transportation.gov/privacy>.

Anyone can search the electronic form of all comments received into any of our dockets by the name of the individual submitting the comment (or signing the comment, if submitted on behalf of an association, business, labor union, etc.).

**FOR FURTHER INFORMATION CONTACT:**  
For legal issues, Sara R. Bennett, Attorney-Advisor, Vehicle Rulemaking and Harmonization, Office of Chief Counsel, 202-366-2992, email [Sara.Bennett@dot.gov](mailto:Sara.Bennett@dot.gov).

For research issues, Lori Summers, Director, Office of Vehicle Crash Avoidance and Electronic Controls Research, telephone: 202-366-4917, email [Lori.Summers@dot.gov](mailto:Lori.Summers@dot.gov).

For rulemaking issues, Tim J. Johnson, Acting Director, Office of

Crash Avoidance Standards, telephone 202-366-1810, email [Tim.Johnson@dot.gov](mailto:Tim.Johnson@dot.gov).

#### SUPPLEMENTARY INFORMATION:

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A. Development of ADS  
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B. Process Measures—Safety Risk Minimization in the Design, Development, and Refinement of ADS  
1. Functional Safety  
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IV. Safety Framework—Administrative Mechanisms for Implementation and Oversight  
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4. Reforming How NHTSA Drafts New FMVSS To Keep Pace With Rapidly Evolving Technology  
5. Examples of Regulatory Approaches  
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V. Questions and Requests  
VI. Preparation and Submission of Written Comments  
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**I. Executive Summary**  
Over the past several years, NHTSA has published numerous research reports, guidance documents, advance notices of proposed rulemakings, and on March 30, 2020 (85 FR 17624), a notice of proposed rulemaking relating to the development of vehicles equipped with Automated Driving Systems (ADS).<sup>1</sup> An ADS is the

<sup>1</sup> ADS, as defined by SAE International and as used in this document, refers to driving automation

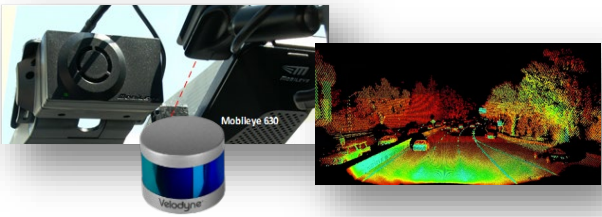
- 2020年12月3日 – ANPRM公示
- 2021年1月29日 – 意見公募期間延長の公示
- 2021年4月1日 – 意見公募期間終了
- 9月現在 – 進行中

