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Geneva, 5–9 May 2014

Item 3 of the provisional agenda

Regulation No. 34 (Prevention of fire risks)**Proposal for the 03 series of amendments to Regulation No. 34
(Prevention of fire risks)****Submitted by the expert from Japan^{*}**

The text reproduced below was prepared by the expert from Japan to amend the requirements for fire prevention under certain conditions in the event of a rear collision. This document replaces ECE/TRANS/WP.29/GRSG/2013/4 distributed during the 105th session of the Working Party on General Safety Provisions (GRSG) (see report ECE/TRANS/WP.29/GRSG/84, para. 20). The modifications to the current text of UN Regulation No. 34 are marked in bold for new characters.

* In accordance with the programme of work of the Inland Transport Committee for 2012–2016 (ECE/TRANS/224, para. 94 and ECE/TRANS/2012/12, 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. Proposal

Paragraph 1.2., amend to read:

"1.2. PART II-1: At the request of the manufacturer, to the approval of vehicles of categories M₁ and N₁, which are of a total permissible mass exceeding 2.8 tonnes, and categories M₂, M₃, N₂, N₃ and O, fitted with tank(s) for liquid fuel, which have been approved to Part I or IV of this Regulation with regard to the prevention of fire risks in the event of a rear collision.

PART II-2: To the approval of vehicles of categories M₁ and N₁, which are of a total permissible mass not exceeding 2.8 tonnes, fitted with liquid fuel tank(s) approved to Part I or IV of this Regulation with regard to the prevention of fire risks in the event of a rear collision."

Paragraph 3.1.4.2., amend to read:

"3.1.4.2. the number of this Regulation, followed by "RI", if the vehicle is approved pursuant to Part I of the Regulation, or by "RII-1" if the vehicle is approved pursuant to Parts I or IV and to Part II-1 of the Regulation, or by "RII-2" if the vehicle is approved pursuant to Parts I or IV and to Part II-2 of the Regulation, a dash and the approval number to the right of the circle prescribed in paragraph 3.1.4.1."

Part II (former), renumber as **Part II-1**

Paragraph 9.4., amend to read:

"9.4. During and after the impacts described in paragraph 9. above, the battery shall be kept in a position as specified by the manufacturer."

Insert new Part II-2, to read:

"PART II-2 - APPROVAL OF VEHICLE WITH REGARD TO THE PREVENTION OF FIRE RISKS IN THE EVENT OF REAR COLLISION

9.6. Definitions and test requirements

9.6.1. Paragraphs 7. to 8.2.2. of Part II-1 shall apply.

9.6.2. The vehicle test shall be performed according to the procedures described in Annex 4 of this Regulation.

9.6.3. After the collision test, the performance requirements of paragraphs 9.1. to 9.4. of Part II-1 shall be met."

Insert new paragraphs 17.7 to 17.11., to read:

"17.7. 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 or refuse to accept type approvals under this Regulation as amended by the 03 series of amendments.

17.8. As from [XX] months after the date of entry into force of the 03 series of amendments, Contracting Parties applying this Regulation with respect to Part II-1 or Part II-2 shall grant type approvals only if the vehicle type to be approved meets the requirements of Part II-1 or Part II-2 of this Regulation as amended by the 03 series of amendments.

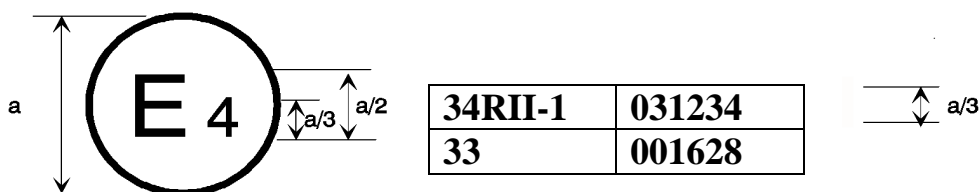
- 17.9. Contracting Parties applying this Regulation shall not refuse to grant extensions of type approvals for existing types which have been granted according to the preceding series of amendments to this Regulation.
- 17.10. Even after the date of entry into force of the 03 series of amendments to this Regulation, type approvals for other than Part II-1 or Part II-2 to the preceding series of amendments to the Regulation which are not affected by the 03 series of amendments shall remain valid and Contracting Parties applying this Regulation shall continue to accept them.
- 17.11. Notwithstanding the transitional provisions above, Contracting Parties whose application of this Regulation comes into force after the date of entry into force of the most recent series of amendments are not obliged to accept type approvals which were granted in accordance with any of the preceding series of amendments to this Regulation are only obliged to accept type approvals granted in accordance with the 03 series of amendments."

Throughout Annex 2, replace the number "02" with "03".

Annex 2, Model B, amend to read:

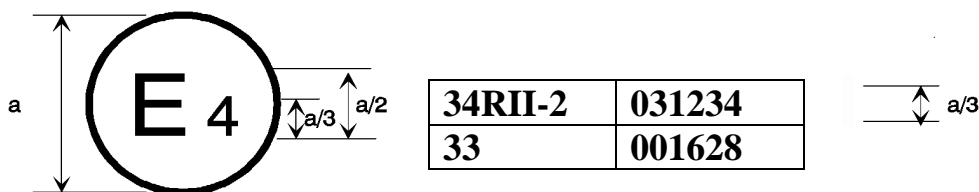
"Model B

(see paragraph 3.1.5. of this Regulation)



a = 8 mm minimum

The above approval mark affixed to a vehicle shows that the type concerned was approved in the Netherlands (E4) pursuant to Regulations Nos. 34 Parts I or IV and II-1 and 33*/. The approval numbers indicated that, at the date when the respective approvals were given, Regulation No. 34 included the 03 series of amendments and Regulation No. 33 was still in its original form.



