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Inland Transport Committee

Working Party on the Transport of Dangerous Goods

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Interpretation of ADR

Reflection on INF.13: Application of the requirements concerning the electrical equipment of vehicles in accordance with 9.2.1.1 of ADR – transitional provisions

Transmitted by the Government of the Netherlands

Introduction

For the 108th session of WP.15 (November 2020) Germany forwarded informal document INF.13 for interpretation of the transitional measures in the table of 9.2.1.1, in particular for the electrical system. Informal document INF.13 contained two questions.

Question 1:

Does this provision in the table concerning the electrical equipment of vehicles first registered for road traffic in general after 31 March 2018 (first registration after manufacture, in accordance with road traffic law) refer to the registration within the meaning of road traffic law?

Reply to question 1: Indeed, in the view of the Netherlands the registration in the meaning of road traffic is intended here.

This means the date the vehicle document, “Certificate d’immatriculation” in France, V5C document in the UK or “Kraftfahrzeugbrief” in Germany, is issued and the vehicle can be used on the road.

In some Contracting Parties this vehicle document is only issued at time of the first periodic inspection, this deals in particular with trailers. To take this into account always the additional option “(or which entered into service if registration is not mandatory)” is added to these provisions. It is understood that this wording may raise questions if the background is not known.

Question 2:

Does this provision in the table concerning the electrical equipment of vehicles also apply to vehicles first registered after 31 March 2018 as an ADR certified vehicle (EX/II, EX/III, AT, FL) with a certificate of approval in accordance with Part 9 of ADR?

Reply to question 2: Indeed, the application of the transitional measures marked a, b and e apply to vehicles first registered in the meaning of road traffic.

TECHNICAL SPECIFICATIONS	VEHICLES				COMMENTS
	EX/II	EX/III	AT	FL	
9.2.2 ELECTRICAL EQUIPMENT					
9.2.2.1 General provisions	X	X	X	X	
9.2.2.2.1 Cables	X	X	X	X	
9.2.2.2.2 Additional protection	X ^a	X	X ^b	X	^a Applicable to vehicles with a maximum mass exceeding 3.5 tonnes first registered (or which entered into service if registration is not mandatory) after 31 March 2018. ^b Applicable for vehicles first registered (or which entered into service if registration is not mandatory) after 31 March 2018.
9.2.2.3 Fuses and circuit breakers	X ^b	X	X	X	^b Applicable to vehicles first registered (or which entered into service if registration is not mandatory) after 31 March 2018.
9.2.2.4 Batteries	X	X	X	X	
9.2.2.5 Lighting	X	X	X	X	
9.2.2.6 Electrical connections between motor vehicles and trailers	X ^c	X	X ^b	X	^b Applicable to vehicles first registered (or which entered into service if registration is not mandatory) after 31 March 2018. ^c Applicable to motor vehicles intended to draw trailers with a maximum mass exceeding 3.5 tonnes and trailers with a maximum mass exceeding 3.5 tonnes first registered (or which entered into service if registration is not mandatory) after 31 March 2018.

In the informal working group, dealing with updating 9.2, it was felt that the risk for EX/II vehicles was not less than EX/III vehicles and that the additional protection of wiring, fuses and circuit breakers and electrical connections should also apply to EX/II vehicles.

It was recognized that EX/II vehicles would in most cases be “panel vans”, one phase constructed vehicles, where the wiring would be protected by the body work of the panel van. As “panel van” is a difficult concept in light of translation it was decided to use the 3.5 tonnes limit instead.

Concerning AT vehicles it was decided to simplify the regulation. Truck manufacturers confirmed that the ADR package did not any longer distinguish between FL and AT vehicles and that always the appropriate FL protection would be provided, as well as fuses and circuit breakers, and appropriate electric connectors for trailers.

For EX/II and AT vehicles no transitional measures are introduced in 1.6.5 as these provisions would be new, or first introduced for these categories. It may be questioned if this would be acceptable from a safety point of view. Modification for AT vehicles was based on a simplification purposes without financial consequences for new vehicles and as such exiting vehicles do not bring unacceptable risks justifying modification.

For EX/II vehicles the vast majority are panel vans in which the wiring is protected by the bodywork, any modern vehicles have fuses and circuit breakers and the light ones are excluded for electric connectors for light trailers up to 3.5 tonnes because they are different than those for heavy trucks/trailers and are needed for interchangeability with trailers in general. Only for the incidental heavy “specific” EX/II truck and trailers approved as EX/II it is that they may be continued to be used unmodified. However, most heavy trucks are approved for EX/II, EX/III, AT or FL.

When a vehicle is registered in the sense of road traffic but not taken in use for the carriage of dangerous goods right away it is still possible to start use for the carriage of dangerous goods latter on, when it complies with the provisions in force at the time of registration on condition that transitional measures makes the approval of all approved for the carriage of dangerous goods invalid. When taken into service for the carriage of dangerous goods it has the same level of accepted safety as vehicles registered at the same time and taken in use for dangerous goods right away.

In practice, vehicles and in particular motor vehicles are very difficult to modify on an economical viable basis. In the rare cases this happens most motor vehicles were prepared for ADR by the original manufacturer from the beginning (i.e. UN R. No. 105 approval). The average life span of a tractor for semi-trailers, which account for at least 80% of the ADR motor vehicles, is 7 years. For trailers a life span of 25 years is foreseen. However, running gear like axles and electrics don’t live that long and are modernized to state of the art one or more times during their life.