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Item 16.9 of the provisional agenda

Progress on the development of new global technical regulations and of amendments to established global technical regulations – Pole Side Impact (PSI)**Proposal for Terms of Reference, Rules of Procedure and first progress report of the informal group for the development of a global technical regulation on pole side impact****Submitted by the representative of Australia***

This document contains a proposal for the Terms of Reference (ToR) and Rules of Procedure (RoP) for the informal group on the development of a global technical regulation (gtr) on pole side impact (PSI) as well as the first progress report of the informal group. It is based on the text of informal document WP.29-153-33 distributed during the 153rd session of the World Forum for Harmonization of Vehicle Regulations (WP.29) (ECE/TRANS/WP.29/1089, para. 109). It is submitted to WP.29 and the Executive Committee (AC.3) of the 1998 Agreement for consideration and possible adoption. This report should be appended to the gtr in the Global Registry.

* In accordance with the programme of work of the Inland Transport Committee for 2010–2014 (ECE/TRANS/208/, para. 106 and ECE/TRANS/2010/8, 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.

I. Background

1. At the 150th session of the World Forum for Harmonization of Vehicle Regulations (WP.29) in March 2010, Australia submitted an informal paper proposing a Pole Side Impact (PSI) gtr (WP.29-150-11).
2. AC.3 requested the secretariat to distribute WP.29-150-11 with an official symbol for consideration and vote at the June 2010 session. It was agreed to transmit WP.29-150-11 to the Working Party on Passive Safety (GRSP) for consideration at its May 2010 session and for their assessment of the need for an informal group.
3. GRSP considered, at its May 2010 session, the Australia's formal proposal (ECE/TRANS/WP.29/2010/81) together with informal document GRSP-47-28, which included a proposed task list. GRSP agreed on the proposed harmonization activity on a pole side impact test and the establishment of an informal group on this subject under the chairmanship of Australia, subject to the consent of WP.29 and AC.3.
4. At the 151st session of WP.29 in June 2010, AC.3 considered Australia's formal proposal and agreed to develop the gtr and to establish the Informal Group. AC.3 also agreed that the initial tasks of the Informal Group should be to:
 - (a) Confirm the safety need for a gtr in light of the increasing prevalence of electronic stability control in the vehicle fleet and
 - (b) Simultaneously assess potential candidate crash test standards to be addressed by the proposed gtr. AC.3 agreed that the development of the gtr and the study on the benefits of such a gtr would be made in parallel.
5. The secretariat was requested to prepare a corresponding AC.3 document and to transmit it to GRSP for consideration.
6. The Contracting Parties represented in the Informal Group were: Australia, Canada, China, France, Germany, Italy, Japan, the Netherlands, New Zealand, the Republic of Korea, the United Kingdom, the United States of America and the European Commission. Representatives from the International Organization of Motor Vehicle Manufacturers (OICA) also participated.

II. Meeting in Bonn, 16-18 November 2010

7. The Informal Group met for the first time in Bonn from 16 to 18 November 2010. The initial meeting focussed on developing a common knowledge base covering the significant body of research already conducted on pole side impact and recent crash tests and establishing broad parameters for future work.
8. Presentations:

The following presentations were made at the meeting:

 - (a) Department of Infrastructure and Transport, Australia (DIT) - Pole Side Impact gtr: Assessment of Safety Need: Initial Data Collection;
 - (b) Bundesanstalt für Straßenwesen (BASt) – Influence of Vehicle Stability Control on Accidents on Rural Roads;
 - (c) DIT – Evaluating Vehicle Technologies – Electronic Stability Control: Using Australian Used Car Safety Ratings Data;

