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Progress on the development of new global technical regulations (gtrs) and on amendments to established global technical regulations (gtrs) — gtr No. 7 (Head restraints)

Third progress report for Phase 2 of gtr No.7 (Head restraints)

Submitted by the Chair of the informal working group of gtr No. 7 – Phase 2 *

The text reproduced below was prepared by the Chair of the World Forum. It is based on informal document No. WP.29-155-34, distributed at the 155th session (ECE/TRANS/WP.29/1093, paragraph 105). This document, if adopted, shall be appended to the amendment 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 2006–2010 (ECE/TRANS/166/Add.1, programme activity 02.4), the World Forum will develop, harmonize and update Regulations in order to enhance the performance of vehicles. The present document is submitted in conformity with that mandate.

A. Background

1. At its 143rd session in November 2007, the World Forum for Harmonization of Vehicle Regulations (WP.29) agreed to provide guidance to the Working Party on Passive Safety (GRSP) for the development of the draft gtr on head restraints (ECE/TRANS/WP.29/1064, para. 81) and that Phase 2 of the gtr should consider, as indicated in informal document No. WP.29-143-23-Rev.1, the following issues:

- (a) The head restraint height of 850 mm;
- (b) The appropriate dynamic test, including the test procedure, injury criteria and the associated corridors for the biofidelic rear impact dummy II (BioRID II).

2. At its twenty-seventh session in June 2009, the Executive Committee of the 1998 Agreement (AC.3) agreed on the two-step approach suggested by the representative of the United Kingdom and of the United States of America. This approach considers whether BioRID II can more effectively address injuries occurring in low speed rear impact crashes and focus on reducing injuries in higher speed rear impact crashes as a second step.

3. At its twenty-eight session in November 2009, Japan submitted to AC.3 a proposal for developing amendments to the gtr, prepared jointly with the United Kingdom and the United States of America, and the revised timetable. AC.3 agreed to develop the amendment to the gtr.

4. The first interim report of this activity was provided to the 152nd session of WP29/AC.3 in November 2010 (ECE/TRANS/WP.29/2010/136). The second interim report was provided to the 154th session of WP.29/AC.3 in June 2011 (ECE/TRANS/WP.29/2011/86).

B. Status

5. The Informal working group has met seven times with the last occasion being in Washington DC on 10 June 2011. Participation includes both industry and government representatives from the regions of Asia Pacific, North America and Europe.

6. The Informal working group is addressing the head restraint height issue in two parts:

7. The first part is to review the procedure for measuring the height of the head restraint and in particular to determine the effective height rather than the physical height of the device. A small sub-group, including representatives from the manufacturing sector and coordinated by the Netherlands, has made good progress in establishing a revised procedure which should be ready for detailed discussion at the next Informal working group meeting. The second part is to make recommendations for the height requirement. This will be discussed following agreement on the measurement procedure.

8. Regarding BioRid, significant progress has been made concerning evaluation of repeatability and reproducibility. However, while most evaluations have indicated good performance in these two areas, there are ongoing research activities to address concerns about reproducibility raised by one representative.

9. A round robin programme, using the BioRid specimens that had exhibited variance, was agreed upon at the Washington meeting. The dummies were shipped to the United States where General Motors and the National Highway Traffic Safety Administration (NHTSA) conducted tests. It was intended that the dummies would then be returned to Europe where the round robin would continue, and additional test series, funded by the

European Commission, would complete the programme. Unfortunately, the dummies were recalled to their owners following the US programme and therefore the round robin was not completed. Nevertheless, the European programme is continuing, although with alternative dummies.

10. Injury criteria are being evaluated by NHTSA and by Japan Automobile Research Institute (JARI). The NHTSA work is complete but the Japanese study has been delayed as a result of the tsunami earlier this year. JARI expects to be in a position to provide their analysis for consideration by the informal working group in the first quarter of 2012.

11. The informal working group continues to work toward providing recommendations to GRSP at their 2012 sessions, although the additional testing programme and the unforeseeable delays on development of injury criteria have caused some slippage in the programme. The informal working group will advise WP.29/AC.3 of any impact that these delays may have on the delivery of their recommendations at the 156th session in March 2012.

12. The next meeting of the informal working group will be held in London during the week beginning 19 March (immediately after the 156th session of WP.29) in conjunction with the informal working groups on WorldSid and Pole Side Impact.
