**Draft ECE/TRANS/WP.29/2022/1**

This document was prepared by the Secretary of the World Forum for Harmonization of Vehicle Regulations (WP.29). It is circulated to the subsidiary bodies, including the Working Party on Automated/Autonomous and Connected vehicles (GRVA) for review at its 11th session.

**Economic Commission for Europe**

Inland Transport Committee

**World Forum for Harmonization of Vehicle Regulations**

**186th session**

Geneva, 8-11 March 2022

Item 2.2 of the provisional agenda

**Coordination and organization of work:  
programme of work and documentation**

Programme of Work of the World Forum for Harmonization of Vehicle Regulations (WP.29) and its Subsidiary Bodies

Note by the Secretariat[[1]](#footnote-1)\*

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 184th session (ECE/TRANS/WP.29/1159) and its 185th session (ECE/TRANS/WP.29/1161), comments from GRBP, GRVA, GRSG and GRE, and the proposed agenda for its 186th session (ECE/TRANS/WP.29/1162) and updates also the information on the work of the six subsidiary Working Parties to WP.29.

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, 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 184th and 185th session of WP.29, all GRs were invited to 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 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 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. 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 ECE/TRANS/WP.29/...* | *Documentation availability* | |
| --- | --- | --- | --- |
| * 1. **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. **1958 Agreement** | For document symbols and its availability, please refer to the agenda (11??) | |
| * + 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 M1 and N1 vehicles)  101 (CO2 emission/fuel consumption)  79 (Steering equipment)  13-H (Braking for M1 and N1)  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. Proposal for new UN Regulations to be considered at the June 2020 session   Nil |  | | |
| * + 1. Status of the Agreement and of the annexed UN Regulations, including the latest situation report | 343/Rev.29 | | |
| * + 1. Development of an International Whole Vehicle Type Approval (IWVTA) system, |  | | |
| * + 1. Consideration of amendments to the 1958 Agreement. |  | | |
| * + 1. Development of an electronic database for the exchange of type approval documentation (DETA) |  | | |
| * 1. **1998 Agreement (Global)** | For document symbols and its availability, please refer to the agenda (11??) | | |
| * + 1. Consideration of draft UN GTRs and amendments to them to be considered at the November 2020 session   UN GTR No. 4 (WHDC) |
| * + 1. Consideration of Mutual Resolutions   Nil |  | | |
| * + 1. Guidance for the development of UN GTRs:   Nil   * + 1. Progress on the development of new UN GTRs and of amendments to established UN GTRs |  | | |
| * + 1. Progress on the development of new UN GTRs and of amendments to established UN 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)  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))  Draft UN GTR on Quiet Road Transport Vehicles (QRTV)  Draft UN GTR on Global Real Driving Emissions (GRDE) |  | | |
| * + 1. Exchange of views on items for new  UN Global Technical Regulations |  | | |
| Harmonization of side impact  Specifications for the 3-D H point machine  Event Data Recorder (EDR) |  | | |
| * 1. **1997 Agreement (Inspections)** | For document symbols and its availability, please refer to the agenda (11??) | | |
| * + 1. Future development of the Agreement |
| * + 1. Consideration of new UN Rules   Nil |  | | |
| * + 1. Update of existing UN Rules   Nil |  | | |
| * + 1. Amendments 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 72nd 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 72nd 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 73rd GRBP (January 2021) USA informed to discuss internally and inform again the 74th GRBP (September 2021).