The above approval mark affixed to a vehicle shows that the type concerned was approved in the Netherlands (E4) pursuant to Regulations Nos. 34 Parts I or IV and II-2 and 33*/. The approval numbers indicated that, at the date when the respective approvals were given, Regulation No. 34 included the 03 series of amendments and Regulation No. 33 was still in its original form."

Annex 4

Paragraph 2.1., amend to read:

"2.1. Testing ground

The test area shall be large enough to accommodate the impactor (striker) propulsion system and to permit after-collision displacement of the vehicle struck and installation of the test equipment. The part in which vehicle collision and displacement occur shall be horizontal, flat **and uncontaminated, and representative of a normal, dry, uncontaminated road surface.**"

Paragraph 2.2.2., amend to read:

"2.2.2. The impacting surface shall be flat, not less than 2,500 mm wide, and 800 mm high, and its edges shall be rounded to a radius of curvature of between 40 and 50 mm. It shall be clad with a layer of plywood 20 +/- 2 mm thick, **in good condition.**"

Paragraph 2.4.2., amend to read:

"2.4.2. The velocity of collision shall be between **48 and 52 km/h.**"

II. Justification

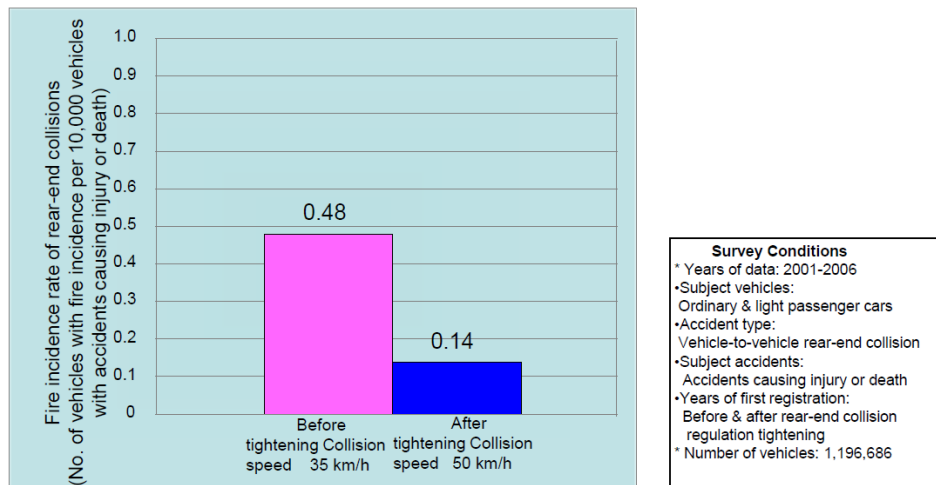
1. In order to prevent fire incidents from rear-end collision on roads such as highways, it is important to conduct rear-end collision tests. Japan has applied the same requirements as the amendments in this document since 1993, resulting in a reduction of one-third in the fire incidence rate (see the Figure 1 below).

2. Rear-end collision tests are mandatory in Japan and in some other countries in the world. Applying this requirement to UN Regulation No. 34 would result in a safer and more international Regulation. Countries which do not yet apply UN Regulation No. 34 would also find it easier to do so. If the number of countries applying this Regulation increases, and as a result, it becomes a constituent UN Regulation of the International Vehicle Type Approval (IWVTA) system and IWVTA will become more international and more effective when it is established.

3. Ad paragraph 1.2.: Currently, the rear-end collision fire prevention requirements are voluntary for manufacturers. However, Japan has made them mandatory. For this reason, Japan proposes to divide the scope of Part II to distinguish between the approval to be granted at the request of the manufacturer based on the frontal/lateral collision fire prevention requirements or on the rear-end collision fire prevention requirements for M₁ and N₁, which are of a total permissible mass exceeding 2.8 tonnes, and categories M₂, M₃, N₂, N₃ and O and the approval based on the mandatory rear-collision requirements.

4. Figure 1 shows that after the tightening of the rear-end collision regulation in Japan (increased collision speed from 35 km/h to 50 km/h), the fire incidence rate of rear-end collisions has been reduced by about one-third, indicating that the regulatory tightening is effective.

Figure 1

Fire incidence rate of rear-end collisions (Japan)

5. Ad paragraph 3.1.4.2. and Annex 2, Model B: Japan proposes to amend the approval number provisions and approval mark models on the basis of the same justifications as that of paragraph 1.2. in the proposal.

6. Ad paragraph 9.4.: Japan considers that the purpose of this paragraph is to prevent fires caused by a battery projection at the time of collision. Keeping the battery in position by a securing device is merely one of the ways to prevent it. This paragraph should require the prevention of battery projection, not the method for it. It should allow each manufacturer to choose a method at their discretion.

7. Part II-2: Japan proposes to add the requirements for the approval of vehicles with regard to the prevention of fire risks in the event of rear collision.

8. Ad Annex 4, paragraph 2.1.: Japan proposes to align the road surface conditions of the test area with those specified in UN Regulation No. 95.

9. Ad Annex 4, paragraph 2.2.2.: Japan proposes to make the impacting surface thickness consistent with that specified in UN Regulation No. 12.

10. Ad Annex 4, paragraph 2.4.2.: Japan believes that the rear collision speed specified in Japan's current safety regulations is appropriate, as the accident data indicate that the fire incidence rate of rear-ended vehicles declined after implementing this measure.