



# Economic and Social Council

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## Economic Commission for Europe

### Inland Transport Committee

#### Eighty-second session

Geneva, 25–28 February 2020

Item 4 (i) of the provisional agenda

**Strategic questions of a horizontal policy or regulatory nature:**

**Harmonization of vehicle regulations**

## Latest Developments in Vehicle Regulations

Note by the secretariat\*

### *Summary*

The work in the World Forum for Harmonization of Vehicle Regulations (WP.29) continued to strengthen vehicle safety and environmental protection, resulting in numerous new and amended vehicle regulations and rules under the 1958, 1997 and the 1998 Agreements.

Important topics were the establishment of the Framework Document on Automated/Autonomous Vehicles and its implementation mainly by the Working Party on Autonomous/Automated Vehicles (GRVA), the Database for the Exchange of Type Approval (DETA) at the United Nations Economic Commission for Europe (ECE), implementation of the 1998 Agreement and Periodic Technical Inspections (PTI) under the 1997 Agreement.

The Inland Transport Committee (ITC) **is invited** to:

- **Endorse** the activities listed in this document
- **Endorse** the establishment of the Framework Document on Automated/Autonomous Vehicles and its implementation mainly by the Working Party on Autonomous/Automated Vehicles (GRVA)
- **Note** the limitation of the 179th WP.29 session to three days only as reaction on the financial crisis
- **Consider** hosting DETA at ECE and request financing of DETA either under the United Nations regular budget or through voluntary contributions from contracting parties

\* This document was scheduled for publication after the standard publication date owing to circumstances beyond the submitter's control.



## I. Vehicle automation

1. Following the restructuring of WP.29 in June 2018 to implement ITC Decision No.19 of 2018 and the establishment of the Working Party on Automated/Autonomous and Connected Vehicles (GRVA) WP.29 established the Framework Document on Automated/Autonomous Vehicles (ECE/TRANS/WP.29/2019/34/Rev.1). This document addresses the safety and security of automated vehicles of SAE levels 3 and higher. It fosters the establishment of performance based and technical neutral provisions, which represent state of the art technology but not restricting future innovations. These technical provisions should be drafted in an agreement neutral way and thus providing the basis for regulations under the three agreements serviced by WP.29 or even guidelines. The Framework Document establishes a safety vision for automated vehicles and contains a list of common principles such as system safety, failsafe response, object event detection and response, operational domain, cyber security, software updates or data storage systems. It also identifies priorities and a workplan.
2. GRVA established four new Informal Working Groups (IWGs) to implement the framework document, which report to GRVA but are not serviced by the secretariat:
  - (a) Functional requirements for automated vehicles;
  - (b) Validation methods for automated driving technologies;
  - (c) Data Storage System for Automated Driving (DSSAD);
  - (d) Cyber Security and Software updates, including Over-the-Air.
3. At its 178th session, WP.29 adopted Terms of Reference and Rules of Procedure for the new IWGs. WP.29 reacted on the budget issue that had led to the situation that a vacant post following the promotion of its incumbent could not been filled in 2019 by shortening the 179th WP.29 session to three days in total only.

## II. 1958 Agreement

4. Four new United Nations vehicle regulations, aimed at improving vehicle safety and environmental performance entered into force in 2019:
  - (a) The lighting regulations simplification package consisting of three new UN Regulations covering the prescriptions of twenty-one individual UN Regulations:
    - (i) UN Regulation No. 148 on Light Signalling Devices;
    - (ii) UN Regulation No. 149 on Road Illumination Devices;
    - (iii) UN Regulation No. 150 on Retro-Reflective Devices;
  - (b) UN Regulation No. 151 on Blind-Spot Information System for the detection of Bicycles by heavy duty vehicles entered into force on 15 November 2019.
5. WP. 29 adopted one more new UN Regulation in 2019. Existing UN Regulations were updated by 139 amendments, which adapt the regulations to the most recent technological innovations and introduce more stringent limits aimed at increasing both the safety and environmental performance of vehicles. UN Regulation No. 152 on Advanced Emergency Braking Systems for M<sub>1</sub> (cars) and N<sub>1</sub> (vans) vehicles was adopted at the June 2019 session of WP.29 and enters into force in January 2020.
6. As extrabudgetary funding for hosting DETA at ECE could not be secured (Informal document ITC (2018) No. 9, para.5), WP.29, at its 174<sup>th</sup> session, requested the UNECE secretariat to take the necessary steps to request financing for the hosting of DETA under regular budget., and thanked Germany for hosting DETA until 2020 as an in-kind contribution (Informal document ITC (2018) No. 9, para. 6). ITC, at its eighty-first session, reiterated its support for hosting the Database for the Exchange of Vehicle Type Approvals (DETA) at ECE; and requested financing of DETA under the United Nations budget. The 2020 UNECE programme budget, subprogramme 2 "Transport", however, does not contain DETA.

7. At the 177th session of WP.29 in March 2019, the International Motor Vehicle Inspection Committee reconfirmed its readiness to finance the development of the module for Declaration of Conformity. The industry associations: International Organization of Motor Vehicle Manufacturers, the European Association of Automotive Suppliers and the European Tyre and Rim Technical Organization confirmed their intention to finance the module for the Unique Identifier.

### **III. 1997 Agreement**

8. On 13 November 2019, the proposed amendments to the 1997 Agreement entered into force introducing new definitions, the possibility for electronic international inspection certificates and provisions on the conformity of periodic technical inspections. This amendment not only enhances clarity of the provisions by adding further definitions, but it also provides for an enhanced level of quality based on the requirements of the new appendix 3 on conformity of the periodical technical inspection process.

9. Two new UN Rules annexed to the 1997 Agreement entered into force on 10 June 2019.

(a) UN Rule No. 3 sets out uniform provisions for Periodical Technical Inspections of motor vehicles using Compressed Natural Gas (CNG), Liquefied Petroleum Gas (LPG) and/or Liquefied Natural Gas (LNG) in their propulsion system with regard to their roadworthiness;

(b) UN Rule No. 4 establishes uniform provisions for periodical technical inspections of motor vehicles with electric and hybrid-electric propulsion systems with regard to their roadworthiness.

### **IV. 1998 Agreement**

10. In 2018, WP.29 concluded several years of work on five amendments to Global Technical Regulations (UN GTRs): No. 2 (Measurement procedure for two-wheeled motorcycles equipped with a positive or compression ignition engine with regard to the emission of gaseous pollutants, CO<sub>2</sub> emissions and fuel consumption), No. 15 (Worldwide harmonized Light vehicle Test Procedure) and to No. 19 (Evaporate Emission Test Worldwide harmonized Light Duty Test Procedure).

11. In March 2019 the development of a new UN GTR on the Determination of Electrified Vehicle Power (DEVP) was initiated. The new UN GTR, that is expected to be adopted by 2020, will centralize expertise and resources for determining powertrain performance specifically for electrified vehicles.

### **V. Link with the 2030 Agenda for Sustainable Development**

12. Accession to United Nations vehicle agreements and adherence to annexed UN Regulations, Rules and GTRs can contribute to progress in achieving targets 3.6, 3.9, 7.3, 9.1, 11.2 and 13.2 of the Sustainable Development Goals.