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### **Economic Commission for Europe**

**Inland Transport Committee** 

World Forum for Harmonization of Vehicle Regulations

184th session

Geneva, 22-24 June 2021 Item 2.2 of the provisional agenda Coordination and organization of work: programme of work and documentation

> Revised programme of Work of the World Forum for Harmonization of Vehicle Regulations (WP.29) and its Subsidiary Bodies (with comments from EC, Japan, US, GRVA and GRSP integrated as appropriate)

### Note by the Secretariat\*

The text reproduced below was prepared by the Secretariat for consideration by the World Forum. It takes into account the results and decisions taken at 182nd session (ECE/TRANS/WP.29/1155) and its 183rd session (ECE/TRANS/WP.29/1157), comments from European Commission, Japan, United States of America, GRVA and GRSP, and the proposed agenda for its 184th session (ECE/TRANS/WP.29/1158) and updates also the information on the work of the six subsidiary Working Parties to WP.29.

<sup>\*</sup> In accordance with the programme of work of the Inland Transport Committee for 2021 as outlined in proposed programme budget for 2021 (A/75/6 (Sect.20), para 20.51), the World Forum will develop, harmonize and update UN Regulations in order to enhance the performance of vehicles. The present document is submitted in conformity with that mandate.

## 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)

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- (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.

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- (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)

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(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)

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In conclusion and considering ITC's special priority of global interest, Road Safety, 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 endeavors 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. At the 178th, 179th and 180th session of WP.29, all GRs were invited to perform a review of their activities and to identify 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 2020 and beyond (ECE/TRANS/WP.29/1145, para. 7 and ECE/TRANS/WP.29/1149, para.). 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 2020:
- 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 on 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. Installation requirements will be updated by new Series of Amendments for Regulation No. 48 (R53, R74, R86). EMC issues will be specifically addressed for certain

vehicles (e.g. for electrical vehicles) as well as a suitable application of Unique Identifier for lighting regulations.

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 and Automated Emergency Braking Systems (AEBS) based on UN Regulation No.131.

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, on driver's field of vision assistant systems and vehicle connectivity elements related to virtual keys.

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 following revised EU General Safety Regulation 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 184th session

Subject Document symbol Documentation
ECE/TRANS/WP.29/... availability

### 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 (1158)

1.1.1. Proposal for amendments to UN Regulations to be considered at the June 2021 session

UN Regulation No.:

- 95 (Lateral collision)
- 129 (Enhanced Child Restraint Systems)
- 137 (Frontal impact with focus on restraint systems)
- 134 (Hydrogen and Fuel Cell Vehicles (HFCV))
- 49 (Emissions of compression ignition and positive ignition (LPG and CNG) engines)
- 24 (Visible pollutants, measurement of power of C.I. engines (Diesel smoke))
- 83 (Emissions of M<sub>1</sub> and N<sub>1</sub> vehicles)
- 101 (CO<sub>2</sub> emission/fuel consumption)
- 79 (Steering equipment)
- 13-H (Braking for  $M_1$  and  $N_1$ )
- 157 (Automated Lane Keeping System (ALKS))
- 30 (Tyres for passenger cars and their trailers)
- 41 (Noise emissions of motorcycles)
- 124 (Replacement wheels for passenger cars)
- 1.1.2. Proposal for new UN Regulations to be considered at the June 2020 session

Nil

Subject			Document symbol ECE/TRANS/WP.29/	Documentation availability		
1.1.3.	anne	us of the Agreement and of the exed UN Regulations, including the at situation report	343/Rev.29			
1.1.4.		elopment of an International Whole icle Type Approval (IWVTA) system,				
1.1.5.		sideration of amendments to the 1958 element.				
1.1.6.	the e	elopment of an electronic database for exchange of type approval imentation (DETA)				
1.2.	1998	3 Agreement (Global)	For document sym			
1.2.1.	ame	sideration of draft UN GTRs and ndments to them to be considered at November 2020 session	availability, please refer to the agend (1158)			
	UN	GTR No. 4 (WHDC)				
1.2.2.	Con	sideration of Mutual Resolutions				
	Nil					
1.2.3.	Guio	lance for the development of UN GTRs:				
	Nil					
1.2.4.	GTF	gress on the development of new UN Rs and of amendments to established GTRs				
1.2.5.	GTF	gress on the development of new UN Rs and of amendments to established GTRs				
	1	(Doors locks and door retention components)				
	2	(Worldwide Motorcycle emission Test Cycle (WMTC))				
	3	(Motorcycle braking)				
	4	(Worldwide Heavy-Duty vehicle emission test Cycle (WHDC))				
	5	(On-Board Diagnostic Systems (OBD))				
	6	(Safety glazing)				
	7	(Head restraints)				
	8	(Electronic stability control systems (ESC))				
	9	(Pedestrian safety).				
	10	(Off-cycle emissions (OCE))				
	11	(Agricultural and forestry tractors and non-road mobile machinery emission test procedures)				
	12	(Motorcycle Controls, Tell-tales and Indicators)				