| *GRBP* | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *Priority/ recurrent* | *Title* | *Tasks / Deliverables* | *References* | *Allocations / IWGs* | *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 | * GRBP September 2021: Informal document for amendments to UN-R51-04 * GRBP: January 2022 Working document UN-R51-04 (M1, N1 vehicles) | Chair: Germany  Secretariat: OICA | M1, N1  L3  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   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 | GRBP September 2021:   * Informal document for amendments to UN-R51 & UN-R117 * Informal document containing general Guidelines * GRBP January 2022: Working documents for UN-R51 & UN-R117 containing general Guidelines | Chair: Norway  Secretariat: OICA | R 51: Noise  R117: Noise  Other regulations:  Deadline to be defined |
| 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 |
| Future priorities (2022, 2023, …) | | | | | | | |
|  | New traction tyre definition | Introduction of new Traction definition for C2 and C3 tyres | R 117 | GRBP | GRBP  To be postponed in 09/2022 |  | C2, C3 |
|  | Vehicles’ Noise | Technical review | R 51, R59, R63, R92, R41 and R117 | TF-(renamed] TF-VN | To be discussed in TF-VN | Chair: France  Secretariat: OICA | M, N |
|  | Type definition | Consideration on tolerances for type defining parameters and selection scheme for a representative vehicle | R51 R41 |  |  |  |  |
|  | New radial tyre definition | French Proposal to introduce new Radial Tyre definition | R30 and R117 | GRBP | WP29 November 2022 | France | Ensure consistency between UN Regs and UN GTRs under  1958 and 1998 Agreements respectively |
|  | New ice tyre definition | ERTRO Proposal to introduce in UN Regulation No.117 an Ice tyre definition for tyres of C1 class. | Amendment to UN R 117 | GRBP | 2022 | ETRTO | Ensure consistency between UN Regs and UN GTRs under  1958 and 1998 Agreements respectively |

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* | |
| --- | --- | --- | --- |
| * 1. **1958 Agreement** | For document symbols and its availability, please refer to the agenda of the seventy-fourth session (GRBP/2022/?) | |
| * + 1. Proposal for draft amendments to existing UN Regulations (1958 Agreement):   Part 1 – Noise: |
| [41 (Noise of motorcycles);  51 (Vehicles noise emissions)]  Part 2 – Tyres:  [30 (Tyres for passenger cars and their trailers);  54 [(Tyres for commercial vehicles and their trailers)](https://unece.org/transport/documents/2020/12/working-documents/grbp-proposal-supplement-24-original-series)  75 (Tyres for L-category vehicles)  106 [(Tyres for agricultural vehicles and their trailers)](https://unece.org/transport/documents/2020/12/working-documents/grbp-proposal-supplement-19-original-series)  117 (Tyre rolling resistance, rolling noise and wet grip);  124 (Replacement wheels for passenger cars);  141 (Tyre pressure monitoring system);  142 (Tyre installation)]   * + 1. Proposal for draft new UN Regulations (1958 Agreement):   [ Draft UN Regulation on studded tyres.] |  | |
| * 1. **1998 Agreement (Global)** | For document symbols and its availability, please refer to the agenda of the seventy-fourth session (GRBP/2022/?) | |
| 16 (Tyres), if needed. |

# 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 ECE/TRANS/WP.29/...* | *Documentation availability* | |
| --- | --- | --- | --- |
| **3.1. 1958 Agreement** | For document symbols and its availability, please refer to the agenda of the eighty-fifth session (GRE/2022/?) | |
| 3.1.1. Proposal for draft amendments to existing UN Regulations (1958 Agreement): |
| 10 (Electromagnetic compatibility)  37 (Filament lamps);  48 (Installation of lighting and light-signalling devices);  53 (Installation of lighting and light-signalling devices for L3 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);  R.E.5 (Consolidated Resolution on the common specification of light source categories). |  | | |
| 3.1.2. Proposal for draft new UN Regulations: |  | | |
| Nil |  | | |
| **3.2. 1998 Agreement (Global)** |  | | |
| Possibility to develop further UN GTRs |  | | |
| **3.3. 1997 Agreement (Inspections)**  Nil |  | | |
| **3.4. Proposal for draft recommendations or amendments to existing recommendations** |  | | |
| **3.5. Miscellaneous items**  Amendments to the Convention on Road Traffic (Vienna 1968)  Development of an international whole vehicle type approval (IWVTA)  Decade of action for road safety 2011–2020;  Obsolete transitional provisions  Direction for future GRE work | For document symbols and its availability, please refer to the agenda of the eighty-fifth session (GRE/2022/?) | | |

