

Programme of Work of the World Forum for Harmonization of Vehicle Regulations and its Subsidiary Bodies

Main topics of work of the World Forum for Harmonization of Vehicle Regulations and its subsidiary bodies

The World Forum for Harmonization of Vehicle Regulations has aligned its work to the Agenda 2030 incorporating into its regulatory framework the technological innovations of vehicles to make them safer and more environmentally sound and thus contributing to the implementation of SDGs 3, 7, 9, 11 and 13.

The Inland Transport Committee (ITC), at its eighty-first annual session in 2019 adopted the ITC Strategy until 2030, invited its subsidiary bodies to take follow-up actions aligning their work with the strategy. In June 2019, the ITC Chair invited all Chairs of Working Parties or Administrative Committees to support in the implementation of the ITC Strategy by proposing a concrete plan aligning the work of their Working Party or Administrative Committee with the ITC strategy.

For the implementation of the ITC strategy ITC identified that, apart from the regular work, the subsidiary bodies need to undertake the following tasks in the Strategy (only those relevant to WP.29 are displayed):

(a) Amendments to the legal instruments with geographical and procedural barriers by 2025 (all WPs/SCs and ACs);

(b) Review of relationship of the existing legal instruments and recommendations by 2022 (all WPs/SCs and ACs to review the legal instruments in the context of different clusters, namely safety, cross-border efficiency, environment and connectivity);

(c) Identification of additional necessary legal instruments (Based on the review, all WPs/SCs and ACs to identify gaps of the legal instruments fully meet the needs for safety, cross-border efficiency, environment and connectivity);

...

(e) Exploring possible new legal instruments from 2020 (all WPs/SCs and ACs based on the above item (c));

(f) Further expand global participation in, and cooperation between, WP.1 and WP.29;

(g) Update DETA and host it at ECE from 2022 onwards (WP.29). This should include consideration given to broadening the current scope of DETA to address needs of 1998 Contracting Parties;

...

(j) Identify, foster and facilitate the introduction of new technologies in the rail, road, road-based mobility, inland waterway, logistics, intermodal transport until 2030 (all WPs/SCs and ACs). The deliverables for this activity should follow realistic timelines, mutually agreed by Contracting Parties;

(k) Enhance support to automated vehicles from 2019, including continuation of amendments to the existing legal instruments and standards, and possible development of new agreement(s), guidance documents, or all if necessary (WP.1 and WP.29);

(l) New training standards and competency criteria from 2022 (all WPs/SCs and ACs with legal instruments);

...

(q) New tools and activities from 2019, e.g. - THE PEP; further development of local pollutant module of ForFITS; reviews on green transport and mobility (WP. 5, WP.29);

...

In conclusion and considering ITC's special priority of global interest, Road Safety and Climate Change mitigation, the top priorities for the work of the World Forum for Harmonization of Vehicle Regulations are related to vehicle safety, including the field of automated vehicles paving the way for a regulatory framework supporting the introduction of these emerging technologies towards future autonomous vehicles, and to environmental protection and climate change mitigation. A detailed list of UN Regulations, UN GTRs, UN Rules and Resolutions for discussion at the upcoming sessions of WP.29 is shown in Table 1.

1. Further development and implementation of the three Vehicle Agreements

1.1. **1958 Agreement:** Following the adoption and entry into force of Revision 3 of the 1958 Agreement on 14 September 2017, the requirements for International Whole Vehicle Type Approval (IWVTA) are to be further developed within UN Regulation No. 0. and DETA to be further developed by adding the modules for Unique Identifier (UI) and Declaration of Conformance (DoC).

1.2. **1997 Agreement:** Amendments to the agreement entered into force on 13 November 2019 introducing elements related to the performance and quality of periodic technical inspections. These endeavours were underpinned by resolution R.E.6 covering skills and training for inspectors, requirements for testing equipment and supervision of test centres. Two additional rules were established covering vehicles with gaseous fuels and electric or Hybrid electric propulsion systems. Access to information necessary for performance of periodic technical inspection of modern vehicles and their electronic controlled safety components needs to be addressed.

1.3. **1998 Agreement:** Following the establishment of Special resolution S.R.3, the implementation of the agreement will be followed with a more strategic approach by identifying key elements that define elements the work will focus on.

