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**ECONOMIC COMMISSION FOR EUROPE**

**INLAND TRANSPORT COMMITTEE**

**Working Party on the Transport  
of Dangerous Goods**

**(Seventy-first session,  
Geneva, 5-9 November 2001)**

**TEMPERATURE CERTIFICATION OF TACHOGRAPH EQUIPMENT**

**Transmitted by CLEPA (The European Association of Automotive Suppliers)**

**Summary:**

Paragraph 9.2.2.5.1 (b) of the ADR prescribes the certification requirements for permanently energised electrical circuits on FL vehicles. The T6 temperature classification prescribed is not compatible with the application for the speed and distance sensor used by the tachograph system and is over specified for equipment installed in the driver's cab.

**Action:**

CLEPA proposes a revision of the temperature class to T4 for engine mounted and under bonnet electrical equipment and T5 for electrical equipment installed in the drivers cab.

**Introduction**

Paragraph 9.2.2.5.1 (b) of the ADR prescribes a T6 temperature classification for permanently energised electrical circuits on FL vehicles. The tachograph system utilises a proximity sensor mounted on the output shaft of the gearbox to provide speed and distance pulses. The surface temperature of the vehicle gearbox can be in excess of the 85°C temperature limit for T6 certification. It is not possible, therefore, to install a certified tachograph system complying with the requirements of paragraph 9.2.2.5.1 (b).

For equipment mounted in the drivers cab the requirement for a T6 temperature classification is over specified. A temperature rating of T5 would be sufficient for electrical equipment in general.

### Proposal

WP15 is asked to accept the following amendment to the text of paragraph 9.2.2.5.1 (b):

For the application of IEC 60079 part 14<sup>1</sup>, the following classification shall be used:

Permanently energised electrical equipment including the leads which is not subject to 9.2.2.3 and 9.2.2.4 shall meet the requirements for Zone 1 for electrical equipment in general or meet the requirements for Zone 2 for electrical equipment situated in the driver's cab. The requirements for explosion group IIC, temperature class T5 shall be met for equipment in general or explosion group IIC, temperature class T4 for equipment installed on the vehicle engine and gearbox assembly, under the vehicle bonnet or in the driver's cab.

### Justification

The speed and distance sensor for electronic tachographs is a proximity device mounted on the output shaft of the gearbox. The surface temperature of the gearbox may be in excess of the 85°C temperature limit for T6 certification. The sensor has been mounted in this position on the majority of electronic tachographs applications for over ten years. Previously the sensor, which has been included in the system certification for the tachograph, has been certified with either a T4 temperature classification or has had an Associate Equipment approval, which does not require a temperature classification.

With the exception of acetylene, T5 is a sufficient temperature rating for all other materials carried by FL vehicles.

### Safety Implications

None. This proposal restores the status quo for the tachograph system.

### Feasibility

No technical or legal problems are foreseen.

### Enforceability

Will rectify a potential certification problem, which would result in tachograph systems operating outside of their certificated environment.

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