# NHTSAによる自動運転システムの研究



## システム安全 性能

テスト走行路、シミュレーションおよび路上ツールの開発；テスト可能なケース；安全指標および評価基準



## サブシステムの テストおよび 機能安全

センサの感知能力／限界、フュージョン、冗長性；認知、操縦および実行



## 耐衝突性

代替的な着席配置、高度化されたテストダミー；無人車両の適合性



## 人的要因

ヒューマンマシンインターフェース；運転者監視システム；意思伝達；アクセス可能性；遠隔操作

# NHTSAによるADSに関する国際的な活動

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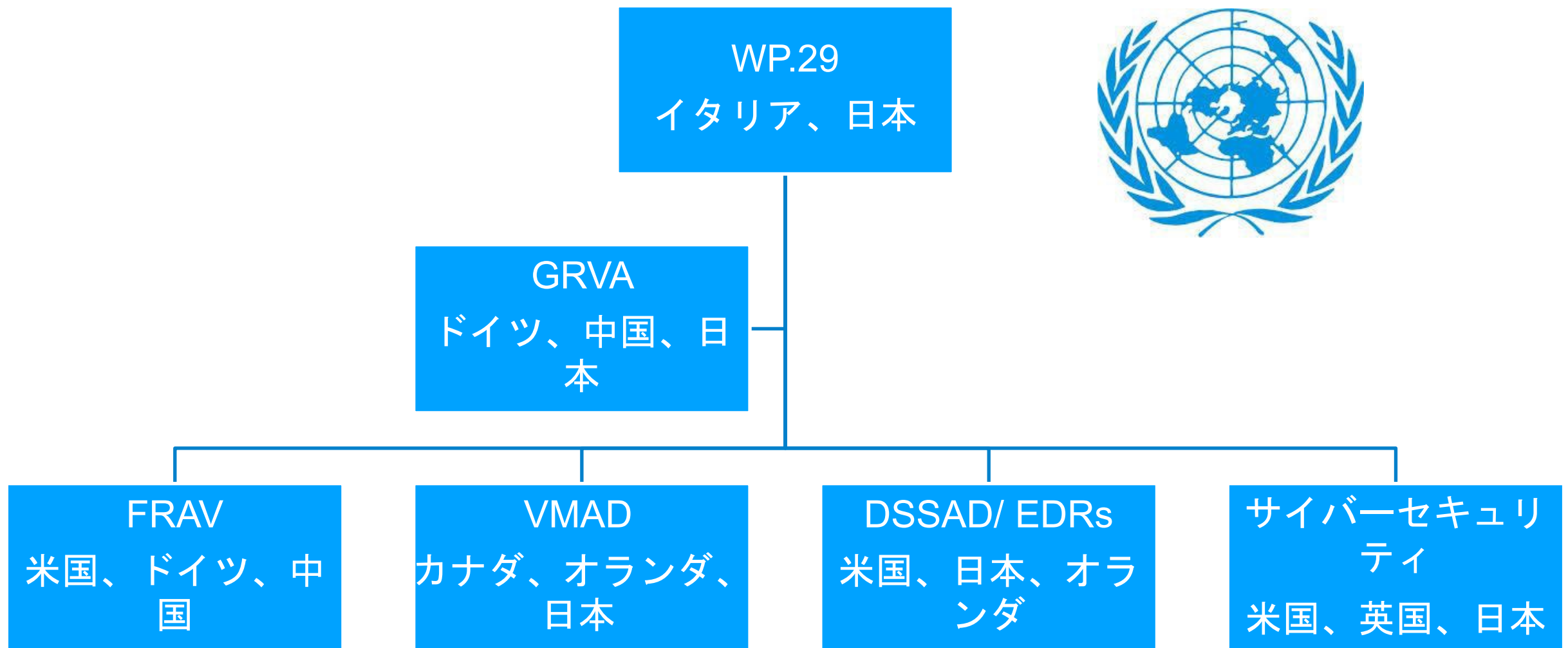
- 国際連合（UNECE）
  - WP.1 – 道路交通安全
  - WP.29 – 車両規則
    - 自動運転分科会（WP.29/GRVA）
- 道路交通の自動化に関する欧州連合・米国・日本による三極作業部会



**EU★US★JAPAN**  
ITS COOPERATION



# 自動運転システムに関する国連活動



# 常設の一般命令 – 2021年6月（2021年8月改訂）

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ADSおよびSAEレベル2のADAS搭載車のメーカーおよび運転者は、当局に衝突の報告を行わなければならない。

- ADSおよびADASレベル2の場合 — 病院で処置を受けた傷害、死亡、車両のレッカー移動、エアバッグの展開、または交通弱者（歩行者または自転車利用者など）に関する報告を1暦日以内、同報告の更新版を10暦日目に提出
- ADSのみの場合 — ADS搭載車が巻き込まれたその他の衝突のうち、傷害または物的損害を生じたものに関する報告を翌月の15日目に提出

