



**Economic and Social  
Council**

Distr.  
GENERAL

ECE/TRANS/WP.29/GRSP/2008/15  
7 March 2008

Original: ENGLISH  
ENGLISH AND FRENCH ONLY

---

**ECONOMIC COMMISSION FOR EUROPE**

**INLAND TRANSPORT COMMITTEE**

World Forum for Harmonization of Vehicle Regulations

Working Party on Passive Safety

Forty-third session  
Geneva, 19-23 May 2008  
Item 20(c) of the provisional agenda

**OTHER BUSINESS**

Regulations Nos. 16, 17, 44 and 80 - Proposal for draft amendments to sled test parameters

Submitted by the expert from India \*/

The text reproduced below was prepared by the expert from India in order to introduce some changes in the sled test parameters of Regulations Nos. 16 and 44 to the foot impact requirements. It is based on a document without a symbol (informal document No. GRSP-42-10) distributed during the forty-second session of the Working Party on Passive Safety (GRSP). The modifications to the current text of Regulations are marked in bold or strikethrough characters.

---

\*/ 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 performance of vehicles with respect to passive safety. The present document is submitted in conformity with that mandate.

- A. FURTHER CLARIFICATIONS AND CONCRETE PROPOSALS SHALL BE PROVIDED BY THE INDIAN DELEGATION REGARDING THE FOLLOWING PROPOSAL.

Deletion of additional information for the sled test

Standard details	Sled test specifications		Sled test parameters depending on the sled pulse		Proposal
	Speed (km/h)	Stopping distance (mm)	Speed (km/h)	Stopping distance (mm)	
Regulation No.16 - safety belts, Annex 8	50 ± 1	400 ± 20	28.9 - 68.9	201 to 766	Delete the speed and the stopping distance specifications or update them to comply with sled pulse
Regulation No. 17 - strength of seats	50 + 0/-2	--	35.3 - 49.4	441 - 824	
Regulation No. 44 - child restraints - Annex 7 Appendix 1 - frontal impacts	50 + 0/-2	650 ± 30	33.6 - 66.2	373 - 1104	
Regulation No. 44 - child restraints - Annex 7 Appendix 2 - rear impacts	30 + 0/-2	275 ± 20	13 - 51.9	76 - 504	
Regulation No. 80 - strength of seats (large vehicles) - Appendix 1	30 - 32	--	17 - 50.9	164 - 1060	

## B. JUSTIFICATION

Sled tests are one of the important tests used for dynamic assessment of vehicle subsystems in crash environment. These sled tests are determined by:

- (a) deceleration corridor (also called as "sled pulse");
- (b) sled speed;
- (c) stopping distances.

Safety engineers always respect compliance to sled pulse and sled speed as primary requirements. Therefore, the stopping distance requirement is irrelevant for the sled tests and the same should be removed and termed as "for reference only" for the following Regulations:

(a) ECE R16 annex 8 – safety belts,

(b) ECE R44 appendices 1 & 2 of annex 7 – child restraints.

The information on sled mass was useful to select appropriate braking mechanism. However, given the progress of technology, crash safety laboratories are able to generate the required sled pulse suitable to a sled mass.

Therefore, even the information of sled mass has become redundant and should be deleted or termed as "for reference only" in Annex 8 of Regulation No. 16.

-----