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INLAND TRANSPORT COMMITTEE

World Forum for Harmonization of Vehicle Regulations

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# CONSIDERATION AND VOTE OF DRAFT GLOBAL TECHNICAL REGULATIONS AND/OR DRAFT AMENDMENTS TO ESTABLISHED GLOBAL TECHNICAL REGULATIONS

Proposal for a draft global technical regulation on pedestrian safety

Proposal for draft amendments to the draft global technical regulation on pedestrian safety

Submitted by the representative of the United States of America \*/

The text reproduced below was submitted by the representative of the United States of America and proposes amendments to the draft global technical regulation (gtr) on pedestrian safety (ECE/TRANS/WP.29/2007/94). The modifications to ECE/TRANS/WP.29/2007/94 are marked in bold characters. It is transmitted for consideration to the World Forum for Harmonization of Vehicle Regulations (WP.29) and to the Executive Committee (AC.3) of the 1998 Agreement.

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<sup>\*/</sup> 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. The present document is submitted in conformity with that mandate.

## A. <u>STATEMENT OF TECHNICAL RATIONALE AND JUSTIFICATION</u>

Page 27, section IX., paragraphs 125. to 130., amend to read:

"125. This global technical regulation...

. . .

## 1. Head protection

- 128. It is estimated that this gtr will prevent **between 1 and** 5 percent of all pedestrian fatalities, depending on the region. Based on preliminary data, it is estimated that, **mainly due to** the head protection requirements, **the measures** would result in the following reduction in **pedestrian** fatalities annually: in the European Union, about 320 361 pedestrians would belives saved; in Republic of Korea, 175 lives saved; in Japan, 111 lives saved; and in the United States of America, between 20 to 6061 to 92 lives saved. It is also expected that the head protection requirements would be beneficial for pedal-cyclists, which would add toincrease these estimated lives saved. In the European Union, an estimated 46 pedal-cyclist lives would be saved. Additionally, it is expected that the gtr will provide some level of benefit in impacts with speeds greater than 40 km/h because of a reduction in injury levels (i.e. severe/serious injuries will become moderate/minor injuries).
- 129. In addition to the fatality estimates, the European Union also provided estimates for the impact of this gtr on serious injuries. In 2003, there were an estimated 68,016 to 160,504 serious pedestrian injuries and 46,286 to 109,226 pedal-cyclist injuries in the 25 European Union countries.
- 130. The estimated proportional savings in fatalities and injuries are based on data from the GIDAS and IHRA databases and an examination of the European Union vehicle fleet composition. The final resulting analysis estimates an annual reduction of 18,893 serious pedestrian injuries and 5,168 serious pedal-cyclist injuries.  $\underline{1}$ /

### 2. Leg Protection

129. The group did not have assessments of the potential leg/knee injury benefits from each of the regions. At the end of the activities of the informal group, the United States of America made a preliminary assessment based upon NHTSA's Pedestrian Crash Data Study (PCDS is a database of 550 pedestrian crashes that occurred between 1994 and 1998), and for the approximately 70,000 annual pedestrian injuries in the United States of America,

### **Target Population**

130. The 32 percent target population from INF GR/PS/169 includes both passenger cars and LTVs. The gtr exempts a rather large percentage of LTVs from having to test with a lower legform,

<sup>1/</sup> http://ec.europa.eu/enterprise/automotive/pagesbackground/pedestrianprotection/final\_trl\_2006.pdf

therefore the target population should only include passenger cars and LTVs that have bumper heights below the defined cut off.

#### (b) Costs

131. The European Union analysis also provides cost estimates to implement necessary changes to the vehicles to meet the gtr leg and head requirements (Table 1). These costs include the price of parts and the costs to the manufacturer for tooling and assembly line outlays. These costs are dependant on lead time to implement the regulation and advancements in technologies developed to address the gtr requirements. It is expected that some of these costs will decrease with time.

Table 1

Vehicle Style	Cost per vehicle
	(Euros)
Super Mini	45.98
<b>Small Family Car</b>	27.76
Large Family Car	36.93
<b>Executive Car</b>	37.64
Sports Car	85.77
Small MPV	30.80
Large MPV	34.53
Large Off-Roader	47.41

## (c) Other Analysis

132. The group did not have separate assessments of the potential leg/knee injury benefits and costs from each of the other regions. Other countries are currently conducting such studies and will consider the results when the gtr is established in their national legislation. The preamble may be amended to incorporate the completed analyses.

[New cost benefits analyses are awaited from the expert of the United States of America]"

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