安全上の欠陥の存在を示唆する情報が得られる事故の通知を適時取得する。

企業による遵守違反は、民事罰の対象となり、かつ／または司法省への付託対象となる可能性がある。



# NHTSAによるその他のADS活動

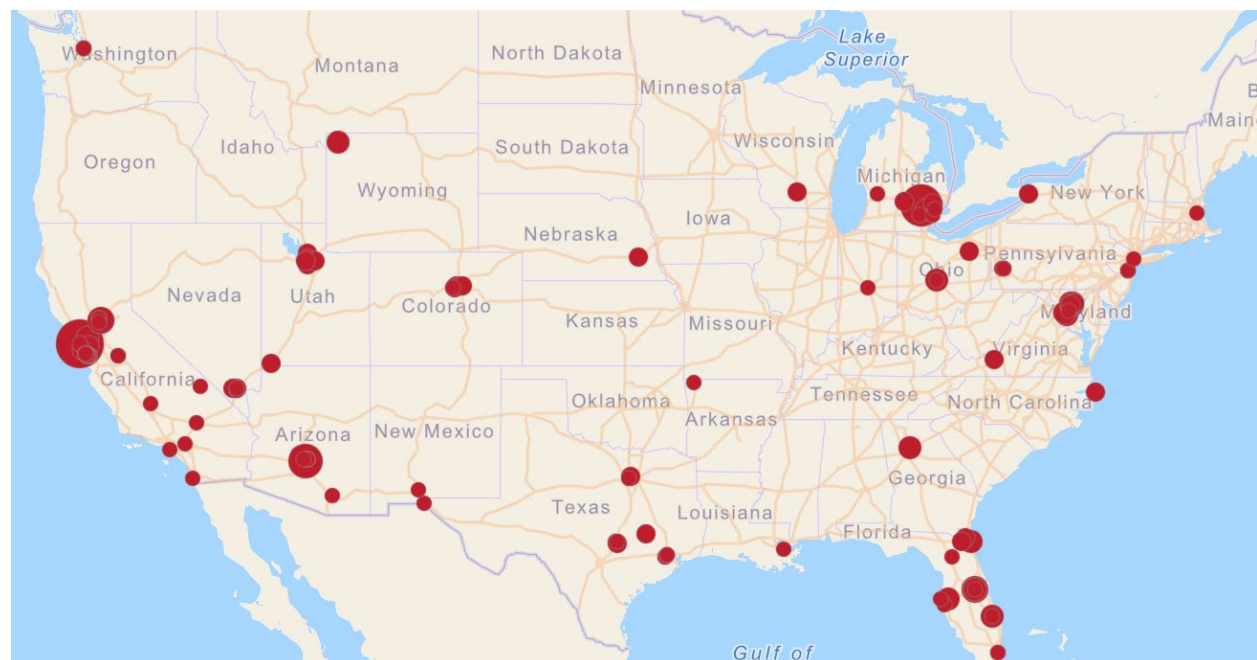
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- 特別衝突調査

調査が終了したケース -

<https://crashviewer.nhtsa.dot.gov/SCI/SearchIndex>

- 輸入車の適用除外



# NHTSAによる最近のADS関連公表物



- 「自動運転システムのテスト可能なケースおよびシナリオに関する枠組み」  
<https://rosap.ntl.bts.gov/view/dot/38824> 参照
- 「運転シナリオの定義に使用する要素の選択および説明のためのアプローチ」  
<https://rosap.ntl.bts.gov/view/dot/55465> 参照
- 「ADASおよびADS用の最新式テストツール」 <https://rosap.ntl.bts.gov/view/dot/55991> 参照
- 「汎用レベル3 ハイウェイ・ショーファー・システムの車線中央維持および車線変更操作の意図した機能の安全性」 <https://rosap.ntl.bts.gov/view/dot/53628> 参照
- 「FMVSSにおける自動運転システム搭載車に関する検討事項」
  - 第1巻 – <https://rosap.ntl.bts.gov/view/dot/54287> 参照
  - 第2巻 – <https://rosap.ntl.bts.gov/view/dot/54442> 参照
- 「自動運転システム搭載車における乗員の安全 第2部：自動運転システム搭載車における正規着座位置以外の乗員姿勢に関する衝突安全上の検討事項 - 現場データ調査」  
<https://rosap.ntl.bts.gov/view/dot/55730> 参照
- 「自動運転システム搭載車における乗員の安全 第3部：試験機関でのスレッドテストに対するGHBMC M50-OSの生体忠実性の評価（WASパート2）」  
<https://rosap.ntl.bts.gov/view/dot/50709> 参照

