

Economic Commission for Europe

Inland Transport Committee

Working Party on the Transport of Dangerous Goods

115th session

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Geneva, 2-5 April 2024

Item 5 (a) of the provisional agenda

Proposals for amendments to annexes A and B of ADR:

Construction and approval of vehicles

Report of the informal working group on electrified vehicles

Transmitted by the Chair of the informal working group

I. Introduction

1. The informal working group on electrified vehicles (IWG-EV) met virtually three times (20 December 2023, 8 January and 8 March 2024) since the November 2023 session of WP.15 (114th session). Besides the continuation of the development, work was done to solve the remaining open items and consequential amendments, also a number of new issues were discussed. The IWG-EV submitted document ECE/TRANS/WP.15/2024/8.

II. Pending decision in document ECE/TRANS/WP.15/2024/8

2. Document ECE/TRANS/WP.15/2024/8 deals with items left in square brackets in Annex III to the report of the 114th session of the WP.15 and a number of consequential amendments forwarded by the UNECE secretariat. However, the topics to determine the technical service addressed to review the risk evaluation based on ISO 6469-1 (new 9.2.4.4.2.1) could not be resolved in time before the deadline for submission of a working document. In the meantime consensus has been reached by the manufacturers sub-group to modify the wording.

Proposal 1

3. Remove the square brackets and delete the last part in parentheses to read (deleted wording stricken through):

~~A review shall be carried out by a technical service (e.g. technical service for vehicle approvals according to UN Regulation No. 1001, as amended at least by the 03-series of amendments).~~

III. Pending issue in document INF. 10 November 2023 (114th) session of the WP.15

4. It was decided by WP.15 that the issue of the interpretation of the table as forwarded in INF.10 was to be dealt with by the IWG-EV. This was decided because it was difficult to oversee all the modifications to 9.2 by the introduction of battery electric vehicles and hydrogen fuelled vehicles and this interpretation.

5. The issue in INF.10 is that if the starting point is the table in 9.2.1.1 and not the provisions itself it may be interpreted that certain issues are not allowed or applicable, depending on the legal system in the Contracting Party involved.

6. Concerning the lines “9.2.4.4 Electric power train” and “9.2.4.4.1 General”, interpretation is possible. In document 2023/14 it was proposed to have two notes under 9.2.4.4 to exclude the use of the electric power train to EX vehicles and electrified trailers for the time being. However, it was decided to have one paragraphs covering the contents of the notes under 9.2.4.4.1, that is only applicable to AT and FL vehicles. Starting from the table with no crosses for EX/II and EX/III vehicles one will not come to the paragraph that excludes EX vehicles with an electric power train.

Proposal 2

7. Replace the first paragraph of 9.2.4.4.1 under 9.2.4.4 and add crosses in the table of 9.2.1.1 for 9.2.4.4 for EX/II, EX/III, AT and FL:

“9.2.4.4 *Electric power train*

“Electric power trains shall not be used for EX vehicles. Trailers with re-generative braking or electric power train are not allowed.”

9.2.4.4.1 *General provisions*

~~Electric power trains shall not be used for EX vehicles. Trailers with re-generative braking or electric power train are not allowed.~~

The electric power train shall meet the requirements of UN Regulation No. 100¹, as amended at least by the 03 series of amendments. (Rest unchanged)”.

		EX/II	EX/III	AT	FL	
9.2.4.4	Electric power train	X	X	X	X	
9.2.4.4.1	General			X	X	

IV. Work of the sub-groups

A. Truck manufacturers sub-group

8. The Truck Manufacturers sub-group met every two weeks on Thursday morning.

Timeline transitional measures

9. It was discussed that the transitional measures normally applied (1st of April of even year after the new ADR become in force) has become tighter than before. One of the key issues is that Whole Vehicle Type Approvals are introduced some years ago. These type-approvals are based on certificates for the separate systems. New requirements in ADR need to be transposed in UN Regulation No. 105, after approval of the UN Regulation No. 105, new tests and certificates may need to be acquired and introduced, and old certificates may need to be exchanged for new in the Whole Vehicle Type Approval. As the number of vehicle regulations increase and technical services and Competent Authorities become more involved, meeting the deadline becomes even more difficult. OICA may come with a proposal on this issue.

Charging

10. It was discussed to include a new 9.2.4.4.1.3 to require temperature sensing in the vehicle connector part to be able to monitor and act on possible thermal events during charging. The thermal sensing function interrupts or limits current transfer when certain temperature limits (according to certain ISO-standards) are reached.

Proposal 3

11. Introduce a new subsection 9.2.4.4.1.3 for the category “FL” to read:

“9.2.4.4.1.3 The vehicle charging inlet shall be provided with thermal sensing function which limits and/or interrupts current transfer according to ISO 17409:2020, when the temperature exceeds component rated values or required limits by applicable product standards, see e.g. IEC 62196-3-1:2020.”

Re-introduction of transitional measure 1.6.5.4

12. It was discovered that since ADR 2021 the basic transitional measure for compliance with Part 9 is deleted. In particular with the new provisions in 9.2 that are applicable to additional vehicle categories it is suggested to re-introduce the transitional measure. The end date to follow discussion mentioned above.

Proposal 4

13. Introduce transitional measure to read:

“1.6.5.4 As regards the construction of EX/II, EX/III, FL and AT vehicles, the requirements of Part 9 in force up to 31 December 2024 may be applied until [31 March 2026].”

Electric heater and programming

14. Electric heaters are not included in the new 9.2.5. It was discussed if for electric heaters pre-programming should be prohibited for FL vehicles, to prevent ignition of explosive atmospheres.

B. Trailer and body builder sub-group

15. There was limited communication to this sub-group concerning the dealing with batteries on trailers and batteries applied in the second phase of vehicle construction. However, it proved not possible time-wise to come to conclusions.

C. EX sub-group

16. The number of experts is very limited. Action is underway to interest more experts, either as part of the IWG-EV or experts from the Explosives Working Group of the UN SCE TDG. In general, the point that EX sub-group would like to await practical experiences with AT and FL vehicles seems to remain.

V. Future work

17. WP.15 is requested to allow the IWG-EV to continue the work on further develop of provisions, where needed, for trailers and body builders and EX vehicles.