

Status Report

Task Force

Automated Vehicles—Regulatory Screening

(TF-AVRS)

of UN Regulations and GTRs under responsibility of

GRSP

1. Background

At the 71st meeting of GRSG, the secretariat, on behalf of WP.29, asked GRSP to start evaluating the UN Regulations and GTRs falling under the responsibility of GRSP

[Report of the Working Party on Passive Safety on its seventy-first session, Geneva, 9–13 May 2022](#)
[ECE/TRANS/WP.29/GRSP/71](#)

XX. Exchange of views on vehicle automation (agenda item19)

36. At the request of WP.29 (ECE/TRANS/WP.29/1164, paragraphs 27 to 30), a majority of GRSP experts agreed to **establish a task force with Germany as coordinator and OICA as secretariat, that would in Autumn 2022, start to screen the UN Regulations and UN GTRs under its responsibility**. Screening would be related to drivers, to accommodate for autonomous driving. The task force would include experts from China, France, Germany, Japan, Netherlands, Republic of Korea, Spain, United States, EC, CLEPA and OICA for the time being.

[Report of the World Forum for Harmonization of Vehicle Regulations on its 186th session](#)
[ECE/TRANS/WP.29/1164](#)

C. Intelligent Transport Systems and coordination of automated vehicles related activities (agenda item 2.3)

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30. **WP.29 requested all GRs to perform a screening of the UN Regulations and UN GTRs of relevance until March 2023** and agreed to resume consideration of a coordinated approach for reporting to AC.2 and WP.29.

2. Overview affected UN Regulations and GTRs

UN-R

11	approval of vehicles with regard to door latches and door retention components	25	approval of head restraints (headrests), whether or not incorporated in vehicle seats
12	approval of vehicles with regard to the protection of the driver against the steering mechanism in the event of impact	29	approval of vehicles with regard to the protection of the occupants of the cab of a commercial vehicle
14	approval of vehicles with regard to safety-belt anchorages	32	approval of vehicles with regard to the behaviour of the structure of the impacted vehicle in a rear-end collision
16	approval of: I. Safety-belts, restraint systems, child restraint systems and ISOFIX child restraint systems for occupants of power-driven vehicles II. Vehicles equipped with safety-belts, safety-belt reminders, restraint systems, child restraint systems and ISOFIX child restraint systems and i Size child restraint systems	33	approval of vehicles with regard to the behaviour of the structure of the impacted vehicle in a head-on collision
17	approval of vehicles with regard to the seats, their anchorages and any head restraints	42	approval of vehicles with regard to their front and rear protective devices (bumpers, etc.)
21	approval of vehicles with regard to their interior fittings	44	approval of restraining devices for child occupants of power-driven vehicles ("Child Restraint Systems")
22	approval of protective helmets and their visors for drivers and passengers of motor cycles and mopeds	80	approval of seats of large passenger vehicles and of these vehicles with regard to the strength of the seats and their anchorages
25	approval of head restraints (headrests), whether or not incorporated in vehicle seats	94	approval of vehicles with regard to the protection of the occupants in the event of a frontal collision
		95	approval of vehicles with regard to the protection of the occupants in the event of a lateral collision
		100	approval of vehicles with regard to specific requirements for the electric power train

2. Overview affected UN Regulations and GTRs

UN-R

111	approval of tank vehicles of categories N and O with regard to rollover stability
114	approval of: I. An airbag module for a replacement airbag system II. A replacement steering wheel equipped with an airbag module of an approved type III. A replacement airbag system other than that installed in a steering wheel
126	approval of partitioning systems to protect passengers against displaced luggage, supplied as non original vehicle equipment
127	approval of motor vehicles with regard to their pedestrian safety performance
129	approval of Enhanced Child Restraint Systems (ECRS)
134	approval of motor vehicles and their components with regard to the safety-related performance of hydrogen-fuelled vehicles (HFCV)
135	approval of vehicles with regard to their Pole Side Impact performance (PSI)
136	approval of vehicles of category L with regard to specific requirements for the electric power train