Subject			Document symbol ECE/TRANS/WP.29/	Documentation availability
	13	(Hydrogen and Fuel Cell Vehicles (HFCV) – Phase 2)		
	14	(Pole Side Impact (PSI)		
	15	(Worldwide harmonized Light vehicle Test Procedures (WLTP) – Phase 2)		
	16	(Tyres)		
	17	(Crankcase and evaporative emissions for two- or three-wheeled motor vehicles)		
	18	(On-board diagnostics for two- or three-wheeled motor vehicles)		
	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))		
		ft UN GTR on Quiet Road Transport iicles (QRTV)		
		ft UN GTR on Global Real Driving issions (GRDE)		
1.2.6.		hange of views on items for new Global Technical Regulations		
	Har	monization of side impact		
	Spe	cifications for the 3-D H point machine		
	Eve	nt Data Recorder (EDR)		
1.3.	199	7 Agreement (Inspections)	For document syml availability, please (1158)	
1.3.1.	Futu	are development of the Agreement	,	
1.3.2.	Con	sideration of new UN Rules		
	Nil			
1.3.3.	Up	date of existing UN Rules		
	Nil			
1.3.4.	Am	endments to Resolution R.E.6		
	Nil			

#### Table 2

### **Subjects under consideration by the Working Party on Noise and Tyres (GRBP)**

### **European Commission comment on UN GTR No.16 (Tyres):**

Amendment 2 adopted at the 181st WP29 session (June 2020).

ETRTO proposed at the 72<sup>nd</sup> GRBP (September 2020) a roadmap for transposition of the UN GTR 16 provisions in UNECE Regulations.

Such discussion has not started yet in GRBP.

### **European Commission comment on Draft UN GTR on Quiet Road Transport Vehicles (QRTV):**

The 72<sup>nd</sup> GRBP (September 2020) decided to extend the mandate of IWG on Quiet Road Transport Vehicles for the Global Technical **Regulation** (GTR) until December 2021. At the 73<sup>rd</sup> GRBP (January 2021) USA informed to discuss internally and inform again the 74<sup>th</sup> GRBP (September 2021).

			GR	'BP			
Priority/ recurrent	Title	Tasks / Deliverables	References	Allocations / IWG	Timeline	Chair/Initiator	Comments
Priority	Real Driving Additional sound emission Provisions (ASEP)	Real driving sound emissions and the extended work of IWG ASEP such as manipulation-safe active components and software, anti-tampering, ASEP NORESS	R 51, R 41	IWG ASEP	<ul> <li>GRBP January 2021: Informal document for amendments to UN-R51- 04</li> <li>GRBP September 2021: Working document UN- R51-04 (M<sub>1</sub>, N<sub>1</sub> vehicles)</li> </ul>	Chair: Germany Secretariat: OICA	M <sub>1</sub> , N <sub>1</sub> L <sub>3</sub> and their NORESS
Priority	Wet Grip on Worn Tyres (WGWT)	Additional prescriptions regarding performances on Wet Grip of Worn Tyres to be added in R 117.	R 117	IWG WGWT	• GRBP September 2021: Working document for amendments to UN-R117 on C1 tyres and possibly C2, C3 tyres GRBP September 2022: Working or informal document for amendments to UN-R117 on C2, C3 tyres	Co- Chairs: France & European Commission Secretariat: ETRTO	C2, C3 to be considered in the timeline, subject to agreement of the IWG and GRBP (change of Terms of Reference submitted by EC expert to GRBP January 2021).
Priority	Measurement Uncertainties	Assessment of measurement uncertainties and track alignment	R51 R117 R41	IWG -MU	<ul> <li>GRBP January 2021: Informal document for amendments to UN-R51 &amp; UN-R117</li> <li>GRBP September 2021:</li> </ul>	Chair: Norway Secretariat: OICA	R 51: Noise R117: Noise Other regulations: Deadline to be defined

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			GR	BP			
Priority/ recurrent	Title	Tasks / Deliverables	References	Allocations / IWGs	Timeline	Chair/Initiator	Comments
					<ul> <li>Working document for amendments to UN-R51 &amp; UN-R117</li> <li>Informal document containing general Guidelines</li> <li>GRBP January 2022: Working document containing general Guidelines</li> </ul>		
Priority	Reverse Warning Sound (RWS)	Harmonisation of Reverse Warning Sound requirements (Components and vehicles) with the aim of lower sound emissions on a high safety level. MOIS, Reversing Safety, Camera Monitor systems as an alternative to RWS	New Regulation	TF-RWS	GRBP September 2021: Working document	Chair: Japan Secretariat: OICA	M2>3,5tons, N2, M3, N3
Potential	New traction tyre definition	Introduction of new Traction definition for C2 and C3 tyres	R 117	GRBP	GRBP September 2021		C2, C3
Potential	Noise limits	Review of limit values Phase 3	R 51	TF-SL		Chair: France Secretariat: OICA	M, N
Potential	Type definition	Consideration on tolerances for type defining parameters and selection scheme for a representative vehicle	R51 R41				