# 適合性の監視

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- 市販後のNHTSAによる購入およびテストを通じた強力な適合性監視
- 自動車製品の安全マージン確保を促進
- 不適合が発覚した製品への入念な対策の執行

# 適合性テスト

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- NHTSAテスト手順 : <https://one.nhtsa.gov/Vehicle-Safety/Test-Procedures/>
- NHTSA適合性テスト報告書 : <https://icsw.nhtsa.gov/cars/problems/comply/>

REPORT NUMBER 110-STF-19-002  
SAFETY COMPLIANCE TESTING FOR  
FMVSS NO. 110  
TIRE SELECTION AND RIMS  
GENERAL MOTORS OF CANADA COMPANY  
2019 CHEVROLET EQUINOX  
MPV  
NHTSA NO. C20190100  
U.S. DOT SAN ANGELO TEST FACILITY  
131 COMANCHE TRAIL, BUILDING 3527  
GOODFELLOW AFB, TEXAS 76908



OCTOBER 24, 2018  
FINAL REPORT  
PREPARED FOR  
U. S. DEPARTMENT OF TRANSPORTATION  
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION  
ENFORCEMENT  
NEF-200  
OFFICE OF VEHICLE SAFETY COMPLIANCE  
1200 NEW JERSEY AVENUE, SE  
WASHINGTON, D. C. 20590

