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### **Economic Commission for Europe**

**Inland Transport Committee** 

**Working Party on the Transport of Dangerous Goods** 

**Eighty-ninth session** 

Geneva, 26–29 October 2010 Item 5 (b) of the provisional agenda

Proposals for amendments to Annexes A and B of ADR: Miscellaneous proposals

# Safety in road tunnels

#### Transmitted by the Government of Switzerland\*

Summary

**Executive summary**: Subject carriage in limited quantities in accordance with Chapter 3.4 to

tunnel traffic restrictions.

Action to be taken:

**Related documents**: ECE/TRANS/WP.1/112, ECE/TRANS/WP.15/2009/12,

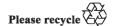
ECE/TRANS/WP.15/2010/10, ECE/TRANS/WP.15/204,

ECE/TRANS/WP.15/206

### Introduction

1. During the eighty-eighth session of the Working Party a discussion was held on the question of introducing tunnel restrictions for units carrying in excess of 8 tonnes of dangerous goods packed in limited quantities in accordance with Chapter 3.4. The discussion is reflected in paragraphs 61 to 65 of the report (ECE/TRANS/WP.15/206).

<sup>\*</sup> The present document is submitted in accordance with paragraph 1 (c) of the terms of reference of the Working Party, as contained in document ECE/TRANS/WP.15/190/Add.1, which provides a mandate to "develop and update the European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR)".



- 2. Some delegations supported the principle of road signs to regulate the movement of vehicles carrying dangerous goods packed in limited quantities in road tunnels. However, it was pointed out that that would also require amendments to ADR, for example to 1.9.5.3.6, as ADR had so far contained no provisions for traffic restrictions in tunnels in such cases. The representative of Switzerland was, however, of the opinion that the same approach that had been used for 1.1.3.6 could be applied to 1.1.3.4 and that no other amendment to ADR seemed necessary. Although 1.9.5.3.6 merely states that tunnel restrictions are not applicable to dangerous goods carried in accordance with 1.1.3, the provision is frequently interpreted as meaning that any vehicle which is not marked with orange-coloured plates is exempt from tunnel restrictions. It should be noted, however, that even this interpretation cannot be directly inferred from the ADR texts, because tunnel prohibitions are regulated by the road signs and signals contained in the Vienna Conventions, an interpretation of which is given in the Consolidated Resolution on Road Signs and Signals (R.E.2) (see document ECE/TRANS/WP.1/112), according to which prohibitions marked by the sign C, 3<sup>h</sup> apply only to vehicles for which the orange-coloured plates according to 5.3.2 of Annex A of ADR are required.
- Paragraph 1.9.5.3.6 merely states that carriage in accordance with 1.1.3 shall not be subject to tunnel restrictions. Thus, for example, the exemptions related to quantities carried per transport unit in 1.1.3.6 are frequently interpreted as being tantamount to an exemption from tunnel restrictions, because the transport units exempted under 1.1.3.6 are not subject to orange-coloured plate marking. Likewise, since the exemptions related to the carriage of goods packed in limited or excepted quantities under 1.1.3.4.2 do not require transport units to display orange-coloured plates, such units are for that reason also not subject to tunnel prohibitions. In both cases, in terms solely of vehicle marking, 1.9.5.3.6 is commonly interpreted as entailing an exemption, because both in 1.1.3.6 and 1.1.3.4 (Chapter 3.4), under certain conditions related to quantity limits per transport unit (1.1.3.6.3 and 1.1.3.4.2) and per packaging and package (1.1.3.4.2), vehicles are not required to display orangecoloured plates. As far as the question of exemption from passage through tunnels is concerned, the fact that under Chapter 3.4 goods which display a marking continue to be carried in accordance with the other exemptions listed under Chapter 3.4, whereas in the case of 1.1.3.6 the vehicle marking represents a departure from the exemption regime, is of little importance. The result is the same with both types of exemptions. As soon as the quantity limits per transport unit — the limits set in 1.1.3.6.3 and the 8-tonne limit set by 1.1.3.4.2 (3.4.14 of ADR 2011) — are exceeded, vehicle marking is required in each case: orange-coloured plate marking for 1.1.3.6 and marking in accordance with 3.4.15 for 1.1.3.4.2.
- 4. In order to illustrate the similarity between the two types of exemptions, one need only compare the provisions relating to Chapter 3.4 in ADR 2011 with the marginal 10 011 version in ADR 1999:
  - "10 011 (1) Dangerous goods in packages may be carried in one transport unit without application of the provisions of this Annex except for the following:".