# Table 4

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

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| *GRPE* | | | | | | |
| *Priority* | *Justification/Background information* | *References* | *Allocations /IWGs/TFs* | *Timeline* | *Chair /sponsor(s)* | *Comments* |
| Improvement of exhaust emissions requirements to ensure real drive performance on the road | Revise technical requirements to allow technological progress, ensure technological neutrality by introducing consistent and long-lasting performance-based emissions measures, at type approval, in use and potentially over the lifetime of the vehicle. | UNR on RDE | IWG on RDE | June 2020 | EC-JP-KR | Adopted in GRPE June 2020 |
| UN GTR on RDE | IWG on RDE | June 2023 (Phase 2) | EC-JP-KR | Directly to Phase 2 |
| 08 Series to UN Regulation No. 83 | GRPE | June 2022 | EC | Delayed |
| 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 :  Provisions to limit airborne particulates from different sources | Sub-23 nm exhaust particles for light- and heavy-duty applications, in the laboratory and on the road | Amendments to UN GTR No. 15 | IWG on PMP | June 2021 | EC | Light duty laboratory 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**

| *Subject* | *Document symbol ECE/TRANS/WP.29/...* | *Documentation availability* |
| --- | --- | --- |
| **4.1. 1958 Agreement**  4.1.1 Proposal for draft amendments to existing UN Regulations (1958 Agreement): | For document symbols and its availability, please refer to the agenda of the eighty-third session (GRPE/2022/?) | |
| 24 (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)  49 (Emissions of compression ignition and positive ignition (LPG and CNG) engines);  68 (Measurement of the maximum speed, including electric vehicles);  83 (Emissions of M1 and N1 vehicles);  85 (Measurement of the net power);  96 (Diesel emission (agricultural tractors));  101 (CO2 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);  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)) | For document symbols and its availability, please refer to the agenda of the eighty-third session (GRPE/2022/?) | |
| 4.2.1. Proposal for developing new UN Global Technical Regulations  Vehicles Interior Air Quality (VIAQ) |  | |
| **4.3. 1997 Agreement (Inspections)** Nil |  | |
| **4.4. Proposal for draft recommendations or amendments to existing recommendations** |  | |
| Nil |  | |
| **4.5. Miscellaneous items** | For document symbols and its availability, please refer to the agenda of the eighty-third session (GRPE/2022/?) | |
| World-wide harmonized Light vehicles Test Procedure (WLTP)  Heavy Duty Hybrids (HDH)  Particle Measurement Programme (PMP)  Gaseous Fuelled Vehicles (GFV)  Environmental and Propulsion Performance Requirements (EPPR) for L-category vehicles  Electric Vehicles and the Environment (EVE)  Vehicle Propulsion System Definitions (VPSD)  Fuel Quality (FQ)  International Whole Vehicle Type Approval (IWVTA)  Exchange of information on national and international requirements on emissions  Vehicles Interior Air Quality (VIAQ)  Global 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 Framework 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* | | | | | | |
| --- | --- | --- | --- | --- | --- | --- |
| *Title* | *Tasks / Deliverables* | *References* | *Allocations / IWGs* | *Timeline* | *Initiator* | *Comments* |
| 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) | WP.29 | Ongoing |
| 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 |
| 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 |
| Data Storage System for Automated Driving vehicles (DSSAD) | […] | Framework document for automated/autonomous vehicles  ECE/TRANS/WP.29/2019/34 as revised | GRVA, IWG on EDR/DSSAD | November 2022 | WP.29 | Ongoing |
| 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 (March 2022) | WP.29 | Ongoing |
| ADAS | Amendment to UN Regulation  No. 79 or new UN Regulation | ECE/TRANS/WP.29/GRVA/9, Annex IV | GRVA, Task Force on ADAS | November 2021 | Russian Federation and European Commission | Ongoing |
| ALKS | Amendment to UN Regulation  No. 157 | ECE/TRANS/WP.29/1155,  para. 33 | GRVA, Special Interest Group on UN Regulation No. 157 | November 2021 | Germany,  United Kingdom of Great Britain and Northern Ireland | Ongoing |
| 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 |
| UN GTRs | Amendments to UN GTRs | AC.3 decisions | GRVA | Upon decisions | AC.3 | On UNGTR No. 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 |
| UN Regulations | Amendments to UN Regulations   * UN Regulation No. 156 * UN Regulation No. 155 * UN Regulation No. 130 * UN Regulation No. 90 | 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**