			G	RBP			
Priority/ recurrent	Title	Tasks / Deliverables	References	Allocations / IWGs	Timeline	Chair/Initiator	Comments
Potential	New radial tyre definition	French Proposal to introduce new Radial Tyre definition	R30 and R117	GRBP			The United States have an interest in two tire proposals currently before GRBP for consideration: first, GRBP-73-20-Rev 1
Potential	New ice tyre definition	ERTRO Proposal to introduce in UN Regulation No.117 an Ice tyre definition for tyres of C1 class.	R117	GRBP			(France).— The United States is interested in working with Canada and the 1958 Contracting Parties to ensure that the new radial tire definition is harmonized with the current definition of radial tire in FMVSS No. 139 and any changes to the existing guidance under the proposal that could impact trade. Second, the United States would like GRBP to discuss a series of technical issues including, certification methods regarding the new ERTRO proposal to amend Regulation 117, defining ice tires of C1 class(GRBP-73-19e).

# Subjects under consideration by the Working Party on Noise and Tyres (GRBP) at its 74th session $\,$

Subject			Document symbol ECE/TRANS/WP.29/	Documentation availability
2.1.	195	8 Agreement		refer to the agenda of
2.1.1.		posal for draft amendments to existing Regulations (1958 Agreement):	the seventy-fourth s (GRBP/2021/8)	ession
Part 1	– No	ise:		
	[41	(Noise of motorcycles);		
	51	(Vehicles noise emissions)]		
Part 2	- Ty	res:		
	[30	(Tyres for passenger cars and their trailers);		
	54	(Tyres for commercial vehicles and their trailers)		
	75	(Tyres for L-category vehicles)		
	106	(Tyres for agricultural vehicles and their trailers)		
	117	(Tyre rolling resistance, rolling noise and wet grip);		
	124	(Replacement wheels for passenger cars);		
	141	(Tyre pressure monitoring system);		
	142	(Tyre installation)]		
2.1.2.		oosal for draft new Regulations (1958 Agreement):		
	[ Dr	aft UN Regulation on studded tyres.]		
2.2.	199	8 Agreement (Global)	For document symb	
	16	(Tyres), if needed.	availability, please the seventy-fourth s (GRBP/2021/8)	refer to the agenda of session

Table 3
Subjects under consideration by the Working Party on Lighting and Light-Signalling (GRE)

			GRE				
Priority	Title	Tasks / Deliverables	References	Allocations / IWGs	Timeline	Initiator	Comments
Priority	Simplification Stage 2	Simplify and update the technical requirements of the new Regulations Nos. 148, 149, 150, as well as the installation Regulations Nos. 48, 53, 74, 86 to become future proof and technology neutral, with performance-based and objective test requirements	New simplified UN Regulations Nos. 148, 149 and 150 and amendments to UN Regulations Nos. 48, 53, 74, 86	GRE, IWG-SLR	2022	IWG SLR (GRE)	Ongoing
Priority	Installation New Series of Amendments for Regulation No. 48 (R53, R74, R86)	Many proposals merged; various amendments, improvements and clarifications including visibility and glare (headlamps, headlamp levelling, direction indicators, daytime running lamps, rear position lamps, etc.)	UN Regulation No. 48 [ECE/TRANS/WP.29/GRE/2020/8]	GRE, IWG-SLR, SIG-R.48	2021	Various CP's	To be finalized
Priority	EMC issues (e.g. for electrical vehicles)	Further development of EMC requirements (e.g. for EV's)	UN Regulation No. 10	TF-EMC	2022		Ongoing
Priority	Unique Identifier	Suitable application of the 'Unique Identifier' ('UI') for the lighting UN Regulations	SLR-37-01	GRE IWG-SLR	2021	IWG SLR (at request WP.29)	Ongoing

# Subjects under consideration by the Working Party on Lighting and Light-Signalling (GRE) at its 85th session

Subject			Document symbol Documentation ECE/TRANS/WP.29/ availability
3.1.	1958	3 Agreement	For document symbols and its
3.1.1.		oosal for draft amendments to existing Regulations (1958 Agreement):	availability, please refer to the agenda of the eighty-fifth session (GRE/2021/9)
	10	(Electromagnetic compatibility)	
	37	(Filament lamps);	
	48	(Installation of lighting and light- signalling devices);	
	53	(Installation of lighting and light- signalling devices for L <sub>3</sub> vehicles);	
	74	(Installation of lighting and light- signalling devices for mopeds);	
	86	(Installation of lighting and light- signalling devices for agricultural vehicles);	
	99	(Gas discharge light sources);	
	128	(Light emitting diodes light sources);	
	148	(Light-signalling devices);	
	149	(Road illumination devices);	
	150	(Retro-reflective devices);	
	com	5 (Consolidated Resolution on the mon specification of light source gories).	
3.1.2.	Prop	oosal for draft new UN Regulations:	
	Nil		
3.2.	1998	8 Agreement (Global)	
	Poss	sibility to develop further UN GTRs	
3.3.	199	7 Agreement (Inspections)	
	Nil		
3.4.	ame	posal for draft recommendations or endments to existing emmendations	
3.5.	Mis	cellaneous items	For document symbols and its
		endments to the Convention on Road fic (Vienna 1968)	availability, please refer to the agenda of the eighty-fifth session (GRE/2021/9/)
		elopment of an international whole cle type approval (IWVTA)	•
	Dec: 2020	ade of action for road safety 2011– );	
	Obs	olete transitional provisions	
	Dire	ction for future GRE work	

