



**Economic and Social
Council**

Distr.
GENERAL

TRANS/WP.29/GRRF/2004/6
21 November 2003

ENGLISH
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 Brakes and Running Gear (GRRF)
(Fifty-fifth session, 3-6 February 2004,
agenda item 1.2.)

PROPOSAL FOR DRAFT SUPPLEMENT 3
TO THE ORIGINAL VERSION OF REGULATION No. 13-H

(Braking)

Transmitted by the expert from the United Kingdom

Note: The text reproduced below has been prepared by the expert from the United Kingdom. It is a proposal to introduce the marking of maximum wear limit or the inclusion of wear indicators on brake discs and drums, following the decision of GRRF taken at fifty-fourth session (TRANS/WP.29/GRRF/54, para. 13.)

Note: This document is distributed to the Experts on Brakes and Running Gear only.

GE.03-24507

A. PROPOSAL

Insert new paragraphs 5.1.4. and 5.1.4.1., to read:

"5.1.4. Provisions for the periodic technical inspection of braking systems

5.1.4.1. It shall be possible to assess the wear condition of the components of the service brake that are subject to wear e.g. friction linings and drums/discs (in the case of drums or discs, wear assessment may not necessarily be carried out at the time of periodic technical inspection). The method by which this may be realised is defined in paragraphs 5.2.11.2. of this Regulation."

Paragraph 5.2.11.2., amend to read:

"5.2.11.2. Checking the wear of the service brake friction components"

Insert new paragraphs 5.2.11.2.1. and 5.2.11.2.2., to read:

"5.2.11.2.1. It shall be possible to easily check this wear on service brake linings from the outside or underside of the vehicle utilising only the tools or equipment normally supplied with the vehicle, for instance by the provision of appropriate inspection holes or by some other means. Alternatively, acoustic or optical devices warning the driver at his driving position when lining replacement is necessary are acceptable. The yellow warning signal specified in paragraph 5.2.21.1.2. below may be used as the optical warning signal.

5.2.11.2.2. Assessment of the wear condition of the friction surfaces of brake discs or drums may only be performed by direct measurement of the actual component or examination of wear indicators, which may necessitate some level of disassembly.

5.2.11.2.2.1. At the time of manufacture the manufacturer shall either:

(a) Permanently mark a disc with the minimum thickness or a drum with the maximum diameter, permissible before replacement is necessary. This should be on a part of the component not subject to deterioration due to corrosion, or

(b) Permanently mark both friction surfaces of a disc or the friction surface of a drum with a wear indicator. This may be in the form of an indentation, a groove or other appropriate method.

5.2.11.2.2.2. At the time of type approval, the vehicle manufacturer shall define the following:

- (a) **The method by which wear of the friction surfaces of drums and discs may be assessed, including the level of disassembly required and the tools and process required to achieve this.**
- (b) **Information defining the maximum acceptable wear limit at the point at which replacement becomes necessary.**

This information shall be made free available e.g. vehicle handbook or electronic data record."

Insert new paragraph 12., to read:

"12. Transitional provisions

12.1. General

12.1.1. As from the official date of entry into force of Supplement 3 to the original version of the Regulation, no Contracting Party applying this Regulation shall refuse to grant approval under this Regulation as amended by Supplement 3.

12.1.2. New type approvals

12.1.2.1. As from 24 months after the official date of entry into force of Supplement 3, Contracting Parties applying this Regulation shall grant ECE approvals only if the vehicle type to be approved meets the requirements of this Regulation as amended by Supplement 3.

12.1.3. Limit of validity of old type approvals

12.1.3.1. Approvals granted to this Regulation, as amended by Supplement 1 or 2, shall cease to be valid 24 months after the official date of entry into force of Supplement 3 unless the Contracting Party which granted the approval notifies the other Contracting Parties applying this Regulation that the vehicle type approval meets the requirements of this Regulation as amended by Supplement 3."

* * *

B. JUSTIFICATION

At the fifty-third session of GRRF, revised provisions for periodic technical inspection were adopted for Regulation No. 13. This amendment transposes the appropriate requirements to Regulation No. 13- H.

The revised wording to the text requires the vehicle manufacturer at the time of type approval to define how the friction surfaces of discs and drums shall be assessed for serviceability and what the maximum wear limits are which makes replacement necessary.

This proposal also demands that the manufacturer (either the disc/drum manufacturer or the vehicle manufacturer) shall mark the component with the minimum thickness, in the case of a disc, or maximum diameter, in the case of a drum. This will ensure that the correct information is readily available to any person dismantling the vehicle for repair or maintenance. The component must be permanently marked on a surface that is not subject to deterioration due to the elements. This can be achieved by marking on the disc "bell" or wheel mounting face. As an alternative, the components may be manufactured to include wear indicators. These may take the form of indentations or grooves in the friction surfaces of the components. At the time of type approval the vehicle manufacturer would identify which method had been used.

It was confirmed at the fifty-fourth session of GRRF that many disc and drum manufacturers already mark components that are supplied to the aftermarket with these dimensions and that components supplied for vehicle production could be similarly marked.

Transitional provisions have been included based on document TRANS/WP.29/2003/95 that was agreed at the last session for Regulation No. 13.
