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World Forum for Harmonization of Vehicle Regulations

Working Party on General Safety Provisions

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Geneva, 21 - 24 October 2008

Item 3(c) of the provisional agenda

REGULATION No. 107
(M₂ and M₃ vehicles)

Fire safety in buses

Proposal for draft 03 series of amendments to Regulation No. 107

Submitted by the expert from Germany */

The text reproduced below was prepared by the expert from Germany in order to improve the fire safety in engine compartments of busses. It is based on informal document No. GRSG-94-04 distributed during the ninety-fourth session of the Working Party on General Safety Provisions (GRSG) (ECE/TRANS/WP.29/GRSG/73, para. 13). The modifications to the current text of the Regulation 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. The present document is submitted in conformity with that mandate.

A. PROPOSAL

Insert new paragraphs 10.6. to 10.9., amend to read:

- "10.6. As from the official date of entry into force of the 03 series of amendments, no Contracting Party applying this Regulation shall refuse to grant ECE approval under this Regulation as amended by the 03 series of amendments.**
- 10.7. No Contracting Party applying this Regulation shall refuse national type approval of a vehicle type approved to the 03 series of amendments to this Regulation.**
- 10.8. As from [1 October 2012], Contracting Parties applying this Regulation shall grant approvals only if the vehicle type to be approved meets the requirements of this Regulation as amended by the ~~02~~ 03 series of amendments.**
- 10.9. As from [1 October 2013], Contracting Parties applying this Regulation may refuse first national registration (first entry into service) of a vehicle which does not meet the requirements of the 03 series of amendments to this Regulation. "**

Annex 3,

Insert new paragraphs 7.5.1.5. to 7.5.1.5.3., to read:

- "7.5.1.5. In the case of vehicles having the engine located to the rear of the driver's compartment, the compartment shall be equipped with an alarm system providing the driver with both an acoustic and a visual signal in the event of excess temperature in the engine compartment and each compartment where a combustion heater is located.**
- 7.5.1.5.1. The alarm system shall be designed so as to detect a temperature in the engine compartment, and each compartment where a combustion heater is located in excess of the temperature occurring during normal operation.**
- 7.5.1.5.2. Paragraph 7.5.1.5.1. is considered to be satisfied if the following areas of the engine compartment, and each compartment where a combustion heater is located, are monitored regarding excess temperature:**
- 7.5.1.5.2.1. Areas in which, in case of leakage, flammable fluids (liquid or gas) may come into contact with exposed components, e.g. the supercharger or the exhaust-system, including engine mounted components, whose working temperature is equal to or greater than the ignition temperature of the flammable fluids (liquid or gas); and**

- 7.5.1.5.2.2. Areas in which, in case of leakage, flammable fluids (liquid or gas) may come into contact with shielded components, e.g. an independent heating device, whose working temperature is equal to or greater than the ignition temperature of the flammable fluids (liquid or gas); and**
- 7.5.1.5.2.3. Areas in which, in case of leakage, flammable fluids (liquid or gas) may come into contact with components, e.g. the alternator, whose temperature, in case of failure, may be equal to or greater than the ignition temperature of the flammable fluids (liquid or gas).**
- 7.5.1.5.3. The alarm system shall be operational whenever the engine start device is operated, until such time as the engine stop device is operated, regardless of the vehicle's attitude. "**

B. JUSTIFICATION

With working document ECE/TRANS/WP.29/GRSG/2007/6, Germany proposed the introduction of fire detection systems into the engine compartment of buses and coaches. The discussion in the Working Party on General Safety Provisions (GRSG) led to the conclusion that detailed prescriptions for these systems need to be specified. The informal documents Nos. GRSG-90-32 and GRSG-93-15 pointed out the hazard of fires which start in the engine compartment. Previous attempts to define requirements for detection systems were seen as not appropriate.

This proposal describes a fire detection system which identifies fires and alarms the driver accordingly. The transitional provisions were added, as requested by GRSG in its ninety-fourth session. The official dates of entry into force should be the same as those dates related to the entry into force of new legislation concerning exhaust emissions (Euro VI) to be able to adapt the engine compartments to the requirements of Euro VI together with the requirements of the new proposal.
