

Draft Terms of Reference of the Informal Working Group on Periodical Technical Inspections (IWG on PTI)

A. Preamble

At its 183rd session WP.29 approved the request of the Co-Chairs for extension of the mandate of the IWG on PTI until March 2022 and invited the IWG to deliver revised Terms of Reference (ECE/TRANS/WP.29/1157, para 110).

The Co-Chairs of the IWG on PTI as well sought guidance from WP.29 on elements of its activities related to the framework document on in-service compliance which aimed to address different mechanisms for the robust verification of compliance of the automotive products.

The aim of the draft presented below is to provide guidance for IWG on PTI to coordinate its activities on the different stages of the legal life of vehicles, equipment and parts.

B. Draft Terms of Reference of the Informal Working Group on Periodical Technical Inspections

I. Introduction

1. Vehicles degrade over the time as is the case for any product, and it is necessary to assess the impact of degradations, breakdowns, tampering, wear and other events that may impact vehicle's performances. Those performances have been traditionally related to road safety, environmental protection and energy saving; new technologies oblige to have an open approach to incorporate new aspects like cybersecurity or personal data protection. Software of the vehicles, and specifically over the air updates of the software lead to a new situation where modification to functions and performance can easily be realized on large scale. It is necessary to define the appropriate provisions to ensure that the performance of vehicles, throughout their use, fulfils the legal requirements applicable at each stage and can be impartially assessed. The whole of the various aspects related to the requirements to be fulfilled by the vehicles is called whole-life compliance (WLC).

2. The coordination of technical provisions and/or guidance and/or resolutions for whole-life compliance of the vehicles shall be conducted by WP.29 within the context of the 1958 and 1998 Geneva Agreements and the 1997 Vienna Agreement. The following is a list of whole-life compliance

principles, which would form the basis for further development within the WP.29 and its subsidiary bodies:

- a) the relevant aspects of vehicle use need to be considered, including safety, the environment and security;
- b) in a realistic scenario, and even more with the most evolved technologies, it appears necessary to define provisions for the different stages to ensure whole-life compliance in coordination with the type approval process;
- c) whole-life compliance shall take advantage of existing and new technologies; the opportunities created by these technologies need to be considered to increase the efficiency of whole-life compliance while keeping or improving road safety, environmental protection, and the other performances as listed in B I 1;
- d) the whole-life compliance framework shall provide the necessary transparency to facilitate the acceptance of new technologies by the users;
- e) the stages of whole-life compliance shall be coordinated, whereas their scopes, methods, thresholds and other parameters may differ;
- f) when necessary, relevant requirements to check the performance and compliance of vehicles, systems and components shall be developed according to the corresponding stages of whole-life compliance;
- g) Contracting Parties shall have the appropriate access to the technical specifications and any other data to develop and conduct an objective verification of the performance and compliance of each individual vehicle at any of the stages of the whole-life compliance;
- h) vehicle design and information-/data access shall allow impartial assessment of whole-life compliance stages.
- i) communication requirements to electronic interfaces of the vehicles should be standardized.

II. Working items

A. Whole-life compliance

3. A Framework document on vehicle whole-life compliance is to be developed. Its primary purpose is to provide guidance for WP.29 and its subsidiary bodies to coordinate the different stages of the legal life of vehicles, equipment, and parts.

Mechanisms for the robust and impartial verification of whole-life compliance of the automotive products are to be considered.

B. Measures to detect tampering: methods and supervision

4. The ways to identify tampering of safety and environment related components and systems have to be considered, including but not limited to development of inspection techniques and technical requirements to determine the amount of particles per volume of the exhaust gases emitted from combustion engines.

C. Innovative technologies

5. When necessary, to develop relevant requirements to verify the performance of systems and components, including automated / autonomous driving systems, for WLC.

6. The IWG should develop proposals for establishment of requirements for WLC verification of the performance and compliance of vehicles, equipment and systems, including automated/autonomous driving systems, in all the relevant driving conditions, as well as other than those tested in type approval, and methods for their assessment.

