

Guidance, by consensus decision on elements of draft GTR No. 9 – Phase 2 that have not been resolved by the Working Party on Passive Safety.

I. Introduction

1. The intention of this document is to provide further information to the Executive Committee of the 1998 Agreement (AC.3) on the development of the draft phase 2 of gtr No. 9 (ECE/TRANS/WP.29/2014/..), recommended by GRSP at its December 2013 session and seek guidance on remaining issues of this proposal concerning the Injury Assessment References Values (IARVs) for the flexible lower legform to bumper test of para. 5.1.1.

II. Background

2. GRSP agreed to set up an Informal Working Group (IWG) on pedestrian safety Phase 2 in order to further develop proposals to amend gtr No.9 on pedestrian safety, introducing the Flexible Pedestrian Legform Impactor (Flex-PLI) (ECE/TRANS/WP.29/AC.3/24, ECE/TRANS/WP.29/1079, para. 101).

3. The main objective of the IWG on gtr No. 9 – Phase 2 was to develop a draft proposal to amend gtr No. 9 by introducing the Flex-PLI as a single harmonized test tool in order to enhance the safety level of lower leg pedestrian protection.

4. The work of the IWG was not limited to draft proposals to amend gtr No. 9, but covered the development of a complementary draft proposal to amend Regulation No. 127 on pedestrian safety. WP.29 and AC.3 agreed to mandate the IWG to solve the pending issues for incorporating the Flex-PLI in Phase 2 of the gtr No. 9 and in the Regulation on pedestrian safety in the same time (ECE/TRANS/WP.29/1091, paras. 36 and 100).

III. Issue

5. At the December 2013 session of GRSP, the expert from Germany, co-Chair of the IWG on pedestrian safety introduced the draft gtr No. 9 Phase 2 to incorporate the FlexPLI, as a result of the last meeting of the IWG held on 16 and 17 December 2013, prior to the GRSP proper session. He explained that the proposal was leaving pending the issues of the IARVs for the flexible lower legform to bumper test (para. 5.1.1) and for the tolerance of the FlexPLI mass (paras. 6.3.1.1. and 6.3.1.1.3.). The first remaining issue in the proposal received comments from the expert of the United States of America who questioned the lack of information concerning the above-mentioned IARVs. He stated that the draft amendment to the gtr could not be recommended unless Contracting Parties would be allowed to choose appropriate IARVs when transposing the gtr into their national legislations. In response, the expert from Germany introduced a draft revision of the proposal (GRSP-54-33-Rev.2) addressing this concern with footnote 2 in para. 5.1.:

"5.1.1. When tested in accordance with paragraph 7.1.1. (flexible lower legform to

bumper), the absolute value of the maximum dynamic medial collateral ligament elongation at the knee shall not exceed [22 mm], and the maximum dynamic anterior cruciate ligament and posterior cruciate ligament elongation shall not exceed [13 mm]. The absolute value of dynamic bending moments at the tibia shall not exceed [340 Nm]. In addition, the manufacturer may nominate bumper test widths up to a maximum of 264 mm in total where the absolute value of the tibia bending moment shall not exceed [380 Nm]. A Contracting Party may restrict application of the relaxation zone requirement in its domestic legislation if it decides that such restriction is appropriate.

[² A Contracting Party without pre-existing pedestrian protection regulations or standards implemented in domestic legislation at the time the Phase 2 of Global Technical Regulation No. 9 is established in the Global Registry, may decide other injury thresholds for the maximum dynamic medial collateral ligament elongation, the maximum dynamic anterior cruciate ligament and posterior cruciate ligament elongation and the dynamic tibia bending moments in its domestic legislation if it decides that such modification is appropriate.]"

6. The expert from OICA regretted the lack of agreement on this last issue which would result in a number of options, thus hampering harmonization.

7. However, GRSP recommended the proposal and agreed to seek guidance of AC.3 at its March 2014 session concerning IARVs of para. 5.1.1. and seek endorsement of AC.3 to extend the mandate of the IWG until November 2014 to complete the addendum to M.R.1 to incorporate the FlexPLI. Finally, GRSP requested the secretariat to submit the proposal as draft Amendment 2 to gtr No. 9 and its final progress report to AC.3 for consideration and vote at its June 2014 session (see ECE/TRANS/WP.29/GRSP/54, paras. 7 and 8).

8. In the meantime, it shall be noted that GRSP adopted a parallel series of amendments to Regulation No. 127 (Pedestrian safety), endorsing the same IARVs values of the above mentioned draft gtr No. 9 Phase 2 without the footnote (see ECE/TRANS/WP.29/GRSP/54, para. 29). However, the tolerance of the FlexPLI mass remained in square brackets as per the draft gtr, pending confirmation of the IWG by the May 2014 session of GRSP.

IV. Conclusions

9. The expert from the United States of America stated that he could not agree with the proposed IARVs values until cost benefit analysis would be completed in his country. He reminded that previously he suggested including the injury risk curves only, with Contracting Parties choosing appropriate IARVs when implementing this gtr in national legislation but the IWG rejected the idea. Although language had been added to the preamble of the gtr to address these concerns and IARVs were currently in square brackets (for further discussion), he finally stated that the United States of America cannot adopt this amendment unless Contracting Parties are allowed to choose IARVs that are cost beneficial to their domestic fleet or the IARVs are kept in between brackets (see GRSP-54-32) and finally he accepted the solution of the above mentioned footnote. However, in the opinion of the expert from Germany, co-chair of the IWG, the agreed footnote 2 of the draft gtr could create a precedent to the development of future gtrs and GRSP agreed to seek guidance of AC.3 on this subject.