Table 4
Subjects under consideration by the Working Party on Pollution and Energy (GRPE)

		GRP	E			
Priority	Justification/Background information	References	Allocations /IWGs/TFs	Timeline	Chair /sponsor(s)	Comments
Improvement of exhaust emissions requirements to ensure	Revise technical requirements to allow technological progress, ensure technological neutrality by	UNR on RDE	IWG on RDE	June 2020	EC-JP-KR	Adopted in GRPE June 2020
real drive performance on the road	introducing consistent and long- lasting performance-based	UN GTR on RDE	IWG on RDE	June 2023 (Phase 2)	EC-JP-KR	Directly to Phase 2
on the road	emissions measures, at type approval, in use and potentially	08 Series to UN Regulation No. 83	GRPE	June 2022	EC	Delayed
	over the lifetime of the vehicle.	Amendment to UN Regulation No. 49 to reflect latest regulatory evolution	GRPE	January 2021	EC	Submitted earlier
New propulsion energy	Develop technical regulation to ensure environmentally-friendly and level-playing market introduction of new form of propulsion energy, such as hydrogen and electricity.	UN GTR on DEVP	IWG on EVE	June 2020	US-CAN	Adopted by WP.29 November 2020
		UN GTR on in Vehicle Battery durability	IWG on EVE	June 2021	US-CAN, China, EC, Japan	
		Heavy Duty Hybrids	GRPE	[2022]	[tbd]	
Particulate emissions :	Sub-23 nm exhaust particles for	Amendments to UN	IWG on PMP	June 2021	EC	Light duty laboratory
Provisions to limit airborne particulates from different sources	light- and heavy-duty applications, in the laboratory and on the road	GTR No. 15				adopted in GRPE June 2020 - still on- going for PEMS-PN and heavy duty application
	Brake emissions	New UN GTR	IWG on PMP	January 2023	EC	Delays
	Tyre wear emissions	tbd	IWG on PMP / GRPE	[June 2023]	[EC]	

## Subjects under consideration by the Working Party on Pollution and Energy (GRPE) at its 83rd session

Document symbol Documentation ECE/TRANS/WP.29/... Subject availability 4.1. 1958 Agreement For document symbols and its availability, please refer to the agenda 4.1.1 Proposal for draft amendments to existing of the eighty-third session UN Regulations (1958 Agreement): (GRPE/2021/9) (Visible pollutants, measurement of power of C.I. engines (Diesel smoke)); 40 (Emission of gaseous pollutants by motorcycles); 47 (Emission of gaseous pollutants of mopeds) (Emissions of compression ignition and positive ignition (LPG and CNG) engines); (Measurement of the maximum speed, including electric vehicles); 83 (Emissions of  $M_1$  and  $N_1$  vehicles); 85 (Measurement of the net power); (Diesel emission (agricultural tractors)); 101 (CO<sub>2</sub> emissions/fuel consumption) 103 (Replacement pollution control devices); 115 (LPG and CNG retrofit systems); 120 (Net power of tractors and non-road mobile machinery); 132 (Retrofit Emissions Control devices (REC)); 133 (Recyclability of motor vehicles); 143 (Heavy duty dual-fuel engine retrofit systems) 154 Worldwide harmonized Light vehicles Test Procedure (WLTP Regulation)

4.1.2. Proposal for draft new UN Regulations

Nil

### 4.2. 1998 Agreement (Global)

- 2 (Worldwide motorcycle emissions test cycle (WMTC));
- 4 (Worldwide harmonized Heavy-Duty Certification Procedure (WHDC));
- 5 (Worldwide harmonized Heavy duty on-board diagnostic systems (WWH-OBD));
- 10 (Off-Cycle Emissions (OCE));
- 11 (Non-road mobile machinery engines);

For document symbols and its availability, please refer to the agenda of the eighty-third session (GRPE/2021/1)

Subject			Document symbol ECE/TRANS/WP.29/	Documentation availability
	15	(Worldwide harmonized Light Vehicle Test Procedure (WLTP));		
	17	(Crankcase and evaporative emissions of L-category vehicles);		
	18	(On-Board Diagnostic (OBD) systems for L-category vehicles)		
	19	(Evaporative emission test procedure for the Worldwide harmonized Light vehicle Test Procedure (WLTP EVAP));		
	21 (	Determination of Electrified Vehicle Power (DEVP))		
4.2.1.		oosal for developing new UN Global nnical Regulations		
	Veh	icles Interior Air Quality (VIAQ)		
4.3.	199′	7 Agreement (Inspections)		
	Nil			
4.4.	ame	posal for draft recommendations or endments to existing ommendations		
	Nil			
4.5.	Mis	cellaneous items	For document sym	bols and its
		eld-wide harmonized Light vehicles Procedure (WLTP)	availability, please of the eighty-third (GRPE/2021/1)	refer to the agenda session
	Hea	vy Duty Hybrids (HDH)	(,,	
	Part	icle Measurement Programme (PMP)		
	Gas	eous Fuelled Vehicles (GFV)		
	Perf	ironmental and Propulsion formance Requirements (EPPR) for L-gory vehicles		
	Elec (EV	etric Vehicles and the Environment E)		
	Veh (VP	icle Propulsion System Definitions SD)		
	Fuel	Quality (FQ)		
		rnational Whole Vehicle Type roval (IWVTA)		
		hange of information on national and mational requirements on emissions		
	Veh	icles Interior Air Quality (VIAQ)		
	Glol	bal Real Driving Emissions (RDE)		

