

Taskforce on the Fitness of GRVA Regulations and GTRs for ADS

Introduction and context

Introduction

- At its 186th session in March 2022, WP29 requested all its subsidiary working parties to perform a screening of the UN Regulations and Global Technical Regulations (GTR) of relevance regarding their fitness for Automated Driving Systems (ADS) until **March 2023**.
- At the 13th session of GRVA in May 2022, the expert from France volunteered to lead and coordinate the work regarding the screening of UN Regulations and GTRs under the purview of GRVA, and the expert from China offered their support and stated their willingness for active involvement and contribution.

Proposed area of work (1/3)

To be discussed at the 1st session of the taskforce

- **Perform a screening of all Regulations and GTRs within the purview of GRVA**
- **Work in collaboration with the ADS fitness taskforces of other GRs**

Proposed area of work (2/3)

- **Perform a screening of all Regulations and GTRs within the purview of GRVA:**
 1. Identify Regulations and GTRs that may be affected by vehicles equipped with ADS;
 2. Establish a list of affected prescriptions and study options, including:
 - Removing prescriptions;
 - Modifying prescriptions;
 - Adding new prescriptions;
 - Amending Regulations and GTRs;
 - Drafting new Regulations and GTRs.

Proposed area of work (3/3)

- **Work in collaboration with the ADS fitness taskforces of other GRs**
 - Reply to requests and questions from other ADS fitness taskforces when details on ADS are needed
 - Redirect towards FRAV when necessary
 - Attend sessions of other ADS fitness taskforces to share information
 - Work towards a common screening method and format for deliverables

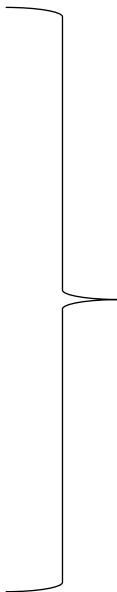
Inventory of GRVA Regulations and GTRs

| Regulation | Title | GTR | Title |
|------------|---|-------|--------------------------------------|
| R13 | Heavy vehicle braking | GTR 3 | Motorcycle brake systems |
| R13H | Brakes of M1 and N1 vehicles | GTR 8 | Electronic stability control systems |
| R78 | Braking (category L vehicles) | | |
| R79 | Steering equipment | | |
| R89 | Speed limitation devices | | |
| R90 | Replacement braking parts | | |
| R102 | Close coupling devices (CCDs) | | |
| R130 | Lane Departure Warning System (LDWS) | | |
| R131 | Advanced Emergency Braking Systems (AEBS) | | |
| R139 | Brake Assist Systems (BAS) | | |
| R140 | Electronic Stability Control (ESC) | | |
| R147 | Mechanical coupling components of combinations of agricultural vehicles | | |
| R152 | Advanced Emergency Braking Systems (AEBS) for M1 and N1 vehicles | | |
| R155 | Cyber security and cyber security management system | | |
| R156 | Software update and software update management system | | |
| R157 | Automated Lane Keeping System (ALKS) | | |

General steering & braking Regulations/GTR
High potential ADS impact

Challenges

- Capitalise on previous work
 - CN, EU, USA, UK are studying or have studied this topic
- Cover different ADS implementations:
 - ALKS (level 3)
 - Dual mode (level 4)
 - Fully automated vehicle (level 4/5)
- Cover different use cases:
 - Transport of goods
 - Transport of persons (shuttle, taxi, personal car)



Guidance from GRVA is welcome on whether to prioritise use cases already on the road

Example of a low impact prescription

UN R 102 para. 2.2.1. “Straight line stability test”

*Vehicles shall be tested at a speed of 85 +5/-0 km/h and remain aligned. During the test, it must be possible to travel along a straight section of the road without unusual steering correction **by the driver.***

Example of a high impact prescription

UN R 13 para. 5.1.2.2. “Secondary braking system”

*The **driver** shall be able to achieve this braking action from his **driving seat** while keeping at least **one hand** on the **steering control**.*

How to keep the **spirit** of the prescription when adapting it to ADS?

Examples of options:

- Leave the prescription as is and add prescriptions inside ADS regulations;
 - E.g. in UN R157, “severe vehicle failures” should cause a “Minimum Risk Manoeuvre”;
- Create a separate prescription for ADS inside UN R13;
 - “ADS shall be able to use the secondary braking system in the event of failure...”
- Create a separate braking regulation for ADS;
- Etc.

Timeline

- **7 October 2022, 13:00 – 15:00 CET** : First session of the taskforce (open to all interested GRVA experts)
- **January 2023**: report at the 15th session of GRVA
- **March 2023**: synthesis at WP29
- ***After March 2023***: possible start of drafting amendments, depending on WP29 outcomes

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