

**Draft Minutes of Meeting**

*19<sup>th</sup> meeting of the  
WP.15 IWG-EV for the  
Introduction of Electrified Vehicles in the ADR*

**Venue:** Held via MS Team call  
**Chairman:** Kees de Putter (NL)  
**Secretariat:** Barbara Lehner (Daimler Truck)  
**Date:** 24 July 2024 10.00 to 12.00 hrs. CET

**0. Welcome**

The meeting was opened and the participants welcomed. In a review chair explained the working group started some two and half year ago on new and unknown technology. In the meantime we have now battery Electric Vehicles and Hydrogen Fuelled vehicles for categories AT and FL in ADR 2025. It was agreed in WP.15 to continue working on EX vehicles, electrified trailers and solve issue arising from the newly adopted provisions. Workload reduces the meetings of the IWG-EV will be on a lower frequency.

**1. Competition guidelines and law compliance policy**

Participants were reminded of the competition guidelines and law compliance policy.

This policy is consisting of not discussing any market conduct of individual companies and of not exchanging any business sensitive information. See the EU competition law details [here](#).

**2. Attendance list**

A full list of participants will be recorded, and the list will be added to the MoM.

**3. Approval of the agenda**

The item of external signals was added to 6.2 and the agenda approved.

**4. Approval of the minutes of last meeting**

The minutes of the 18<sup>th</sup> session were not yet available. Being the last session before May 2024 session of WP.15 the discussions can be found in the report which reflects the outcome of the meeting. The report will discussed and approved at the next session.

## **5. About the introduction of electrified vehicles in the ADR**

### **5.1. Reporting from the sub-groups**

#### **5.1.1. Users' sub-group**

No meetings of the users sub-group took place since last session of the IWG-EV. However, an online exchange of views was done on external signals, and in particular if it should be operable when the feature to de-energize, had de-energized the electrical system.

#### **5.1.2. Trucks manufacturers' sub-group**

Due the holiday season there was an oral reflection on the work done in the Truck-manufacturers sub-group. Meetings will take place every two weeks and a number of topics were identified that needed clarification or a solution. Some other topics were under discussion but needed further consideration if they should be tabled at the IWG-EV meetings.

#### **5.1.3. Hydrogen vehicles' sub-group**

This sub-group was already dormant for a very long time. The chair reminded participants that it would be possible to rise questions or issues on this topic if this would be necessary.

#### **5.1.4. Trailers and bodybuilders' sub-group**

It was said that activities were awaited from WP.29 that would allow electrified trailers. The started development stopped for some time but seems now to be started again. Besides amendment of the definition of electrified trailers other vehicle regulations need to be amended such a UN Regl. No 100 and UN Regl. No 13 and many more. To be continued.

#### **5.1.5. Explosives' sub-group**

The EX sub-group had its the kick-off meeting on the 15<sup>th</sup> of May. Being a group of 17 globally spread experts finding suitable meeting dates for all remained a challenge. In a power point presentation [link] the discussions and questions were given.

## **6 Open points to be discussed at the WP.15**

### **6.1 CMS: ADR 9.2.2.8.3 vs. R46 16.1.1**

Progress was made before on an exemption for re-activation of the Camera Monitoring System for indirect (rear) vision of truck drivers when the feature to de-energize the electric system was activated. However the new provisions approved by CMR Task Force of GRSG/WP.29 was open to interpretation if an outside operating device should be used or that only the external device was allowed, and not anymore the internal device on the dashboard. From the task force it appeared that the first case was the intention. Revised wording was

developed and will be send to GRSG and WP.29 for approval. The final decisions is to be awaited after the next GRSG session later this year.

## 6.2 Externa signal: ADR 9.2.4.4.1 – operation while feature to de-energized is activated

In 9.2.4.4.1 an external signal is requested in case the cells in a REESS would lead to a thermal issue when the vehicle is being stationary. This would be the trigger for the signal normally given as a warning to the driver on the dashboard. It was questioned if this should also be active when the electrical system (high and low voltage) is de-energized in an ATEX zone. In case of an ATEX zone, this would be a challenge for generating the trigger signal for the battery management System but also to energize for example an acoustic device that is safe in an explosive atmosphere.

More consideration is needed to take a decision. On one side the question is if it is possible to generated the triggersignal from the BMS while the electrical system is de-energized and what is available for ATEX approved warning devices and on the other side is it possible to limit risks in procedures to let cells come to rest by a waiting time before a vehicle can be in an situation when an explosive atmosphere will develop. Before it was already discussed not to charge vehicles while being loaded or filled. A clear explanation what the feature to de-energize is for may be helpful in the understanding of the regulation.

## 6.3 R134 02 series of amendments: implementation date

Shortly after the last WP.15 it was discovered that hydrogen container approved to UN Regl. No. R 134-02 (Further R134-02) series of amendment could not be delivered within short notice. In particular the Multi-lateral Agreement allowing earlier use of hydrogen fuelled vehicles is affected.

The R134-02 contains certain safety improvements but also some increased aging tests of valves that will delay additional tank testing. After the May session of WP.15 the ADR 2025 cannot be changed anymore and also at EU level there was no opening for national use.

Discussion arose if the reference to R134-02 also included the transitional measures here-in, and as such the R134-01 series could be used up till that time. However, this may have consequences to all UN Vehicle Regulations referred to in ADR.

It was decided that this topic could part of the report to WP.15 for discussion.

## 6.4 Automatic closing H2-valves: ADR 9.2.4.5.3

Automatic closing of shut-off valves of hydrogen containers in case of an accident is an important issue not yet dealt with in R 134. A decleration value is added in 9.2.4.5.3 (b). This was based on the trigger to store data of the Event Data Recorder. However in the development of this regulation the value was changed from a high 1.5 G's to 3.25. m/s<sup>2</sup> for 0.7 seconds and this was taken over in the proposals for ADR 2025. However, this change was overlooked and in practical installation it is realized that this value is very low, leading to many shut-downs. Fuel-cells may be damaged by this emergency shut-down. It is proposed to increase the value. Operators of trucks use deceleration values to train drivers for efficient driving and use values for heavy braking op to 0.6-0.7 G's.

It is proposed to forward a document in time to be an official document to WP.15 to have a decision so that truck- manufactures can take a more suitable deceleration figure forward in their designs.

(PS: 0.8 G's was felt appropriate that is translated into 8,0 m/s<sup>2</sup>).

## **7 Conclusion**

**Work of active sub-groups will continue.**

**An official document will be drafted and proposed for the deceleration value.**

**A report with the progress will be drafted for discussion at the next 20<sup>th</sup> session of the IWG-EV.**

## **8 Date and place of next meeting**

The next session will be planned after the summer holidays but in time for the next session of WP.15 begin November 2024. A poll will be sent out in time.

## **9 Closing of the meeting**

The chair thanked all the participants and wished all a good holiday and closed the meeting

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