- (d) National Highway Traffic Safety Administration (NHTSA) – United States (US) Pole Side Impact Test;
- (e) BAST on behalf of (European Enhanced Vehicle-safety Committee (EEVC) WG13 and WG21 - Accident Data: Side Impacts with Poles);
- (f) DIT – Summary of Available Test Data;
- (g) WorldSID Positioning Sub-Committee Update;
- (h) DIT – Summary of Current Pole Tests;
- (i) Transport Canada – Pole Test Comparison of the WorldSID IRTRACC, WorldSID Rib-Eye and ES2-re;
- (j) DIT - Australian Pole Side Impact Research 2010: A summary of recent oblique, perpendicular and offset perpendicular pole side impact research with the WorldSID 50th dummy;
- (k) NHTSA - Calculating Benefits for Oblique Pole Side Impact Rulemaking;
- (l) BAST on behalf of EEVC WG13 and WG21 cost-benefit of Side Impact Test Procedures.

9. NHTSA also submitted a number of documents, which were referenced in its presentations.

10. The following matters were considered during the discussion.

11. The meeting agreed upon Rules of Procedure. These are provided at Annex 1.

12. The meeting agreed upon Terms of Reference. These are provided at Annex 2 for endorsement by GRSP prior to endorsement being sought by WP.29. The date for the initiation of the proposed gtr is not included in the Draft Terms of Reference, but it was agreed that this would be a standing item on the agenda at future meetings of the Informal Group.

13. Other issues on which decisions were made or on which a degree of common views were expressed include:

- (a) While the preliminary results on safety need were noted, it was agreed that a more comprehensive presentation would be required for the next meeting;
- (b) Presentations by BAST, DIT and NHTSA indicated that Electronic Stability Control (ESC) systems would have a significant impact in reducing single vehicle crashes, particularly for Sport Utility Vehicles (SUVs), but would not resolve the problem being addressed by the gtr;
- (c) The strong view of the meeting was that the gtr should be a high quality document, which presented one test procedure. While it was recognised that decisions on the schedule for implementation ultimately rested with Contracting Parties, several participants also suggested that the gtr should consider the issue of an appropriate lead time and implementation date, for example in Part A;
- (d) Views expressed indicated that the scope of the gtr should cover light passenger and light commercial vehicles (under 10,000lbs);
- (e) It was noted that US data supported an oblique angle test and EEVC data suggested the largest percentage of crashes occurs at $90^\circ \pm 15^\circ$ degrees, so that there was not necessarily a conflict of data. It was agreed that further detailed work was required on impact angle. However, it was also noted that

the selection of the impact angle was difficult and that the choice of angle in a test procedure could be determined by the outcome sought rather than the most common impact point;

- (f) It was noted that close cooperation with the WorldSID Informal Group was needed, but that a clear division in work needs to be maintained. For instance, the WorldSID Informal Group would be responsible for producing risk curves (with work currently being undertaken by an International Standard Organization (ISO) group), but the PSI Informal Group would be responsible for setting injury criteria and limits;
- (g) It was agreed that future PSI and WorldSID Informal Group meetings would be held together when practical;
- (h) It was noted that the WorldSID 50th percentile male would be completed in 2011, with risk curves and seating position possibly taking longer; while the WorldSID 5th percentile female would be completed in 2013;
- (i) It was generally agreed that the test procedure in a gtr would utilise WorldSID dummies;
- (j) It was agreed that it was premature to identify an agreed test procedure and that consideration of test procedures based on Federal Motor Vehicle Safety Standard (FMVSS) 214, EuroNCAP and the perpendicular offset test identified by APROSYS should be carried forward;
- (k) It was agreed that cost-benefit analysis would be a major element in comparing the three candidate procedures;
- (l) DIT presented a project timetable, which culminated in the submission of a draft gtr to WP.29 and AC.3 for approval in November 2012. Comments suggested that this was ambitious particularly as GRSP would need to endorse the gtr. It was agreed to keep the matter under review and that the most important objective was to produce a high quality gtr.

III. Future meetings

14. The next meeting of the PSI Informal Group will be held in Brussels in the week of 28 February to 4 March 2011 in conjunction with meetings of the WorldSID and gtr No. 7 (Head restraints) Informal Groups.