"3.4.1 ...

Limited quantities of dangerous goods packed in such limited quantities, meeting the provisions of this Chapter are not subject to any other provisions of ADR except the relevant provisions of:".

5. Regarding 1.1.3.6, to date it has not seemed necessary to provide clarification in other parts of the text, as for example in 1.9.5.3.6 or 8.6.3.3, indicating that tunnel restrictions shall apply when the limits per transport unit laid down in 1.1.3.6.3 are exceeded and orange-coloured plate marking is required. Likewise, it should not be necessary to specify that when the limits per transport unit laid down in 1.1.3.4.2 (3.4.1.4)

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are exceeded, the restrictions for passage through tunnels shall apply. This, of course, is the case provided the marking required under 3.4.14 is the same as that required under 5.3.2. In such a case, the interpretation of the Consolidated Resolution on Road Signs and Signals (R.E.2) (see document ECE/TRANS/WP.15/2010/10) would apply in both cases in the same way.

- 6. Nevertheless, as indicated above, some delegations are of the opinion that the two types of exemptions are not the same. According to those delegations, in the case of Chapter 3.4, even when the quantity carried is in excess of 8 tonnes, the load should continue to benefit from the other exemptions under Chapter 3.4, which is not the case for 1.1.3.6. Those delegations believe that, for this reason, some text should be added to 1.9.5.6.3 to set out the rules. We consider that this issue is mainly theoretical. In order to reach a consensus, we propose that some explanatory text should be added to Chapter 3.4. To do so, we need to look at the wording of ADR 2011. Section 3.4.1 contains a positive list of the rules applicable to the carriage of dangerous goods packed in limited quantities. We consider that all the provisions applicable to the carriage of such goods must be defined in the framework of Chapter 3.4. If tunnel restrictions are applicable in certain cases, they must be referred to directly in Chapter 3.4. This is the purpose of proposal 4.
- 7. According to paragraph 62 of the report (ECE/TRANS/WP.15/206), some delegations did not favour the idea of altering the interpretation given to the plates in the Consolidated Resolution on Road Signs and Signals (R.E.2), as those plates did not refer only to tunnels, and the Swiss proposal would result in an unwarranted increase in traffic restrictions. This argument may be responded to as follows: as ADR considers loads in excess of 8 tonnes of dangerous goods packed in limited quantities as posing a sufficient risk to warrant vehicle marking, there should be no hesitation concerning the use of the sign C, 3h prohibiting the passage of dangerous goods; such loads should be prohibited under all circumstances because the risks they pose are considered by ADR as equivalent to those not exempted under Chapter 3.4. For this reason we wish to maintain proposal 1 as set forth in document ECE/TRANS/WP.15/2010/10. Explanations concerning why it is necessary to amend the provisions relating to vehicle marking are also contained in the aforementioned document. We believe that the scope of orange-coloured plate marking should be defined not in R.E.2, but in ADR itself. This is what we do in proposal 2.
- 8. In paragraph 63 of the report (ECE/TRANS/WP.15/206), reference was made to the idea of requiring only orange plates for vehicles, instead of the marking specified in 3.4.7 for the carriage of goods in limited quantities in excess of the 8-tonne limit set by 3.4.14 of ADR 2011. The fact that the marking specified under 3.4.7 of ADR 2011 is also required for maritime transport should not prevent the use of orange-coloured plates for road vehicles in accordance with 5.3.2. The texts of RID and ADR are different in 3.4.13 because no 12-tonne limit per transport unit is provided for rail transport.
- 9. The interpretation of some delegations referred to in paragraph 63 of the report of the eighty-eighth session, namely that abandoning the marking required under 3.4.15 and using orange-coloured plates instead would lead to the application of all the provisions of ADR is problematic, because 3.4.13 (a) already provides for such a possibility for transport units that already have orange-coloured plates in accordance with section 5.3.2. Consequently, we do not believe that a transport unit which uses such an orange-coloured plate marking must necessarily observe all the other provisions of ADR. This cannot be the consequence of the possibility already provided for under 3.4.13 (a). There is therefore no reason that one type of vehicle marking should not be replaced by another. It is true that ADR has not dealt with the problem of how to interpret such loads in limited quantities with orange-coloured plates, for instance during roadside checks; however, the choice of an alternative marking for limited quantities already exists in ADR. The best way of making it easier to understand what the orange-coloured plates mean is to specify the transport