2. Horizontal activities

2.1. Performance requirements outside test conditions (ECE/TRANS/WP.29/1126, para. 21) and whole life compliance are elements to be considered in all areas of work both in WP.29 and in all GRs.

3. Main topics of the Subsidiary Bodies

3.1. As of the 184th session of WP.29, all GRs were invited to regularly perform a review of their activities and to update their top priorities of their work. The outcome of this review provided the basis for the establishment of the Programme of Work of the World Forum for Harmonization of Vehicle Regulations (WP.29) and its Subsidiary Bodies for the year 2022 and beyond (ECE/TRANS/WP.29/1159, paras. 34 and 35). There was common agreement that in addition to the work on top priorities, existing UN Regulations, UN GTRs and UN Rules would need to be updated for keeping pace with technical progress on a continuous basis. GRs identified the following main priorities of work for 2023:

3.1.1. GRBP main topics are the work on real driving Additional Sound Emission provision (ASEP), for Quiet Road Transport Vehicles (QRTV), Reverse Warning System (RWS), Measurement Uncertainties, as well as Wet Grip of Worn Tyres (WGWT). Further activities are relating to new traction tyre definition, TPMS and vehicle type definition for sound measurements.

A detailed list of priority activities of GRBP is presented in Table 2.

3.1.2. GRE is continuing the work on simplification of the lighting regulations following the establishment of the UN Regulations Nos. 148,149 and 150 as well as Resolution R.E.5 on the common specification of light source categories. Once the first stage of simplification is finalized, in the second stage, GRE will focus on introducing technology neutral

requirements, also taking into account work to avoid glare and to ensure good visibility for dipped beam headlamps. Also, a suitable application of Unique Identifier for lighting regulations is being considered. Installation requirements will be updated by new Series of Amendments for Regulation No. 48 EMC issues will be addressed, not only specifically for certain vehicles and functionalities (e.g. for electrical vehicles) but also generally for adaptation to technical progress (e.g. consideration of enlarging frequency test-range, assistance systems)..

A detailed list of priority activities of GRE is presented in Table 3.

3.1.3. GRPE main area of work is related to improvement of exhaust emissions requirements to ensure real drive performance on the road, new propulsion energy including in-vehicle battery durability or hydrogen systems as well as particulate emissions: Provisions to limit airborne particulates from different sources e.g. sub-23 nm exhaust particles and particulates stemming from brake emissions and/or tyre wear.

A detailed list of priority activities of GRPE is presented in Table 4.

3.1.4. GRVA is establishing further elements for the UN vehicle regulatory framework towards automated driving. This includes Functional Requirements for automated / autonomous vehicles, New assessment / Test methods, Cyber security and (Over-the-Air) Software updates and Data Storage System for Automated Driving vehicles (DSSAD). GRVA will further elaborate requirements for Advanced Driver Assistance Systems (ADAS) based on the UN Regulation No.79, Automated Driving Systems extending UN Regulation No.157, Automated Emergency Braking Systems (AEBS) based on UN Regulation No.131 and Automated Lane Keeping Systems based on UN Regulation No. 157.

A detailed list of priority activities of GRVA is presented in Table 5.

3.1.5. GRSG work will focus on common performance requirements for EDR suitable for both 1958 and 1998 Agreements, EDR for ADAS equipped vehicles and for Heavy Duty Vehicles (HDV), on driver's field of vision assistant systems, improved direct visibility by drivers of HDVs and heating systems for electric vehicles. GRSG will consider inclusion of automated vehicles in the vehicle classification system in R.E.3.

A detailed list of activities of GRSG is presented in Table 6.

3.1.6. GRSP focuses its work on crashworthiness. Current priorities are electric vehicle safety, pedestrian safety and child safety. Further work priorities are hydrogen and fuel cell vehicles and helmets as well as update of UN crash regulations and head restraints.

A detailed list of priority activities of GRSP is presented in Table 7.