Table 5
Subjects under consideration by the Working Party on Automated / Autonomous and Connected Vehicles (GRVA)

The United States note that automation related activities currently underway under GRVA guided by the current version of the Frame Work Document. This includes the specific deliverables and timelines. To promote stronger coordination, the US also urges other GRs to confer with GRVA before beginning any work related to automated/autonomous driving systems.

			GRVA				
Priority	Title	Tasks / Deliverables	References	Allocations / IWGs	Timeline	Initiator	Comments
Priority	Functional Requirements for Automated Vehicles	Draft initial WP.29 guidelines for ADS safety requirements based on "current activities" including the requirements on motorway use case.  Proposal for WP.29 guidelines on ADS safety requirements	Framework document for automated/autonomous vehicles ECE/TRANS/WP.29/2019/34 as revised	GRVA, IWG on FRAV	WP.29 session in November 2021 (information) March 2022 (endorsement) WP.29 session in March 2022 (information) June 2022 (endorsement)		Ongoing
Priority	New Assessment/Test Method	Second iteration of WP29 guidelines for NATM addressing the "outstanding issues" identified by VMAD and the evaluation of NATM for the motorway use-case.  WP29 guidelines for NATM including outcome of "outstanding issues" and translation of FRAV requirements	Framework document for automated/autonomous vehicles ECE/TRANS/WP.29/2019/34 as revised	GRVA, IWG on VMAD	WP.29 session in November 2021 (information) March 2022 (endorsement) March 2022 (information) June 2022 (endorsement)	WP.29	Ongoing
Priority	Cyber security and (Over-the-Air) Software updates	Review of draft set of technical requirements for 1998 CPs	Framework document for automated/autonomous vehicles ECE/TRANS/WP.29/2019/34 as revised	GRVA, IWG on Cyber Security and OTA issues	November 2021	WP.29	Ongoing

Priority	Data Storage System for Automated Driving vehicles (DSSAD)	[]	Framework document for automated/autonomous vehicles ECE/TRANS/WP.29/2019/34 as revised		November 2022	WP.29	Ongoing
Priority	Event Data Recorder (EDR)	[]	Framework document for automated/autonomous vehicles ECE/TRANS/WP.29/2019/34 as revised	GRSG in cooperation with GRVA, IWG on EDR/DSSAD	November 2021	WP.29	Ongoing
Maintenance	ADAS	Amendment to UN Regulation No. 79 or new UN Regulation	ECE/TRANS/WP.29/GRVA/9, Annex IV		November 2021	Russian Federation and European Commission	Ongoing
Maintenance	ALKS	Amendment to UN Regulation No. 157	ECE/TRANS/WP.29/1155, para. 33	GRVA, Special Interest Group on UN Regulation No. 157	2021	Germany, United Kingdom of Great Britain and Northern Ireland	Ongoing
Maintenance	AEBS	Amendment to UN Regulation No. 131	ECE/TRANS/WP.29/GRVA/9, Annex V	GRVA, IWG on AEBS (Heavy vehicles)	June 2022	Germany	Ongoing

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Maintenance	UN GTRs	Amendments to UN GTRs	AC.3 decisions	GRVA	Upon	AC.3	On UNGTR No.
					decisions		8 (ESC): The
							United States and
							Canada are
							reviewing a
							pending proposal
							to amend the UN
							GTR's test
							procedures.
							Preliminary
							assessment of the
							proposal shows
							that the
							modification may
							not be
							unnecessarily and
							would reduce the
							full range of
							steering currently
							required in the
							GTR
Maintenance	UN Regulations	Amendments to UN Regulations	Provisions of the 1958 Agreement	GRVA	Permanent	N/a	N/a

## Subjects under consideration by the Working Party on Automated / Autonomous and Connected Vehicles (GRVA) at its 11th session $\frac{1}{2}$

