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Collective Amendments: Regulations Nos. 38 and 87

Proposal for collective amendments to Regulations Nos. 38 and 87

Submitted by the expert from the Working Party "Brussels 1952" *

The text reproduced below was prepared by the expert from the Working Party "Brussels 1952" (GTB) updating the provisions on heat resistance tests. The modifications to the existing text of the Regulations are marked in bold for new or strikethrough for deleted characters.

* In accordance with the programme of work of the Inland Transport Committee for 2010–2014 (ECE/TRANS/208, para. 106, ECE/TRANS/2010/8, 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

A. Proposal for Supplement 17 to the original version of Regulation No. 38

Paragraphs 8.1. to 8.4., amend to read:

"8.1. **In the case of rear fog lamps with filament light sources, the complete lamp shall be mounted to represent the correct installation on the vehicle and shall** ~~The lamp must~~ be subjected to a one-hour test of continuous operation following a warm-up period of 20 minutes. The ambient temperature shall be $23^{\circ}\text{C} \pm 5^{\circ}\text{C}$.

The complete lamp shall be mounted on a base representing the correct installation on the vehicle.

The measuring equipment shall be equivalent to that used during lamp approval tests. The filament lamp may be a mass production filament lamp, which has been aged for at least one hour for the test and the photometric verification and shall be operated without being dismantled from or readjusted in relation to its test fixture.

The filament lamp used shall be of the category specified for the lamp, and the test shall be made applying a voltage of 6.3 V, 13.2 V or 28.0 V, respectively, at the input terminals of the lamp.

In the case of a system that uses a light source control gear not being part of the lamp the voltage declared by the manufacturer, as used for the photometric testing, shall be applied to the input terminals of that light source control gear. The test laboratory may require from the manufacturer the special light source control gear needed to supply the light source and the applicable functions.

8.2. **Where no maximum power is specified, the test shall be carried out with the filament light source with the highest usable wattage.**

8.3. **In the case of light sources operated by an electronic control gear to obtain variable luminous intensity, the test shall be carried out under the conditions given at the highest luminous intensity.**

8.4. **After the lamp has been stabilized at the ambient temperature, no distortion, deformation, cracking or colour modification shall be perceptible. The light intensity according to paragraph 6. above, shall be checked at the points 5° left and 5° right on the horizontal line. The values obtained shall reach at least 80 per cent of the values measured before the heat resistance test on the same device."**

B. Proposal for Supplement 17 to the original version of Regulation No. 87

Paragraphs 11.1. to 11.3., amend to read:

"11.1. **In the case of daytime running lamps with filament light sources, the complete lamp shall be mounted to represent the correct installation on**

the vehicle and shall be subjected to a one-hour test of continuous operation following a warm-up period of 20 minutes. The ambient temperature shall be $23^{\circ}\text{C} \pm 5^{\circ}\text{C}$.

The measuring equipment shall be that used during the type-approval tests of the lamp.

The heat test and the photometric verification shall be carried out using the filament light sources, as appropriate, operated without being dismantled from or readjusted in relation to the lamp's test fixture:

The filament light source could be a mass production filament lamp(s), which has(have) been aged for at least one hour;

The filament light source used shall be of the category specified for the lamp, and the test shall be carried out at a voltage of 6.3 V, 13.2 V or 28.0 V respectively applied at the input terminals of the lamp.

In the case of a system that uses a light source control gear not being part of the lamp the voltage declared by the manufacturer, as used for the photometric testing, shall be applied to the input terminals of that light source control gear. The test laboratory may require from the manufacturer the special light source control gear needed to supply the light source and the applicable functions.

- 11.2. Where no maximum power is specified, the test shall be carried out with the highest usable wattage.**
- 11.3. After the lamp has been stabilized at the ambient temperature, no distortion, deformation, cracking or colour modification shall be perceptible. The light intensity according to paragraph 7, above, shall be checked **in the points 5° left and 5° right on the horizontal line**. At that measurement the values shall reach at least **80 per cent** of the values obtained before the heat resistance test on the same device."

II. Justification

1. The heat resistance tests in Regulations Nos. 38 and 87 do not represent the state of art. The current test condition conflicts with the requirement for the non-replaceable light sources.
2. The photometric test with a non-replaceable light source must be tested after 1 minute and 30 minutes of operation. If the lamp was not stable, the lamp would not meet the photometric requirements. Therefore, the heat test is not necessary for rear fog lamps equipped with LEDs.
3. After the lamp has been stabilised at the ambient temperature, no distortion, deformation, cracking or colour modification shall be perceptible. Nevertheless, it is necessary to see how the lamp is changing after the heat resistance test and, to this end, it is proposed to check the compliance of 5° left and right only to be sure that the change in the value is caused by the influence of heat.