Table 1
Subjects under consideration by the World Forum (WP.29) at its 189th session

<i>Subject</i>	<i>Document symbol ECE/TRANS/WP.29/...</i>	<i>Documentation availability</i>
1.0. Automated/Autonomous Driving		
1.0.1. Framework document on automated/autonomous vehicles.		
1.0.2. Functional Requirements for automated / autonomous vehicles		
1.0.3. New assessment / Test method		
1.0.4. Cyber security and (Over-the-Air) Software updates		
1.0.5. Event Data Recorder (EDR)		
1.0.6. Data Storage System for Automated Driving vehicles (DSSAD)		
1.1. 1958 Agreement		For document symbols and its availability, please refer to the agenda (1169)
1.1.1. Proposal for amendments to UN Regulations to be considered at the March 2023 session		
UN Regulation No.:		
0 (IWVTA)		
9 (Noise of three-wheeled vehicles);		
10 (Electromagnetic compatibility);		
13 (Heavy vehicle braking);		
18 (Anti-theft of motor vehicles);		
39 (Speedometer and Odometer);		
46 (Devices for indirect vision);		
51 (Noise of M and N categories of vehicles);		
53 (Installation of lighting and light-signalling devices for L3 vehicles);		
55 (Mechanical couplings);		
63 (Noise emissions of mopeds);		
78 (Motorcycle braking);		
79 (Steering equipment);		
90 (Replacement brake parts);		
97 (Vehicle Alarm Systems).		
107 (M2 and M3 vehicles);108 (Retreaded tyres for passenger cars and their trailers);		
109 (Retreaded tyres for commercial vehicles and their trailers);		
116 (Anti-theft and alarm systems);		
117 (Tyre rolling resistance, rolling noise and wet grip);		

<i>Subject</i>	<i>Document symbol</i> <i>ECE/TRANS/WP.29/...</i>	<i>Documentation</i> <i>availability</i>
121 (Identification of controls, tell-tales and indicators);		
125 (Forward Field of Vision of Drivers);		
141 (Tyre pressure monitoring system);		
142 (Tyre installation);		
148 (Light-signalling devices);		
149 (Road illumination devices).		
152 (AEBS for M1 and N1);		
154 (Worldwide harmonized Light vehicles Test Procedure (WLTP));		
160 (Event Data Recorder (EDR));		
161 (Devices against Unauthorized Use);		
162 (Immobilizers);		
163 (vehicle alarm system),		
164 (studded tyres).		
1.1.2. Proposal for new UN Regulations to be considered at the March 2023 session [16X] (xxxx)		
1.1.3. Status of the Agreement and of the annexed UN Regulations, including the latest situation report	343/Rev.31	
1.1.4. Development of an International Whole Vehicle Type Approval (IWVTA) system,		
1.1.5. Consideration of amendments to the 1958 Agreement.		
1.1.6. Development of an electronic database for the exchange of type approval documentation (DETA)		
1.2. 1998 Agreement (Global)		For document symbols and its availability, please refer to the agenda (1169)
1.2.1. Consideration of draft UN GTRs and amendments to them to be considered at the March 2022 session New UN GTR on In-vehicle Battery Durability for Electrified Vehicles		
1.2.2. Consideration of Mutual Resolutions Nil		
1.2.3. Guidance for the development of UN GTRs: Nil		
1.2.4. Progress on the development of new UN GTRs and of amendments to established UN GTRs		
1.2.5. Progress on the development of new UN GTRs and of amendments to established UN GTRs		

<i>Subject</i>	<i>Document symbol</i> <i>ECE/TRANS/WP.29/...</i>	<i>Documentation</i> <i>availability</i>
2 (Worldwide Motorcycle emission Test Cycle (WMTC))		
3 (Motorcycle braking)		
8 (Electronic stability control systems (ESC))		
9 (Pedestrian safety).		
13 (Hydrogen and Fuel Cell Vehicles (HFCV) – Phase 2)		
16 (Tyres)		
19 (EVAPorative emission test procedure for the Worldwide harmonized Light vehicle Test Procedure (WLTP EVAP))		
20 (Electric Vehicles Safety (EVS))		
21 (determination of electrified vehicle power (Electric vehicles and the environment))		
Draft UN GTR on Quiet Road Transport Vehicles (QRTV)		
Draft UN GTR on Global Real Driving Emissions (GRDE)		
1.2.6. Exchange of views on items for further development of UN Global Technical Regulations/Mutual Resolutions		
Harmonization of side impact		
Specifications for the 3-D H point machine		
Event Data Recorder (EDR)		
1.3. 1997 Agreement (Inspections)		For document symbols and its availability, please refer to the agenda (1169)
1.3.1. Future development of the Agreement		
1.3.2. Consideration of new UN Rules		Nil
1.3.3. Update of existing UN Rules		Nil
1.3.4. Amendments to Resolution R.E.6		Nil