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conditions in the transport document. To that end, there will need to be an obligation to have a transport document and to enter the relevant information in the transport document (proposals 4 and 5).

- 10. The aim of proposals 1 and 2 is to make the markings in Chapter 3.4 and section 5.3.2 equivalent, whereas proposal 3 proposes that the marking required under 3.4.15 should be replaced by orange-coloured plates under all circumstances. According to the current interpretation of Consolidated Resolution R.E.2, vehicles with such markings may be subject to tunnel restrictions.
- 11. Bearing in mind the decision-making procedures in the Working Party on Road Traffic Safety (WP.1) and the need to ensure, without further delay, the effective management of all the risks in tunnels, a transitional solution is necessary in order to allow for checks to be carried out on the carriage of goods in limited quantities through tunnels. This is the aim of proposal 2. In addition, in proposal 4 we clearly outline the scope of vehicle marking, which should meet the concerns of those who do not wish tunnel prohibitions to be extended as a general rule for carriage of goods in limited quantities.
- 12. Paragraph 65 of the report of the eighty-eighth session explains that there would be no need for a transport document for a category E tunnel: all transport units with loads in excess of 8 tonnes are supposed to have marking. As for category E tunnels, no sorting would be necessary: all such loads would be prohibited since they bear vehicle markings. However, it is a different matter for sorting loads at the entrance to tunnels other than category E ones. We have compiled a list of 1,669 items that can be transported packaged in limited quantities which have been assigned a restriction code for E tunnels. They can pass through category B, C or D tunnels, but only if they can be identified as loads that have been assigned restriction code E in the transport document. In addition, there are 33 items with tunnel restriction codes for D tunnels which can pass through B or C category tunnels provided that they are identifiable. The only practical way of allowing their passage is, yet again, to enter the tunnel restriction code for the load in the transport document.
- 13. We do not think it would be appropriate to limit the obligation to carry a transport document to category B, C and D tunnels, even if it is all too clear that no load in limited quantities in excess of 8 tonnes can transit through a category E tunnel. The obligation to carry a transport document for passing through restricted tunnels must be a general one. That is why in proposal 4 we have taken up proposal 3 from document ECE/TRANS/WP.15/2010/10, which was not submitted to the May 2010 session. The arguments set forth in the document remain valid. Given that through vehicle marking ADR has taken into account the additional risks posed by loads in limited quantities in excess of 8 tonnes, it would be appropriate for such loads to be subject to the obligation to have a transport document for passing through tunnels. We propose that the documentation should be required only for passing through restricted tunnels (proposal 4).
- 14. Bearing in mind that all modes of transport and the Model Regulations require a transport document for carriage in limited quantities and, given the difficulties that the transporter might encounter if the obligation to have such information applies only to loads in excess of 8 tonnes, some delegations consider that it would be more practical to require the transport document as a rule. This is the rationale behind proposal 5.
- 15. Proposal 5 attempts to resolve the problem of how to interpret orange-coloured plate marking on a vehicle for carriage in limited quantities.

### **Proposal 1**

16. We propose to request the Working Party on Road Traffic Safety (WP.1) to consider deleting the reference to orange-coloured plates and to section 5.3.2 in the Consolidated

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Resolution on Road Signs and Signals (R.E.2) (see document ECE/TRANS/WP.1/112) as follows:

In 1.11 (a), at the end of the first paragraph, replace:

"for which orange-coloured plates according to section 5.3.2 of Annex A of ADR for marking of vehicles are required on the vehicles" with:

"for which marking of the vehicle is required in accordance with Annex A of ADR."

