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Working Party on Lighting and Light-Signalling (GRE)

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agenda item 1.1.)

REGULATION No. 48 - ELECTRICAL CONNECTIONS

(Installation of lighting and light-signalling devices)

Transmitted by the Expert from the Working Party "Brussels 1952" (GTB)

Note: The text reproduced below was prepared by the expert from GTB as a response to the invitation by GRE at its forty-sixth session to develop a package proposal regarding automatic switching of lighting and light-signalling devices (TRANS/WP.29/GRE/46, paragraph 9.). It is to be considered as an interim report.

Note: This document is distributed to the Experts on lighting and light-signalling only.

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A. BACKGROUND

Regulation No. 48 incorporates a number of general and specific requirements regarding electrical connections. The general requirements in paragraphs 5.11. and 5.12. apply to simultaneous activation of certain lamps. The specific requirements are defined in the individual specifications for the various devices.

In addition to design and construction Regulations that address the responsibility of the manufacturer, activation of lighting and light-signalling devices is also subject to regulations regarding their use, which address the responsibility of the driver. Such use regulations may be found in the national Road Traffic Code of individual countries and in Article 32 of the 1968 Vienna Convention on Road Traffic (TRANS/WP.29/GRE/1999/23). It should be noted that such use regulations are not uniform in all countries; in most cases, activation rules refer to one or more external parameters, such as:

- the traffic environment, e.g. inside/outside built-up areas, oncoming/preceding vehicles, other road users
- weather conditions, e.g. fog, snow, rain
- ambient light conditions
- vehicle operating conditions, e.g. speed, operation of windshield wipers
- time of day, time of year.

As driver's action is possible only in the limits provided by vehicle design, discrepancies in national use regulations may lead to problems when defining requirements for electrical connections of lighting and light-signalling devices. The GTB Working Group on Harmonization has recently evaluated a study of national regulations in 31 countries on producing the daytime running light function; it became evident that there are wide variations in the prescriptions regarding the electrical connections and the use of the devices. This example shows that, in view of global harmonization, it is necessary to work towards uniform use regulations.

The requirements regarding electrical connections refer to the respective device being "switched ON", under the assumption - which was correct at the time Regulation No. 48 was established - that such action will be carried out by the driver. In the recent past, systems have been developed which assist the driver in performing the task of activating certain devices. Proposals to allow such automatic systems have been presented by Germany at the forty-fourth GRE session (TRANS/WP.29/GRE/2000/2) and by France at the forty-fifth GRE session (TRANS/WP.29/GRE/2001/2). On the other hand the United Kingdom has been concerned that automatic systems could be in contradiction to national use regulations; specific instructions should therefore be introduced into Regulation No. 48 (TRANS/WP.29/GRE/2000/16).

GTB has been invited to develop a package proposal, which takes into account existing documents and technical solutions.

B. GTB ACTION

A new work item "Automatic activation of lighting devices" has been approved and assigned to the competent Working Group. Some elements of the preliminary discussion are set out below.

- Automatic activation/deactivation of lighting/light signalling devices can be a valuable assistance to the driver and contribute to safety; the automatic deactivation of direction indicators has been current practice for a long time.
- New developments, such as the Adaptive Front-lighting System (AFS), will rely on automatic activation systems.
- The system presented by France (TRANS/WP.29/GRE/2001/2) does not seem to be in contradiction to the definition of hazard warning signal in paragraph 2.7.17. of Regulation No. 48 or to the 1968 Vienna Convention.
- It is intended to consider each device/function listed in paragraph 6. of Regulation No. 48 with regard to the following questions:
 - Should automatic activation be permitted?
 - If so, what would be the requirements?
 - Should automatic deactivation be permitted?
 - If so, what would be the requirements?
- One of the requirements in case of automatic activation would be the possibility of manual override by the driver and, if necessary, also the presence of a tell-tale, which would indicate that the respective function is activated.

GTB will probably be in a position to present a proposal for amendments to Regulation No. 48 at the forty-eighth GRE session. Until that time it is recommended to defer discussion of the United Kingdom document (TRANS/WP.29/GRE/2000/16) and related proposals.