Table 7
Subjects under consideration by the Working Party on Passive Safety (GRSP)

GRSG								
Priority/ recurrent	Title	Tasks / Deliverables	References	Allocations / IWGs	Timeline (GRSG adoption)	Timeline (WP.29 adoption)	Initiator	Comments
Priority	Event Data Recorder	EDR performance elements for ADS		GRSG in cooperation with GRVA, IWG on EDR/DSSAD	Oct 2023 (GRSG)	June 2024	WP.29	
Priority	Event Data Recorder	Common technical elements document for creation of a UN regulation on EDR for heavy duty vehicles (trucks and busses)		IWG on EDR/DSSAD	[March 2023] [Oct 2023](GRSG)	[Nov 2023] [March 2024]	WP.29	
Priority	Event Data Recorder	EDR Step#2 - consideration of amendments to Step #1 requirements with respect to additional data elements, durability considerations including potential fire resistance, potential test procedures and consideration of new triggering criteria (e.g. “jerk”).		IWG on EDR/DSSAD	Oct. 2023 (GRSG)	June 2024	WP.29	
Priority	Field of Vision Assistant (FVA)	Verify and address as necessary “Augmented Reality” related aspects in relation with existing UN Regulations / UN GTRs / UN Rules	- UN R- 125 - GRSG-121-24/Rev.2 Field of Vision Assistant (FVA) may increase driver awareness but may also constitute obstruction to	IWG on FVA	2022/2023 (Step 2)	Nov. 2023	OICA	Chair: NL Secr.: OICA

		Step 2 aims at developing more detailed rules and guidelines and a new Regulation on FVA also covering other vehicle categories	the prescribed driver's field of vision () . Step 1 was finished in 2021					
Priority	Direct Vision	Phase 2 of the New UN Regulation		VRU Proxi	March 2023 (GRSG)	Nov. 2023	Japan, EC WP.29	
Priority	Heating System	Electric Radiant Warmers for EVs	UN Regulation No. 122	Korea	March 2023		Korea	
recurrent	Consolidated Resolution on the construction of vehicles	Inclusion of automated vehicles (classification)	R.E.3 GRSG-117-06	TBD	2023	Nov. 2023	WP.29 France	

Subjects under consideration by the Working Party on Passive Safety (GRSP) at its 73rd session

<i>Subject</i>	<i>Document symbol</i> <i>ECE/TRANS/WP.29/...</i>	<i>Documentation</i> <i>availability</i>
7.1. 1958 Agreement		For document symbols and its availability, please refer to the agenda for the eightieth session (GRSP/2023/1)
7.1.1. Proposal for draft amendments to existing UN Regulations (1958 Agreement):		
[21 (Interior fittings);		
22 (Protective helmets);		
80 (Strength of seats and their anchorages (buses));		
94 (Frontal collision);		
95 (Lateral collision)		
100 (Electric power trained vehicles);		
127 (Pedestrian safety);		
129 (Enhanced child restraint systems)		
134 (Hydrogen and fuel cell vehicles (HFCV))		
137 Frontal impact with focus on restraint systems]		
7.1.2. Proposal for draft new UN Regulations:		
Nil		
7.2. 1998 Agreement (Global)		For document symbols and its availability, please refer to the agenda for the eightieth session (GRSP/2023/1)
[9 (Pedestrian safety);		
13 (Hydrogen and Fuel Cells Vehicles)		
20 (Electric vehicle safety)		
Electric vehicles		
Vehicle Crash compatibility]		
7.3. 1997 Agreement (Inspections)		
Nil		
7.4. Proposal for draft recommendations or amendments to existing recommendations		
Mutual Resolution No. 1.		

<i>Subject</i>	<i>Document symbol ECE/TRANS/WP.29/...</i>	<i>Documentation availability</i>
7.5. Miscellaneous items		
[Exchange of information on national and international requirements on passive safety;		For document symbols and its availability, please refer to the agenda for the eightieth session (GRSP/2023/1)
International Whole Vehicle Type Approval (IWVTA)		
Securing of children in buses and coaches;		
Exchange of views on vehicle automation;		
Three-dimensional H-point machine;		
Children left in cars.]		