In 1.11 (a) (i), (ii) and (iv), replace three times:

- "... for which the orange-coloured plate marking according to 5.3.2 of Annex A of ADR is required." with
- "... for which marking is required in accordance with Annex A of ADR."

In 1.11 (a) (iii) replace:

- "... for which the orange-coloured plate marking according to 5.3.2 of Annex A of ADR is required." with
- "... for which marking is required in accordance with Annex A of ADR."

#### **Consequential amendments**

- 17. The same modification should be introduced for signs D, 10a; D, 10b and D, 10c.
  - In 1.11 (c), at the end of the paragraph, replace:
  - "... for which orange-coloured plates according to section 5.3.2 of Annex A of ADR are required on the vehicle." with
  - "... for which marking of the vehicle is required in accordance with Annex A of ADR."
- 18. The same modification should be introduced for signal C, 3<sup>m</sup>.
  - In 1.11 (b), at the end, replace:
  - "... orange-coloured plates on the vehicle according to 5.3.2 of Annex A of ADR are ..." with
  - "... marking in accordance with Annex A of ADR is ...".

#### **Justification**

19. This enables ADR to be developed flexibly without having to resort regularly to amending the Convention on Road Signs and Signals. Vehicles marked in accordance with Chapter 3.4 can be subjected to tunnel restrictions. This enables risks to be managed in these tunnels in a way that takes account of the risks actually present in the tunnel at the time of carriage.

## **Proposal 2**

- 20. Insert a new subparagraph 5.3.2.1.1.2 to read as follows:
  - "5.3.2.1.1.2 For the purposes of carriage in accordance with Chapter 3.4, orange-coloured marking means the mark required by 3.4.13."

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#### **Consequential amendment**

21. Renumber 5.3.2.1.1 as 5.3.2.1.1.1.

#### **Justification**

22. Thanks to this indication in 5.3.2 requirements for tunnels can be implemented more quickly for loads carried in accordance with Chapter 3.4. The proposed amendments to the text of R.E.2 described in proposal 1 can be adopted by WP.1 at its own speed, and more comprehensive risk management in tunnels is made possible forthwith.

### **Proposal 3**

23. Amend 3.4.13 to read as follows:

"3.4.13 (a) Transport units with a maximum mass exceeding 12 tonnes carrying packages with dangerous goods in limited quantities shall be marked in accordance with 5.3.2 3.4.15 at the front and at the rear except when orange coloured plate marking is displayed in accordance with 5.3.2."

### **Proposal 4**

24. Add a new 3.4.16 to read as follows:

"3.4.16 When the total gross mass of the packages containing dangerous goods packed in limited quantities carried exceeds 8 tonnes per transport unit and the load must pass through a tunnel subject to restrictions on the passage of vehicles carrying dangerous goods, the provisions concerning the transport document in 5.4.1.1 and the provisions in Chapter 8.6 shall apply."

### **Proposal 5**

25. Amend 3.4.1 (e) to read as follows:

"(e) Part 5, 5.1.2.1 (a) (i) and (b), 5.1.2.2, 5.1.2.3, 5.2.1.9,  $\underline{5.4.1.1.1}$ ,  $\underline{5.4.1.1.4}$  and 5.4.2:"

In this case, 3.4.16 must be reworded as follows:

"3.4.16 When the total gross mass of the packages containing dangerous goods packed in limited quantities carried exceeds 8 tonnes per transport unit and the load must pass through a tunnel subject to restrictions on the passage of vehicles carrying dangerous goods, the provisions in Chapter 8.6 shall apply."

#### **Proposal 6**

26. Amend 5.4.1.1.4 to read as follows:

"5.4.1.1.4 (Deleted) Special provisions for dangerous goods packed in limited quantities

For the transport of dangerous goods packed in limited quantities according to subparagraph 3.4.13 (a), the transport document shall bear the following inscription: 'Limited quantities'."

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