Subject			Document symbol ECE/TRANS/WP.29/	Documentation availability			
5.1.	1958 Agreement		For document symbols and its availability, please refer to the agenda of the eleventh session (GRVA/2021/19)				
5.1.1.	Proposal for draft amendments to existing UN Regulations (1958 Agreement):						
	13 a	nd 13-H (Braking);					
	78	(Motorcycle braking);					
	79	(Steering equipment);					
	89	(Speed limitation devices);					
	90	(Replacement brake linings);					
	139	(Brake Assist Systems);					
	140	(Electronic Stability Control);					
	152	(AEBS for $M_1$ and $N_1$ );					
	155	(Cyber security);					
	156	(Software updates);					
	157	Automated Lane Keeping Systems. (ALKS);					
5.1.2.	Prop	oosal for draft new UN Regulations:					
	Nil						
5.1.3.	Vehicle automation						
	Rem	note Control Manoeuvring (RCM)					
	Automated Controlled Steering Function (ACSF)						
	Auto	omated Lane Keeping Systems (ALKS)					
	Validation Methods for Automated Driving (VMAD)						
		ctional Requirements for Automated Autonomous Vehicles (FRAV)					
	Longitudinal control (Adaptive Cruise Control, preventing braking);						
	Transition demand (Human Machine Interface (HMI));						
	Driv	er Availability Recognition;					
	Info	rmation to the driver (HMI);					
		tronic System Compliance (Completronics Development);	X				
		odic Technical Inspection/ dworthiness Provisions;					
	Cyb	er Security;					
	G C						

Software (incl. Over-the-Air) updates;

Document symbol Documentation
Subject ECE/TRANS/WP.29/... availability

Data Storage System for Automated Driving (DSSAD);

Night Vision;

Rear crossing alert;

Door-open blind spot detection;

Around view monitoring

### 5.2. 1998 Agreement (Global)

3 (Motorcycle braking)

8 (ESC);

For document symbols and its availability, please refer to the agenda of the eleventh session (GRVA/2021/19)

### 5.3. 1997 Agreement (Inspections)

Nil

# 5.4. Proposal for draft recommendations or amendments to existing recommendations:

Nil

### 5.5. Miscellaneous items

Intelligent Transport Systems (ITS)

Intelligent Transport Systems/Automated Driving (AD)

Connected, automated and autonomous vehicles

Functional Requirements for automated / autonomous vehicles

New assessment / Test method

Cyber security and (Over-the-Air)

Software updates

Data Storage System for Automated Driving vehicles (DSSAD)

Horizontal regulation on automated and autonomous vehicles and associated recommendations

System safety

Artificial Intelligence technologies for wheeled vehicles

Driver availability recognition

Vehicle cybersecurity and data protection

Rear crossing traffic alerting

Night Vision system

360-degree vision monitor

International Whole Vehicle Type Approval (IWVTA)

Modular Vehicle Combinations (MVC)

For document symbols and its availability, please refer to the agenda of the eleventh session (GRVA/2021/19)

Subject	Document symbol ECE/TRANS/WP.29/	
Exchange of views on innovations and relevant national activities		

ECE/TRANS/WP.29/2021/1/Rev.1

Table 6 **Subjects under consideration by the Working Party on General Safety Provisions (GRSG)** 

			GRSG				
Priority/ recurrent	Title	Tasks / Deliverables	References	Allocations / IWGs	Timeline	Initiator	Comments
Priority	Event Data Recorder	Establish new performance requirements for EDR suitable for potential new UN R and/or UN GTR	ECE/TRANS/WP.29/2019/34/ Rev.	IWG on EDR/DSSAD	2021	WP.29	IWG reporting both to GRSG and GRVA
Priority	Field of View Assistant (FoVA)	Verify and address as necessary "Augmented Reality" related aspects in relation with existing UN Regulations / UN GTRs / UN Rules	- UN R- 125 - GRSG-117-27  Field of View Assistant (FOVA) increases driver awareness but constitute obstacle to the prescribed driver's field of vision (e.g. head-up displays) . If GRSG deems there is a safety benefit, Reg. 125 should be amended to modify requirements on FoVA.	TBD	2021	OICA	Timeline for Step 1, Step 2 will be at best 2022
Priority	Security	Virtual keys	UN R 116 GRSG-117-31  Amend the definition of keys taking into account innovative vehicle alarms systems (virtual key).	TBD	2022	OICA	a CP has to step forward to chair this task force
Priority	Direct Vision	Improved direct visibility by drivers through larger windows	UN R 125	VRU Proxy	2022	Japan, EC WP.29	

			GRSG				
Priority/ recurrent	Title	Tasks / Deliverables	References	Allocations / IWGs	Timeline	Initiator	Comments
Priority	Close-proximity for driver's awareness	Develop close-proximity field of driver's awareness in vehicle moving off from standstill	GRSG-121-11	VRU-Proxi	2022	Japan, EC	
recurrent	Consolidated Resolution on the construction of vehicles	Update to technical progress Inclusion of automated vehicles (classification)	R.E.3 GRSG-117-06	TBD	2021	WP.29 France	
recurrent	Safety glazing	Update to technical progress	UN R 43 / UNGTR 6	Panoramic Sunroof Glazing (PSG)	April 2021	Korea WP.29	
recurrent	Burning behaviour of materials	Update to technical progress	UN R 118	Behavior of M <sub>2</sub> and M <sub>3</sub> category vehicles' general construction in case of fire events (BMFE	Oct. 2021	France WP.29	
recurrent	Blind Spot Information Systems	Update to technical progress	UN R 151	Awareness of Vulnerable Road Users proximity (VRU-Proxi)	April 2022	Japan, EC WP.29	