| *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/2022/?) | | |
| 5.1.1. Proposal for draft amendments to existing UN Regulations (1958 Agreement): | |
| 13 and 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 M1 and N1);  155 (Cyber security);  156 (Software updates);  157 Automated Lane Keeping Systems. (ALKS); | |  | | |
| 5.1.2. Proposal for draft new UN Regulations: | |  | | |
| Nil | |  | | |
| 5.1.3. Vehicle automation | |  | | |
| Remote Control Manoeuvring (RCM)  Automated Controlled Steering Function (ACSF)  Automated Lane Keeping Systems (ALKS)  Validation Methods for Automated Driving (VMAD)  Functional Requirements for Automated and Autonomous Vehicles (FRAV)  Longitudinal control (Adaptive Cruise Control, preventing braking);  Transition demand (Human Machine Interface (HMI));  Driver Availability Recognition;  Information to the driver (HMI);  Electronic System Compliance (Complex Electronics Development);  Periodic Technical Inspection/ Roadworthiness Provisions;  Cyber Security;  Software (incl. Over-the-Air) updates;  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)** | | For document symbols and its availability, please refer to the agenda of the eleventh session (GRVA/2022/?) | | |
| 3 (Motorcycle braking)  8 (ESC); | |
| **5.3. 1997 Agreement (Inspections)** | |  | | |
| Nil | |
| **5.4. Proposal for draft recommendations or amendments to existing recommendations:** | |  | | |
| Nil | |  | | |
| **5.5. Miscellaneous items** | | For document symbols and its availability, please refer to the agenda of the eleventh session (GRVA/2022/?) | | |
| 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)  Exchange of views on innovations and relevant national activities | |

# 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 (Step 1)  2022 (Step 2) | 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 |  |
| 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   2023 | 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 M2 and M3 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 ECE/TRANS/WP.29/...* | *Documentation availability* |
| --- | --- | --- |
| **6.1. 1958 Agreement** | For document symbols and its availability, please refer to the agenda for the 122nd session (GRSG/2022/?) | |
| 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 (M2 and M3 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/2022/?) | |
| Possibility to develop further UN GTRs  Nil |  | |
| **6.3. 1997 Agreement (Inspections)** |  | |
| Nil |
| **6.4. Proposal for draft recommendations or amendments to existing recommendations:** |  | |
| Nil |  | |
| **6.5. Miscellaneous items** | For document symbols and its availability, please refer to the agenda for the 122nd session (GRSG/2022/?) | |
| International Whole Vehicle Type Approval (IWVTA)  Consolidated Resolution on the Construction of Vehicles (R.E.3)  Event Data Recorder Requirements |  | |

