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## Economic Commission for Europe

### Inland Transport Committee

### Working Party on the Transport of Dangerous Goods

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Item 5 (a) of the provisional agenda

**Proposals for amendments to annexes A and B of ADR:  
Construction and approval of vehicles**

## Application of electrical equipment in Chapter 9.7

Transmitted by the Government of the Netherlands\*

### I. Introduction

1. In ADR 2017 requirements for the electrical installation were further extended to AT vehicles. As a result, also for the second stage construction of vehicles the additional or modified parts of the electrical installation needs to comply as well. In the meantime, also EX/III vehicles carrying explosives in tanks (ammonium nitrate/fuel oil (ANFO)) were added.
2. Document ECE/TRANS/WP.15/2023/8 raised the question on the application of 9.7.8 to FL vehicles. As a result, the heading of 9.7.8 was amended (see Annex II of document ECE/TRANS/WP.15/264). This proposal is to return the heading to its original form but does not touch the other amendment adopted on this document in 9.7.8.3.

### II. Proposal

3. Amend 9.7.8, 9.7.8.1 and 9.7.8.2 to read (new wording underlined, deleted wording stricken through):

**“9.7.8            Electrical equipment ~~for FL vehicles~~”**

9.7.8.1            *General*

Additions to or modifications of the ~~The~~ electrical installation on ~~FL~~ vehicles shall meet the relevant requirements of Chapter 9.2 ~~9.2.2.1, 9.2.2.2, 9.2.2.4, 9.2.2.5, 9.2.2.6, 9.2.2.8 and 9.2.2.9.1.~~ as appropriate (see table 9.2.1.1).

~~However additions to or modifications of the electrical installations of the vehicle shall meet the requirements for the electrical apparatus of the relevant group and temperature class according to the substances to be carried.~~

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\* A/78/6 (Sect. 20), table 20.5.



*NOTE: For transitional provisions, see also 1.6.5.*

9.7.8.2 FL vehicles

Electrical equipment on FL vehicles [that remains energized when the feature to de-energize electrical circuits is activated], situated in areas where an explosive atmosphere is, or may be expected to be, present in such quantities as to require special precautions, shall be suitable for use in a hazardous area. Such equipment shall meet the general requirements of IEC 60079 parts 0 and 14 and the additional requirements applicable from IEC 60079 parts 1, 2, 5, 6, 7, 11, 18, 26 or 28. The requirements for the electrical apparatus of the relevant group and temperature class according to the substances to be carried shall be met.”

Rest of 9.7.8.2 remains unchanged

### III. Justification

4. The purpose of the amendment of the heading of 9.7.8 and the first paragraph of 9.7.8.1 is to extend to all categories of vehicles under 9.7. For example, the additional protection, but also de-energizing of additional batteries also has to comply with the requirements of Chapter 9.2 as applicable.

5. The start of the second paragraph is added to the first paragraph to clarify that it in particular deals with additions or modifications of the systems already available on the base vehicle. Where Chapter 9.2 addresses the vehicle manufacturer, Chapter 9.7 addresses the body builder (second stage).

6. The rest of the second paragraph of 9.7.8.1 belongs to protection in explosive atmospheres. However, this wording already exists in the last sentence of the first paragraph of 9.7.8.2 and is therefore obsolete.

7. For 9.7.8.2 a new heading is introduced to clarify that this paragraph is in particular for FL vehicles. Vehicles carrying explosives in tanks (UN 0331 - 1.5D) need not to comply with the FL requirements as the fuel oil for ammonium nitrate is expected by classification not to produce an explosive atmosphere.

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