## Subjects under consideration by the Working Party on General Safety Provisions (GRSG) at its $122nd\ session$

Subject		Document symbol Documentation ECE/TRANS/WP.29/ availability
6.1.	1958 Agreement	For document symbols and its availability, please refer to the agenda for the 122nd session (GRSG/2021/16)
6.1.1.	Proposal for draft amendments to existing UN Regulations (1958 Agreement):	
	43 (Safety glazing);	
	46 (Devices for indirect vision);	
	58 (Rear underrun protective devices);	
	60 (Driver operated controls (mopeds/motorcycles));	
	66 (Strength of superstructure (buses))	
	67 (LPG vehicles);	
	93 (Front underrun protection);	
	107 (M <sub>2</sub> and M <sub>3</sub> vehicles);	
	110 (CNG and LNG vehicles);	
	116 (Anti-theft and alarm systems);	
	118 (Burning behaviour of materials);	
	125 (Forwardfield of Vision for Drivers);	
	144 (Accident Emergency Call Systems (AECS))	
	151 (Blind Spot Information Systems)	
	158 (Reversing motion);	
	159 (Moving Off Information System)	
	[161] (Devices against Unauthorized Use)	
	[162] (Immobilizers)	
	[163] (Vehicle Alarm Systems)	
6.1.2.	Proposal for draft new UN Regulations:	
	Nil.	
6.2.	1998 Agreement (Global)	For document symbols and its availability, please refer to the agenda for the 122nd session (GRSG/2021/16)
	Possibility to develop further UN GTRs	
	Nil	
6.3.	1997 Agreement (Inspections)	
	Nil	

Proposal for draft recommendations or amendments to existing

recommendations:

**6.4.** 

Nil

Subjec	rt	Document symbol Documentation ECE/TRANS/WP.29/ availability				
6.5.	Miscellaneous items	For document symbols and its availability, please refer to the agenda for the 122nd session (GRSG/2021/16)				
	International Whole Vehicle Type Approval (IWVTA)					
	Consolidated Resolution on the Construction of Vehicles (R.E.3)					
	Event Data Recorder Requirements					

ECE/TRANS/WP.29/2021/1/Rev.1

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

			GRSP				
Priority/ recurrent	Title	Tasks / Deliverables	References	Allocations / IWGs	Timeline	Initiator	Comments
			Short term				
1. Priority	Pedestrian Safety	Review proposed Amendment 3 to	ECE/TRANS/WP.29/2021/53 ECE/TRANS/WP.29/2021/54	TF to be created		US/EC	To be started
		GTR9	AC3/31/Rev.1				
			GRSP-69-43-Rev.1				
	Head impact zone enlargement	Inclusion in GTR9	ECE/TRANS/WP.29/GRSP/2020/9 ECE/TRANS/WP.29/GRSP/2019/18	T.b.d.	WP.29 June 2021	EC, JPN	To be started
			GRSP-69-21-Rev.1				
	Head impact zone enlargement	Transposition in UN R127	ECE/TRANS/WP.29/GRSP/2020/9 ECE/TRANS/WP.29/GRSP/2019/18	N/A	2022	EC, JPN	Ongoing
			GRSP-69-21-Rev.1				
	Deployable pedestrian	Inclusion in GTR9	ECE/TRANS/WP.29/AC.3/45	IWG-DPPS	11/2022	KOR	Ongoing
	protection systems		ECE/TRANS/WP.29/AC.3/45/Rev.1				
	Deployable pedestrian protection systems and head impact zone enlargement	Transposition in UN R127	N/A	N/A	WP.29 June 2021	EC, JPN	To be started
2. Priority	Amendment to Mutual Resolution No. 1 – Addendum 1	Inclusion of Addendum 1 (BioRID)	ECE/TRANS/WP.29/GRSP/2021/2 GRSP-69-01	No	WP29/AC.3 November 2021	UK	Urgent matter, since the lack of specifications may hamper the proper use of UN GTR No. 7 and UN Regulation No. 17

<sup>\*</sup> List of priorities still under discussion by the GR.

			GRSP				
Priority/ recurrent	Title	Tasks / Deliverables	References	Allocations / IWGs	Timeline	Initiator	Comments
Recurre nt	UN Regulation No. 17	Test procedure for the height of head restraints in the case of vehicles having a low roof construction.	ECE/TRANS/WP.29/GRSP/2020/12	N/A	2022	OICA	Ongoing
Recurre	UN Regulation No. 22	Type approval of accessories to	ECE/TRANS/WP.29/GRSP/2020/13	Ad hoc	WP29	Israel	Ongoing
nt		helmets	GRSP-69-17	group	November 2021		
Recurre nt	UN Regulation No. 100	Specific conditions concerning a clear interpretation of an AC voltage	GRSP-69-04				
Recurre nt	UN Regulation No. 129	head containment assessment for side impact testing;	, ECE/TRANS/WP.29/GRSP/2021/7	N/A	2021	Spain	Ongoing
	<u> </u>		Medium term		1		<u> </u>
Priority	Amendment to Mutual Resolution No. 1 – Addendum 4	Inclusion of Addendum 4 (Q dummies)	N/A	Task Force	2021-2022	Germa ny	Urgent matter, since the lack of specifications may hamper the proper use of UN Regulation No. 129
Priority	vulnerable occupants and	Resolution No. 1 – Addendum x Addendum x (Female	N/A	[T/F]	2021	Swede n	Urgent matter, to provide the same level of protection to females in the event of crashes to fulfil
		But also other vulnerable occupants and seating position					UN SDG5
Priority							