15. Subsequent meetings of the PSI and WorldSID Informal Groups will be held together when practical. Further meetings are scheduled for the week of 6-10 June 2011 in Washington D.C. and for September/October 2011 and December 2011.

IV. Action items

16. Action items identified for completion prior to the Brussels meeting include:

<i>Action</i>	<i>Responsibility</i>
Provide safety need data	Contracting Parties participating in the Informal Group who have not yet responded to Australia's request (originally made by email on 17 September 2010) should reply. The original deadline was end December 2010. Australia to liaise bilaterally with Governments where issues with data have been identified. [NB: Australia may also approach Contracting Parties for more detailed data (e.g. gender and body region analysis)]
Provide comprehensive analysis of safety need data	Australia
Identify target vehicle categories to be covered by the regulation	Germany
Recalculate US benefit numbers to take account of most recent data	US
Arrange briefing on APROSYS work on side impact	Australia to organize
Arrange briefing on relevant EuroNCAP work	Australia/France to organize
Review data on angle of impact	Germany, US and other Contracting Parties where able
Provide summary data on relevant crash tests including notice of future crash tests	Contracting Parties
Make presentation at Brussels meeting on relevant crash tests	Contracting Parties
Gather information on the cost of counter-measures	Australia will explore further bilaterally with manufacturers
Consider the benefit of pole side impact counter-measures in rollovers, having regard to impact of ESC	Australia will explore further with manufacturers
Identify body regions to be assessed as a first step in setting injury criteria (values to be considered at subsequent meeting)	Informal Group
Consider whether gtr should address post-crash electrical safety	Australia to explore further; Informal Group

17. Advice on all action items is to be provided to the secretariat as soon as possible and, whenever appropriate, items will be included in the agenda for the Brussels meeting.

18. Additional action items may be identified for the Brussels meeting. Informal Group members will be contacted as appropriate.

Annex 1

Rules of Procedure

1. The informal group is open to all participants of GRSP and WP29. There is no limitation on the number of participants from any country or organization is not expected, although this will be kept under review.
2. A Chair (Mr Hogan) and a Secretary (Mr Belcher) will manage the informal group.
3. The official language of the informal group will be English.
4. All documents and/or proposals must be submitted to the Secretary of the group in a suitable electronic format in advance of the meeting. Items or proposals requiring decision by the informal group should be circulated two weeks in advance of a meeting.
5. An agenda and related documents will be circulated to all members of the informal group at least two weeks in advance of all scheduled meetings.
6. The process will pursue consensus. When consensus cannot be reached, the Chair of the group or his representative shall present the different points of view to GRSP.
7. The progress of the informal group generally will be reported to GRSP as an informal document and presented by the Chairman or his representative.
8. All working documents of the informal group should be distributed in digital form and be freely accessible on the UNECE website in the GRSP folder http://www.unece.org/trans/main/wp29/meeting_docs_grsp.html.

Annex 2

Terms of Reference

The major tasks to be performed by the Informal Group include:

1. Review of existing research, including crash tests, and literature;
 2. Liaison with and consideration of the results of the meetings of the GRSP WorldSID Informal Group;
 3. Assessment of safety need, including analysis of current fatalities and injuries from pole side impact, other side impacts and rollovers, taking account of positive safety developments already occurring or likely such as ESC; and target vehicle categories to be taken into consideration;
 4. Examination of possible test procedures;
 5. Consideration of variations in candidate test procedures;
 6. Establishment of likely counter-measures driven by short-listed test procedures;
 7. Calculation of likely injury mitigation coverage of the crash and injury population from these countermeasures;
 8. Assessment of cost-benefit for short-listed test procedures (including data from a significant range of countries, as there may be wide variations in benefits);
 9. Assessment of likely incremental benefits and costs from, e.g., testing for smaller (5th percentile female) and non-struck side and rear seat occupants;
 10. Selection of a preferred test procedure; and
 11. Preparation of a draft global technical regulation for consideration by GRSP and subsequently by WP.29.
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