D. Consistency between the provisions of the 1968 Vienna Convention and the technical provisions for vehicles against the rules in the framework of the 1997 Vienna Agreement

7. Requirements for periodical technical inspection are prescribed by UN legal acts, including the 1968 Vienna Convention on road traffic, the 1997 Vienna Agreement and the UN Consolidated Resolution R.E.1. Where necessary and possible, the rules for periodical technical inspections among the various Agreements, Conventions and Resolutions should be harmonised to allow improved safety and sustainability of road transport and limit legislative obstacles for technological developments.

E. WLC Solutions to support the safe operation of highly automated and autonomous vehicles

8. WP.29 will develop an approach for the approval of Advanced Driver Assistance Systems (ADAS), and Connected and Automated Driving Vehicles (CAV) The IWG on PTI should follow the development of CAVs and ADAS and propose pragmatic and efficient measures in the PTI field needed to support the safe operation of highly automated and autonomous vehicles. The measures should include reasonable requirements/principles to ensure a safe operation of CAVs and ADAS, through a pragmatic way that as much as possible keeps controlled flexibility for industry. The IWG on PTI should consequently carefully follow-up the activities under the 1958 and 1998 Agreements and provide its expertise where needed.

F. Guidance for PTI

9. Periodic technical inspections of in-service vehicles are part of the wider regime of WLC to ensure that vehicles are kept in a safe and environmentally acceptable condition during their use. As sovereign activity, it should be the impartial main tool to ensure roadworthiness.

G. Guidance for road-side technical inspections and enforcement

10. A range of measures is required that encourage whole life compliance including the use of targeted enforcement, incentives,

disincentives, user education and training. Roadside inspection is a form of vehicle assessment that makes considerable contribution towards ensuring in service compliance.

H. Others

- (a) Provision of guidance regarding PTI when requested to WP29 by GRs, or where deemed necessary by the IWG on PTI;
- (b) Exchange of views and information from each Contracting Party about the most advanced technology, equipment and methods, including, such as research results including field tests, information on the national legal system and measures, events, conventions, etc.;
- (c) Exchange of views and information on PTI will also be taken forward. This latter activity might be concurrent with above discussion on PTI;
- (d) Necessary discussion will be made at appropriate terms;
- (e) Consider further items to be treated by the IWG or the WP.29.

III. Timeline

- 10. The IWG on PTI outlines its plan (including working items to be covered, any steps, deliverables and expected timelines) to be approved by the WP.29.
- 11. The activities referred to in this document are intrinsically linked to the 1958, 1998 and 1997 Agreements evolution. The mandate of the group is granted for a period of three years, subject to renewal.

IV. Rules of procedure

- 12. The following rules of procedure describe the functioning principles of the IWG:
 - (a) Following the Rules of Procedure of WP.29. Chapter 1, Rule 1, the IWG is open to all experts from any country or organization of WP.29 and its subsidiary bodies.
 - (b) Two Co-Chairs (Netherland and the Russian Federation) will manage the IWG with the support of a Secretary (CITA).
 - (c) The working language of the IWG will be English.
 - (d) An agenda and related documents will be circulated to all members of the IWG in advance of all scheduled meetings.
 - (e) All documents and/or proposals shall be submitted to the secretary of the IWG in a suitable electronic format, preferably in line with the UNECE guidelines in advance of the meetings.
 - (f) All documents shall be distributed in digital format. The specific PTI section on the UNECE website shall be used for this purpose.
 - (g) The IWG may refuse to discuss any item or proposal which has not been circulated 5 working days in advance of the scheduled meetings.

(h) Meetings of the IWG shall be held in relation with WP.29 and its subsidiary groups sessions schedule. Additional meetings will be organized upon request.

(i) The work process will be developed by consensus. When consensus cannot be reached, the Co-Chairs of the IWG shall present the different points of view of the IWG to WP.29. The Co-Chairs may seek guidance from WP.29 as appropriate.

(j) The progress of the IWG will be routinely reported to WP.29 orally or with an informal document by the Co-Chairs.

(k) Draft meeting minutes will be available after each meeting, and presented for approval at the following one.
