

Submitted by IWG-PH Chair

Informal document GRSP-67-25
(67th GRSP, 20-23 July 2020
agenda item 7)

PROPOSAL FOR THE 06 SERIES OF AMENDMENTS OF REGULATION NO. 22 (PROTECTIVE HELMETS)

ACCESSORIES

Starting from

Informal document GRSP-62-19
(62nd GRSP, 12-15 December 2017)

French considerations on R22

- New add on to take into account:

Lightning equipment

Cameras

Audio – phone equipment

Design equipment



Informal document GRSP-63-26
(63rd GRSP, 14 - 18 May 2018)

Submitted by
IWG UN Regulation No. 22

Informal document **GRSP-63-26**
(63rd GRSP, 14 - 18 May 2018,
agenda item 11)

Terms of Reference for the informal working group of Regulation No. 22 (Protective Helmets)

A. INTRODUCTION

In December 2017, the Working Party on Passive Safety (GRSP) agreed on the need to update the UN Regulation No. 22 according to the new research results in biomechanics on head protection and to seek the consensus of WP.29.

In March 2018, the World Forum for Harmonization of Vehicle Regulations (WP.29) gave a general support to the GRSP proposal to establish an informal working group (IWG) to work on updating the UN Regulation No. 22 under the framework of the 1958 Agreement.

The purpose of this document is to set forth the Terms of Reference (ToR) for the IWG including objective, scope, operating principles, timeline and deliverables.

B. OBJECTIVE OF THE WORKING GROUP

Based on accident data analysis available and experience, the objective of the IWG is to develop additional safety provisions that were either not ready for adoption of UN Regulation No. 22 and/or required additional research. The IWG will also update/clarify existing requirements and test procedures in UN Regulation No. 22.

Scope of work for IWG shall include the following items. Should additional items be proposed, the IWG will decide by consensus on their inclusion.

- A. New test and criteria following the progress in research for head protection improvement (e.g.: Rotational Acceleration Protection, harmonization head form,);
- B. Requirements for new features to take into account :
 1. Lightning equipment;
 2. Cameras
 3. Removable chinbar
 4. Sunshield
 5. Audio-phone equipment
 6. Design equipment
 7. Aeration (to improve helmet wearing)
- C. New Type Approval Marking System to prevent counterfeit and backup enforcement and police control and give complementary information to consumer (e.g. year of production).

C. OPERATING PRINCIPLES

TOR - OBJECTIVE OF THE WORKING GROUP

The objective of the IWG is to develop additional safety provisions that were either not ready for adoption of UN Regulation No. 22 and/or required additional research. The IWG will also update/clarify existing requirements and test procedures in UN Regulation No. 22 based on new data and on-road experience.

Scope of work for IWG shall include the following items. Should additional items be proposed, the IWG will decide by consensus on their inclusion

- A. New test and criteria following the progress in research for head protection improvement (e.g.: Rotational Acceleration Protection);
- B. Requirements for new features to take into account:
 - 1. Lightening equipment;
 - 2. Cameras
 - 3. Audio-phone equipment
 - 4. Design equipment
 - 5. Aeration (to improve helmet wearing)
- C. New Type Approval Marking System (to prevent counterfeit and backup enforcement and police control)

Status Report *

- . In December 2017 GRSP agreed on the need to update UN Regulation No. 22
- . In March 2018 WP.29 gave a general support to establish the IWG on Protective Helmets
 - Geneva, 14th May 2018 – 1st IWG-PH to draft Term of Reference
 - Geneva, 10th December 2018 – 2nd IWG-PH to discuss the first proposal
 - Milan, 25th & 26th March 2019 – 3rd IWG-PH to draft & endorse the proposal to be submitted to GRSP on its 65th session
 - Geneva, 13th May 2019 – 4th IWG-PH to prepare the presentation for GRSP
 - Milan, 5th & 6th September 2019 – 5th IWG-PH to draft & endorse the final proposal to be submitted to GRSP on its 66th session
 - Geneva, 9th December 2019 – 6th IWG-PH to prepare the presentation for GRSP and refine or correct some editorial
- Meetings data, reports and all documents were available in the IWG web site: <https://wiki.unece.org/pages/viewpage.action?pageId=60361119>

7.3.1.3.5. Helmets placed on the market with accessories shall be examined to assess that the supplementary equipment has no adverse effect and that in any case the protective helmet and/or visor still complies with all the requirements.

Note: The evaluation shall be done with and without the accessory and their support with particular attention, as example, to energy absorption, sharp edges and field of vision.