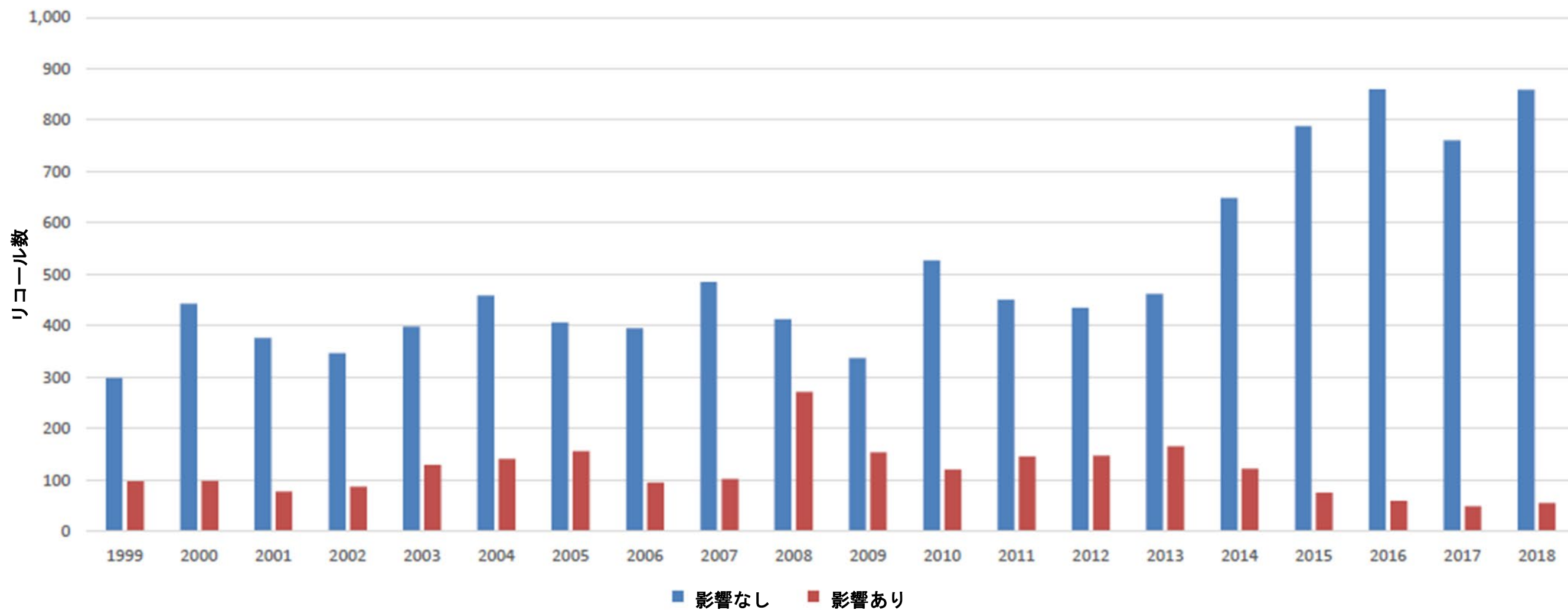
# 安全対策の執行

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- 規則がない場合でも、NHTSAは、安全でない製品のリコールを要求できる。
- 複数のチャンネルを介した路上安全の能動的監視
- 安全上の問題を早期の段階で効果的に特定および調査する。
- 安全でない車両を路上で使用することがもたらす結果

# 安全対策の執行

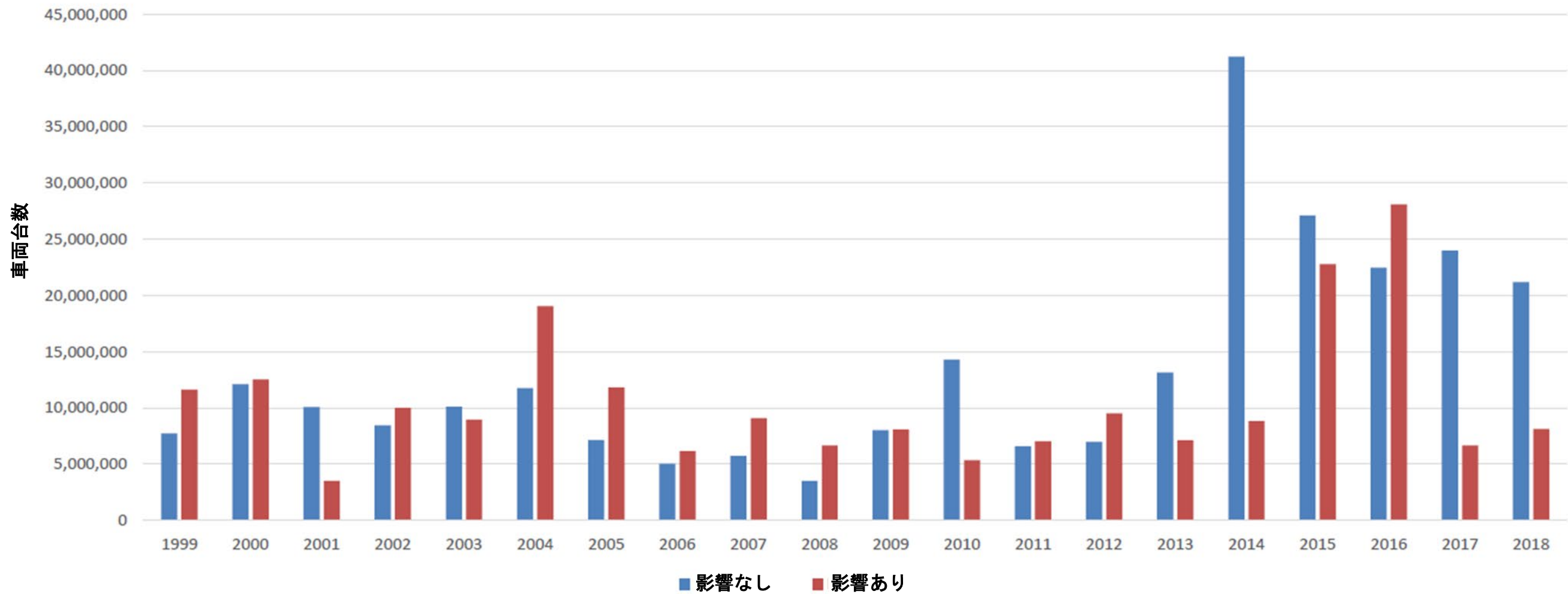
1999年～2018年の年間車両リコール数





# 安全対策の執行

1999年～2018年のリコール車両台数





# NHTSA

NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION



[www.nhtsa.gov](http://www.nhtsa.gov)