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			GRSP				
Priority/ recurrent	Title	Tasks / Deliverables	References	Allocations / IWGs	Timeline	Initiator	Comments
Priority	Alternative test methods for heavy duty vehicles in order to improve applicability	Transposition in UN GTR13	N/A	IWG	T.b.d	T.b.d	To be started
Priority	Hydrogen safety material compatibility and new tank concepts	Inclusion in GTR13 'phase 2'	ECE/TRANS/WP.29/AC.3/49	IWG-HFCV	WP.29 June 2023	JPN, KOR, EC	Ongoing
Priority	Hydrogen safety material compatibility and new tank concepts	Transposition in UN R134 [and R146]	N/A	T.b.d.		EC, JPN	To be started if agreed by GRSP
Priority	Electric vehicles safety	GTR20 Phase 2		IWG-EVS	Proposal at March November 2024WP.29	US, EC, CN, JP	Ongoing
Recurre nt	Children in buses	New reg	2019/22 and GRSP-66-06	IWG- STCBC	WP29 March 2023	SP	Ongoing
Recurre nt	UN Regulation No. 16	Alternative (at the choice of the manufacturer) to the airbag switch-off for frontal airbags in combination with rearward-facing child restraint systems in the rear seat	ECE/TRANS/WP.29/GRSP/2019/15 and GRSP-66-14	N/A	2021	OICA	Ongoing

	GRSP						
Priority/ recurrent	Title	Tasks / Deliverables	References	Allocations / IWGs	Timeline	Initiator	Comments
Recurre	UN Regulation No. 136	To update R136 considering new provisions in UN R100.03 and to clarify requirements for swappable Rechargeable Electric Energy Storage Systems (REESS)	GRSP-69-13 and GRSP-69-14	N/A	2021/2022	IMMA	

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			GRSP				
Priority/ recurrent	Title	Tasks / Deliverables	References	Allocations / IWGs	Timeline	Initiator	Comments
			Long term				
1. Priority	Passive safety with regard to new seating configurations in automated/autonomous vehicles	At the request of AC.2 and GRVA, collect available information and data describing the expected future seating position configurations (including children) related to highly automated and autonomous vehicles.  Create a common understanding on the readiness of new systems over time and related regulatory needs and timeline  Identify a stepwise "regulatory approach" to enable the above identified solutions.	Link to GRVA and WP29 (e.g. WP29-179-23 and WP29-179-25)	Taskforce to collect existing data/info	Depending from the identified "regulatory timeline"	To be defined	Automated/autonomous vehicles are seen to offer significant benefits in road safety  It is expected that higher levels of automation will be available in the near future allowing occupants to aim for new seating configurations, e.g. improved comfort, working environment or improved communication.
2.Priori ty	UN GTR on ECRS	N/A	N/A	N/A	N/A	N/A	Need to harmonize ECRS provisions
3. Priority	Crash tests that represents the entire population.	N/A	N/A	N/A	N/A	Sweden	

			GRSP				
Priority/ recurrent	Title	Tasks / Deliverables	References	Allocations / IWGs	Timeline	Initiator	Comments
Recurre nt	Helmets	07 series of amdt Phase 2 of IWG	2019/25 and GRSP-66-22	IWG PH (mandate to be proposed)	2022 ?	FR IT	To be started if agreed by GRSP

### Subjects under consideration by the Working Party on Passive Safety (GRSP) at its 80th session

Document symbol Documentation Subject ECE/TRANS/WP.29/... availability 7.1. For document symbols and its 1958 Agreement availability, please refer to the agenda 7.1.1. Proposal for draft amendments to existing for the eighties session UN Regulations (1958 Agreement): (GRSP/2021/17) [21 (Interior fittings); 22 (Protective helmets); 80 (Strength of seats and their anchorages (buses)); 94 (Frontal collision); (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)

- [9 (Pedestrian safety);
- (Hydrogen and Fuel Cells Vehicles)
- (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.

For document symbols and its availability, please refer to the agenda for the eighties session (GRSP/2021/17)

Subject		Document symbol Documentation ECE/TRANS/WP.29/ availability			
7.5.	Miscellaneous items  Exchange of information on national and international requirements on	For document symbols and its availability, please refer to the agenda for the eighties session (GRSP/2021/17)			
	passive safety; International Whole Vehicle Type Approval (IWVTA)	(GRG1/2021/17)			
	Securing of children in buses and coaches;				
	Exchange of views on vehicle automation;				
	Three-dimensional H-point machine;				
	Children left in cars.				