No helmet shall be modified from its original specification as manufactured. Accessories must be fitted in accordance with the helmet manufacturer's instructions. **Only accessories approved by the Authority shall be used. In case of any other modification or addition of non-approved accessories (helmet cameras, visors, communication devices, etc.) the helmet homologation becomes invalid.**

Informal document GRSP-66-21
(66th GRSP, 10-13 December 2019)

Paragraph 7.3.1.3.5 –amend to read:

7.3.1.3.5 ...No helmet shall be modified from its original specification as manufactured. Accessories must be fitted in accordance with the helmet manufacturer's instructions. **Only accessories tested during the type approval procedure of the helmet keep the type approval valid.**

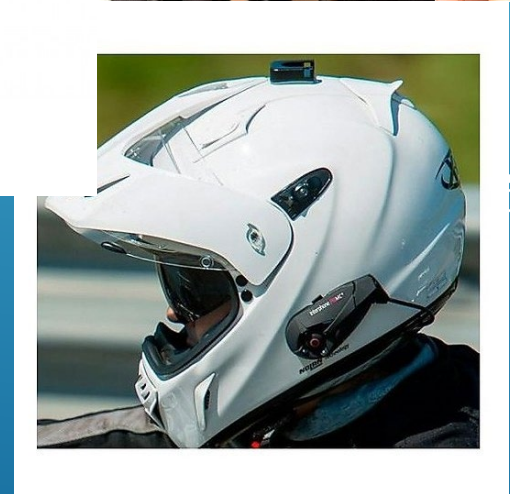
Why



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Technical performance consequences related to Regulation ECE 22

7.3. Linear Impact
Energy absorption tests X point

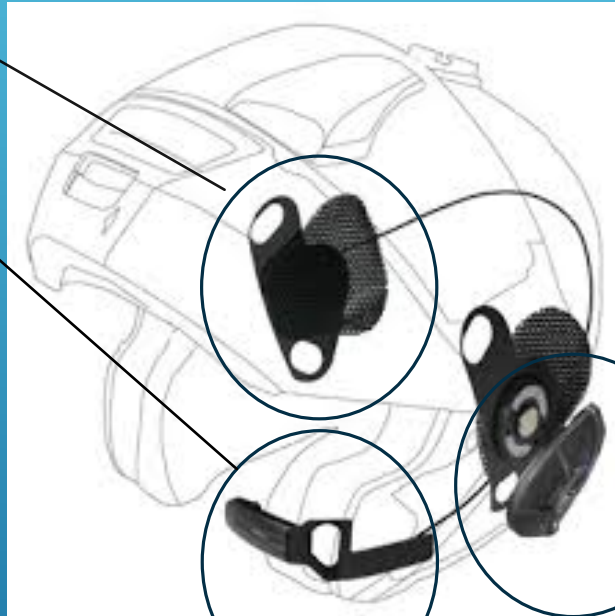
7.3. Linear Impact
Energy absorption tests S point

General

Helmet mass and distribution / inertia for rotational

7.13. Oblique impact test method of measuring rotational acceleration

All the prescriptions in the paragraphs 7.3, 7.4 and 7.13 are verified in type approval process, the modification have affect on the performance of the helmet



7.4 Test for projections and surface friction

Other aspect

Installation, partial disassembly of helmet if not predisposed.
Made by the final user ?

ON A INTEGRATED SOLUTION ALL THIS
ASPECT ARE VERIFIED AND CHECKED
DURING A TYPE APPROVAL PROCESS

On helmets with and without accessories,
independent on the type of the accessories.



To be consider also



In some cases could be necessary consider also the effect on the user, like distraction, gaze guidance, eye reaction, focusing etc. But this is not in the object of the Regulation .

PRODUCT LIABILITY (1/2)

Article 1 (1) of the 1958 Agreement states: “The term “type approval pursuant to a UN Regulation” indicates an administrative procedure by which the approval authorities of one Contracting Party declare, after carrying out the required verifications that a type of vehicle, equipment or part submitted by the manufacturer conforms to the requirements of the given UN Regulation. Afterwards the manufacturer certifies that each vehicle, equipment or parts put on the market were produced to be identical with the approved product”.

PRODUCT LIABILITY (2/2)

The Regulation ECE 22 refers specifically to helmets, the manufacturers with their products must comply with all the requirements to obtain the approval of the device and must guarantee the conformity of the product with what is approved.

The helmet manufacturer – that is the holder of approval of a type protective helmet - is responsible for the conformity of the product and the maintenance of its safety requirements verified during the type approval procedure.

For the NON-conformity of the helmet, deriving from a third party product, not verified but applied on the helmet, perhaps installed directly by the end user who will be responsible?