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Progress on the development of new UN GTRs

and of amendments to established UN GTRs:

Hydrogen and Fuel Cell Vehicles (HFCV) (UN GTR No. 13) – Phase 2

Terms of reference of the informal working group on the UN GTR No. 13 (Hydrogen and Fuel Cell Vehicles) - Phase 2

Submitted by the Working Party on Passive Safety*

The text reproduced below was adopted by the Working Party on Passive Safety (GRSP) at the sixty-second session (ECE/TRANS/WP.29/GRSP/62, para. 8). It is based on GRSP-62-25-Rev.1 as reproduced in Annex II to the report. This document, if adopted, shall be appended to the gtr in accordance with the provisions of paras. 6.3.4.2., 6.3.7. and 6.4. of the 1998 Agreement.

* In accordance with the programme of work of the Inland Transport Committee for 2018–2019 (ECE/TRANS/274, para. 123 and ECE/TRANS/2018/21 and Add.1, cluster 3.1), 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.

Terms of reference of the informal working group on the UN GTR No. 13 (Hydrogen and Fuel Cell Vehicles) - Phase 2

Adopted text based on GRSP-62-25-Rev.1 (see para. 8 of this report)

A. Introduction

1. In June 2013, the World Forum for Harmonization of Vehicle Regulations (WP.29) and the Executive Committee of the 1998 Agreement (AC.3) established UN Global Technical Regulation (GTR No. 13) for Hydrogen and Fuel Cell Vehicles (HFCV). The UN GTR was developed during Phase 1 by the subgroup safety (SGS) and consists of safety provisions for the hydrogen fuel vessel, fuel system and high voltage system of HFCV. The UN GTR was subsequently adopted and transposed into national regulations by several contracting parties under the 1998 Agreement. Some of the provisions that required long term research were deferred to Phase 2.
2. In March 2017, AC.3 gave general support to a joint proposal submitted by Japan, the Republic of Korea and the European Union to establish an informal working group (IWG) to work on Phase 2 of the UN GTR No. 13 under the framework of the 1998 Agreement.
3. This document sets forth the Terms of Reference (ToR) for the IWG, including objective, scope, operating principles, timeline and deliverables.

B. Objective of the working group

4. The objective of the IWG is to develop additional safety provisions that were either not ready for adoption in Phase 1 and/or required additional research. The IWG will also update/clarify existing requirements and test procedures in UN GTR No.13 based on new data and on-road experience.
5. The provisions that will attain equivalent levels of safety as those for conventional gasoline powered vehicles will be performance-based and supported by science and data to the extent possible, so as not to restrict future technological development. The scope of work for the IWG in Phase 2 shall include the following items. Should additional items be proposed, the IWG will decide by consensus on their inclusion:
 - (a) Potential revision of the scope to address additional vehicle classes;
 - (b) Potential to harmonize vehicle crash test requirements;
 - (c) Potential to refer the existing high voltage requirements of the UN GTR for electric vehicles;
 - (d) Requirements for material compatibility and hydrogen embrittlement;
 - (e) Requirements for the fuelling receptacle;
 - (f) Evaluation of performance-based test for long-term stress rupture proposed in Phase 1;
 - (g) Consideration of research results reported after completion of Phase 1 – specifically research related to electrical safety, hydrogen storage systems, and post-crash safety; and

- (h) Consideration of 200 per cent Nominal Working Pressure (NWP) or lower as the minimum burst requirement for certain types of fuel containers;
- (i) Consider a safe guard system in case of isolation resistance breakdown.

C. Operating principles

(a) The IWG will be sponsored by Japan, the Republic of Korea and the European Union. The IWG led by Co-Chairs (Japan and the United States of America), vice-chairs (China and Republic of Korea), and a Secretary of the International Organization of Motor Vehicle Manufacturers (OICA);

(b) The IWG is a subgroup of the Working Party on Passive Safety (GRSP) and is open to all participants of GRSP including contracting parties and non-governmental organizations to the 1958 and 1998 agreements;

(c) The IWG will report to GRSP, WP.29 and AC.3;

(d) The official language of the IWG will be English;

(e) All documents must be submitted to the Secretary of the group in a suitable electronic form;

(f) Formatting of documents at least (ten) working days before the meeting. The documents will be posted on the dedicated part of UNECE website at least (five) working days in advance of the meetings;

(g) The Secretary of the IWG will distribute a draft minute of the meetings to all members within (fifteen) working days after any meeting with the view to formal adoption at the next meeting;

(h) Decisions and proposals of the group shall be reached by consensus. When consensus cannot be reached, the Chairs of the group may present the different points of view and seek guidance from GRSP, as appropriate;

(i) Meetings shall be held in agreement with the majority of the participants based on the joint proposal by the Chairs of the IWG. Meetings may be in person or virtual, using web-based technology;

(j) A provisional agenda shall be drawn up by the IWG leadership. The first item of the provisional agenda for each session shall be the adoption of the agenda. The second item shall be the minutes of the previous session followed by technical discussions and miscellaneous items.

D. Timeline and deliverables

October 2017: First IWG meeting;

November 2017: Report to the World Forum for Harmonization of Vehicle Regulations (WP.29) and the Executive Committee for the 1998 Agreement (AC.3);

December 2017: Report to GRSP;

February 2018: Second IWG meeting;

May 2018: Report to GRSP;

June 2018: Third IWG meeting;

June 2018: Report to the World Forum for Harmonization of Vehicle Regulations (WP.29) and the Executive Committee for the 1998 Agreement (AC.3);

October 2018: Fourth IWG meeting;

November 2018: Report to the World Forum for Harmonization of Vehicle Regulations (WP.29) and the Executive Committee for the 1998 Agreement (AC.3);

December 2018: Report to GRSP;

2019-2020: Three IWG meetings per year with regular reports provided for the WP.29 and GRSP sessions;

End of 2020: Estimated completion of Phase 2 of UN GTR No. 13 (Hydrogen and Fuel Cell Vehicles).
