INF.14

ECONOMIC COMMISSION FOR EUROPE

INLAND TRANSORT COMMITTEE

Working Party on the Transport of Dangerous Goods
(72nd Session, Geneva, 4-8 November 2002)

Chapter 9.2
Subclause 9.2.2.5.1

Submitted by the Netherlands

Summary:
Difference of interpretation of subclause 9.2.2.5.1.

Further action:
Short term: registration of the interpretation accepted by WP.15 in the report;
Long term: possible amendment of subclause 9.2.2.5.1.

Reference documents:
None

Introduction:
During the last session of the ad-hoc WG on electrical equipment in hazardous atmospheres in 1999 in Bonn it was agreed that all electrical equipment which must remain energised when the battery master switch is open, should comply with the same requirements. A separate requirement for the tachograph was in that sense not justified. The text of the former marginal 220.514 with a specific reference to a "safety barrier" was therefore not taken over in the new set of requirements. Instead, a more general description for the same purpose was chosen by the insertion of the phrase "…including the leads…" in the relevant requirements (9.2.2.5.1 (a) and (b)).
Recently however, a difference of interpretation has become apparent, which has led to the situation that, at least in the Netherlands, vehicle manufacturers will no longer be able to satisfy the national authority for type approval. The problem is, that it does not seem to be sufficiently clear which measures are acceptable to achieve the required level of safety.

Proposal:
The Netherlands, having participated in the working group that dealt with this issue, takes the following view:

In cases where intrinsic safety is required, a safety device, as close as possible to the connection, bypassing the battery master switch (BMS) must be placed. This device must be able to prevent the creation of a dangerous surge or a spark with an energy, sufficient to ignite an explosive atmosphere.
Particularly in the case of a BMS which cuts off the minus (mass) connection, these requirements can only be met either by a properly dimensioned current limiter in accordance with IEC 60079-11 (or EN 50020 (intrinsic safety ‘i’)) or the equipment and the leads shall comply with the provisions for increased safety from IEC 60079-7 (or EN 50019 (increased safety ‘e’)). In the case of increased safety, compliance with the provisions for increased safety from IEC 60079-7 (or EN 50019) and the installation standard IEC 60079-14 shall be demonstrated by the vehicle manufacturer.

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