137	approval of passenger cars in the event of a frontal collision with focus on the restraint system
145	approval of vehicles with regard to ISOFIX anchorage systems ISOFIX top tether anchorages and i-Size seating positions
146	approval of motor vehicles and their components with regard to the safety-related performance of hydrogen-fuelled vehicles of categories L1,
153	approval of vehicles with regard to fuel system integrity and safety of electric power train in the event of a rear-end collision

GTR

1	Door lock and door retention components
7	Head restraint
9	Pedestrian safety
13	Hydrogen and fuel cell vehicles
14	Pole side impact
20	EV safety

3. Interaction with other GR's

At the 14th meeting of GRVA NL proposed to align the scope of the work to be done in all GR's under WP.29. After an extensive discussion GRVA decided:

Fourteenth session of the Working Party on Automated/Autonomous and Connected Vehicles (GRVA)

26-30 September 2022

Decisions submitted to silence procedure following formal meetings with remote participation:

Agenda item No. 4(e), Decision No. 14

GRVA received a request for input from the experts involved in the review of UN GTRs and UN Regulations with regards to ADS. GRVA prepared GRVA -14 -54/Rev.1 with guidance for the experts involved in these activities. GRVA requested the Chair to inform AC.2 about this collaboration between the GRs.

3. Interaction with other GR's

GRVA-14-54/Rev.1 - (Secretariat) Automated Vehicles Regulatory Screening of UN Regulations and GTRs - Guidance

Items to consider during the screening of UN Regulations and UN GTRs:

1. Vehicles in the scope:

- Vehicles equipped with an ADS
 - including, but not limited to:
 - Dual-mode vehicles
 - Vehicles without manual driving capabilities
 - Vehicles with or without occupants

2. Screen regulations with:

- Terms such as “driver” (interaction with controls in the vehicles, signals, etc.), “seating position” (incl. seat references) and other topics (performance requirements)
- Terms such as “driver”, “seating position”, “seat”, etc. in relation with testing provisions

3. Recommendation:

Any proposal to introduce ADS-related terminology shall be reviewed by GRVA to ensure consistent terms and definitions.

3. Interaction with other GR's

At the 124th meeting of GRSG the Chairs of the TF of GRSG, GRVA and GRSP decided to have a meeting with the chairs and secretaries of all other GR's to align the work in all GR's of WP.29 on base of a clear scope and the same forms.

This meeting took place on 11th of November 2022

It was concluded in a first step to scan the regulations word by word to find,

- terms such as “driver” (interaction with controls in the vehicles, signals, etc.), “seating position” (incl. seat references) and other topics (performance requirements),
- tasks to be done by a “driver” etc.
- responsibilities of a “driver” etc.
- provisions not relevant for or in contradiction to vehicles with an ADS

This shall be done by converting the complete regulation or at least the part where an issues has been detected into an excel file, to document the results

3. Interaction with other GR's

UN Regulation	Seat belt anchorages							
14								
09 series of amendments; Supplement 1				Notes:			a) For bi-directional vehicles ... B).Only seat positions with 25° seatback considered	
Date of review	16.11.2022							
SCOPE	This Regulation applies to: Vehicles of categories M and N with regard to their anchorages for safety-belts intended for adult occupants of forward-facing or rearward-facing or side-facing seats;							
List of paragraphs with effect to the approval of automated vehicles								
Paragraph	Text	Issue	Issue for fully automated vehicles?	Issue for dual mode vehicles?	Issue for vehicles without occupants?	Issue for other use cases?	Possible action	Criticality
1	Scope: This Regulation applies to: Vehicles of categories M and N with regard to their anchorages for safety-belts intended for adult occupants of forward-facing or					Bi-directional vehicles not considered so far. Only seated passengers considered		
2.6.1.	Front passenger seat" means any seat where the "foremost H point" of the seat in question is in or in front of the vertical transverse plane through the driver's R point	Link to driver R-point	yes	no	n/a	?	Redefinition	no
5.1.6.2.	In the absence of a well-defined position:							
5.1.6.2.1.	The plane P for the driver's seat is a vertical plane parallel to the median longitudinal plane of the vehicle which passes through the centre of the steering-wheel in the plane of the steering-wheel rim when the steering-wheel, if adjustable, is in its central position.	Link to driver seat and st	yes	no	no	?	Redefinition	no
5.1.6.2.2.	The plane P for the front outboard passenger shall be symmetrical with that of the driver.	Link to Driver (seat)	yes	no	no	?	Redefinition	no
Please note: This is only an example and not the complete screening of Regulation 14								