# Table 7

**Subjects under consideration by the Working Party on Passive Safety (GRSP) [[2]](#footnote-2)\***

| *GRSP* | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *Priority/ recurrent* | *Title* | *Tasks / Deliverables* | *References* | *Allocations / IWGs* | *Timeline* | *Initiator* | | *Comments* |
| **Short term** | | | | | | | | |
| 1. Priority | Pedestrian Safety | Review proposed Amendment 3 to GTR9 | **ECE/TRANS/WP.29/2021/53 ECE/TRANS/WP.29/2021/54**  **AC3/31/Rev.1**  **GRSP-69-43-Rev.1** | TF to be created |  | US/EC | | To be started |
|  | Head impact zone enlargement | Inclusion in GTR9 | ECE/TRANS/WP.29/GRSP/2020/9  ECE/TRANS/WP.29/GRSP/2019/18  GRSP-69-21-Rev.1 | T.b.d. | WP.29 June 2021 | EC, JPN | | To be started |
|  | Head impact zone enlargement | Transposition in UN R127 | ECE/TRANS/WP.29/GRSP/2020/9  ECE/TRANS/WP.29/GRSP/2019/18  GRSP-69-21-Rev.1 | N/A | 2022 | EC, JPN | | Ongoing |
|  | Deployable pedestrian protection systems | Inclusion in GTR9 | ECE/TRANS/WP.29/AC.3/45  ECE/TRANS/WP.29/AC.3/45/Rev.1 | IWG-DPPS | 11/2022 | KOR | | Ongoing |
|  | 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 |
|  |  |  |  |  |  |  |  | |
| Recurrent | 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 | |
| Recurrent | UN Regulation No. 22 | Type approval of accessories to helmets | ECE/TRANS/WP.29/GRSP/2020/13  GRSP-69-17 | Ad hoc group | WP29  November 2021 | Israel | Ongoing | |
| Recurrent | UN Regulation No. 100 | Specific conditions concerning a clear interpretation of an AC voltage | GRSP-69-04 |  |  |  |  | |
| Recurrent | UN Regulation No. 129 | head containment assessment for side impact testing; | , ECE/TRANS/WP.29/GRSP/2021/7 | N/A | 2021 | Spain | Ongoing | |
| **Medium term** | | | | | | | | |
| Priority | Amendment to Mutual Resolution No. 1 – Addendum 4 | Inclusion of Addendum 4 (Q dummies) | N/A | Task Force | 2021-2022 | Germany | Urgent matter, since the lack of specifications may hamper the proper use of UN Regulation No. 129 | |
| Priority | Amendment to Mutual Resolution No. 1 – Addendum x | Inclusion of Addendum x (Female Dummies)  But also other vulnerable occupants and seating position | N/A | [T/F] | 2021 | Sweden | Urgent matter, to provide the same level of protection to females in the event of crashes to fulfil UN SDG5 | |
| Priority |  |  |  |  |  |  |  | |
| 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 | |
| Recurrent | Children in buses | New reg | 2019/22 and GRSP-66-06 | IWG-STCBC | WP29 March 2023 | SP | Ongoing | |
| Recurrent | 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 | |
| Recurrent | 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 |  | |
| **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 step-wise “regulatory approach” to enable the above identified solutions. | Link to GRVA and WP29 (e.g. WP29-179-23 and WP29-179-25) | GRSP  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.Priority | 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 |  | |
| Recurrent | 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**

| *Subject* | *Document symbol ECE/TRANS/WP.29/...* | *Documentation availability* |
| --- | --- | --- |
| **7.1. 1958 Agreement**  7.1.1. Proposal for draft amendments to existing UN Regulations (1958 Agreement): | For document symbols and its availability, please refer to the agenda for the eighties session (GRSP/2022/?) | |
| [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 eighties session (GRSP/2022/?) | |
| [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. |  | |
| **7.5. Miscellaneous items** | For document symbols and its availability, please refer to the agenda for the eighties session (GRSP/2021/17) | |
| Exchange of information on national  and international requirements on  passive safety;  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. |

1. \* In accordance with the programme of work of the Inland Transport Committee for 2022 as outlined in proposed programme budget for 2022 (A/??/? (Sect.20), para 20.??), 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. [↑](#footnote-ref-1)
2. \* List of priorities still under discussion by the GR. [↑](#footnote-ref-2)