



**Economic and Social
Council**

Distr.
RESTRICTED

TRANS/WP.29/GRSG/2003/7
19 February 2003

Original: ENGLISH
ENGLISH AND FRENCH ONLY

ECONOMIC COMMISSION FOR EUROPE

INLAND TRANSPORT COMMITTEE

World Forum for Harmonization of Vehicle Regulations (WP.29)

Working Party on General Safety Provisions (GRSG)

(Eighty-fourth session, 5-9 May 2003,
agenda item 8.)

PROPOSAL FOR DRAFT AMENDMENTS TO REGULATION No. 34
(Prevention of fire risks)

Transmitted by the Expert from Germany

Note: The text reproduced below has been prepared by the expert from Germany in order to modify the requirements of Regulation No.34 (Prevention of fire risks) as amended by document TRANS/WP.29/891 (11 December 2002). It is based on the text of a document distributed without a symbol (informal document No. 11) during the eighty-third session (TRANS/WP.29/62, para. 44). The proposed amendments are marked in bold.

Note: This document is distributed to the Experts on General Safety Provisions only.

A. PROPOSAL

Paragraph 5.9.1.1.1., amend to read :

"5.9.1.1.1. an automatically opening and closing, non-removable fuel filler cap."

Paragraph 5.11., amend to read:

"5.11. **The fuel tank and its accessory parts shall be designed and installed in the vehicle in such a way that any ignition hazard due to static electricity shall be avoided. If necessary, measure(s) for charge dissipation shall be provided. The manufacturer shall demonstrate to the technical service the measure(s) which guarantee the fulfilling of these requirements.**"

Paragraph 6.2.4., amend to read:

“
.....

The rotation rate for each successive increment of 90° shall take place in any time interval from 1 to 3 minutes.”

Annex 5.

Paragraph 2., amend to read:

MECHANICAL STRENGTH

"2. The tank must be tested under the conditions prescribed in paragraph 6.1. of this Regulation for leaks and for rigidity of shape. The tank and all its accessories must be mounted onto a test fixture in a manner corresponding to the mode of installation on the vehicle for which the tank is intended **or mounted in the vehicle itself or mounted in a test fixture made by a vehicle section. On request of the manufacturer and with the agreement of the Technical Service the tank may be tested without using any test fixture.**
Water at 326 K (53 °C) must be used as the testing fluid and must fill the tank to its capacity. The tank must be subjected to a relative internal pressure equal to double the working pressure and in any case to not less than 0.3 bar at a temperature of 326 K ± 2 K (53 °C ± 2 °C) for a period of five hours. During the test, the tank and its accessories must not crack or leak; however, it may be permanently deformed.”

Paragraph 3.2., amend to read:

"3.2. Prior to the test, the tank must be filled to 50 per cent of its capacity with testing fuel and stored, without being sealed, at an ambient temperature of $313\text{ K} \pm 2\text{ K}$ ($40\text{ °C} \pm 2\text{ °C}$) until the weight loss per unit time becomes constant, **but for not more than four weeks (preliminary storage time).**"

* * *

B. JUSTIFICATION

Re. paragraph 5.1.1.1.

Correction of the wording

Re. paragraph 5.11.

The requirements of the original version of Reg. 34 cannot be fulfilled. It is impossible to avoid any accumulation of static electricity charges. Electrostatic charges are produced even in metal tank systems during refuelling or normal use of the vehicles.

However, it is state of the art to evaluate and to avoid ignition hazards due to static electricity. Commonly accepted test procedures to evaluate hazards due to static electricity are published already in international documents. These documents cover not only strategies to identify ignition sources due to static electricity but contain also measuring methods and harmonized threshold values for these methods.

Re. paragraph 6.2.4.

The rotation rate influences the strength of the test. To guarantee a uniform test procedure a fixation of a rotation rate is essential.

Therefore Germany proposes a rotation rate in line with the requirements of FMVSS 301, S7.4.

Source:

Code of Federal Regulations] [Title 49, Volume 5, Parts 400 to 999] [Revised as of October 1, 2000] From the U.S. Government Printing Office via GPO Access [CITE: **49CFR571.301**] [Page 724-729] TITLE 49--TRANSPORTATION CHAPTER V--NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION, DEPARTMENT OF TRANSPORTATION PART 571--FEDERAL MOTOR VEHICLE SAFETY STANDARDS--Table of Contents Subpart B--Federal Motor Vehicle Safety Standards Sec. 571.**301** Standard No. **301**; **Fuel system integrity.**

S 7.4 Static rollover test conditions

The vehicle is rotated about its longitudinal axis, with the axis kept horizontal, to each successive increment of 90 deg., 180 deg. and 270 deg. at a uniform rate, with 90 deg. of rotation taking place in any time interval from 1 to 3 minutes. After reaching each 90 deg. increment the vehicle is held in that position for 5 minutes.

Re. Annex 5, paragraph 2.

The existing wording requires a test fixture in a manner corresponding to the mode of the installation of the vehicle for which the tank is intended.

The proposed text allows clearly the use of the vehicle itself or a vehicle section as a test fixture. In many cases, the test of a tank, not fixed, is the most unfavourable test condition and this test condition should be allowed with the agreement of the Technical Service instead of the use of a test fixture.

Re. Annex 5, paragraph 3.2.

An open tank (not sealed) filled to 50% of the maximum capacity can never reach a weight loss which becomes constant per unit time UNTIL THE TANK IS COMPLETELY EMPTY.

This requirement makes physically no sense. Therefore it is important to keep the requirement as it is described in Regulation 34, 01 series of amendments.