3. Interaction with other GR's

In a second step for each regulation a sheet shall be prepared to serve as a high level summary of the findings to be delivered to WP.29. in March 2023.

The form should base on a form presented by OICA during WP.29, which still has to be improved and decided at a second meeting of the TF Leaders and Secretaries of the different GR TF's on 30th of November 2022.

On the second meeting of the TF Leaders and Secretaries of the different GR TF's it was concluded as proposed by the GRSP TF to integrate this summery sheet in the excel file .

3. Interaction with other GR's

Automated Vehicles - Regulatory Screening (AVRS)				
UN Regulation N°	09 series of amendments; Supplement 1		Date of review:	16.11.2022
Scope:	Category M & N			
Content of existing Regulation			Specifics for dual-mode vehicles	none
Content relevant for vehicles equipped with an ADS			Specifics for vehicles without manual driving capabilities	none
Content to be covered by (potential) ADS Regulation	n/a		Specifics for vehicles with or without occupants	n/a
Summary of recommended changes	Change Driver seat by.....			
Notes:	Bi-directional vehicles to be reviewed in a second step Other seat positions (e.g. Large seat back angle) to be reviewed in second step			
Outcome of review				
		Yes	No	
Regulation applicable to automated vehicles/driverless vehicles			X	
Recommendation:	Amendment required			
potential approach	New Regulation			

Please note:

a) This page serves as a summary of the "Review" worksheet

b) These fields on this page are only filled in as examples!

c) Please fill in these white fields

Review | Summary | Document | +

4. 1st Meeting of the GRSP TF-AVRS

On 24th of November the 1st meeting of the GRSP TF-AVRS took place in virtual format

Despite the uncomfortable timeslot for the far east of the world, a huge number of participants also from Asia and Australia attended the meeting.

The TF members elected Mr. Rudolf Gerlach (Germany) as TF Leader and Mr. Ansgar Pott (OICA) as Secretary of the TF


The TASK Force leaders explained the background and the way how to perform the regulation scan as it has been agreed amongst the other GR's TF Leaders. During the meeting the TF Leader asked the participants to take over the job to fill out the excel sheet for at least one of the regulations. Thanks to the participants, for all of the 30 UN regulations and 6 GTR's under GRSP a responsible person could be nominated. The TF Leader asked the responsible persons whenever possible to deliver first outcomes for the 72nd session of GRSP

It has been concluded to upload all excel files with the results for further discussion on UN wikipage of the GRSP TF-AVRS

<https://wiki.unece.org/pages/viewpage.action?pageId=188285257>

5. Next steps

To do:

- Scan of all GRSP Regulations
 - Highlight paragraphs of Regulation with effect to vehicles with ADS (possible issues blocking application of the Regulation to ADS vehicles)
 - Point out possible effects to future use cases (bi-directional vehicles, other passenger positions...)
 - Define possible action needed (no detailed elaboration)
 - Estimate criticality of necessary changes
- First feedback for GRSP-72 (December 2022) 
- 2nd TF meeting in January (date tbd)
- Summary of findings to be presented to WP.29

Timeline:

- WP.29 is expecting input for its March 2023 session
- **→ this is before the 73rd session of GRSP (May 15 -19 2023)**
- **→ to be able to endorse the outcome during GRSP 73, the deadline needs to be postpone to the June session of WP.29**

Other GRs have the same problem. **The TF therefore asks the GRSP Chair to contact WP.29 in this regard**