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Joint Meeting of the RID Committee of Experts and the Working Party on the Transport of Dangerous Goods

Geneva, 13-23 September 2011

Item 7 of the provisional agenda

Reports of informal working groups

Report of the informal working group on gas tanks of motor vehicles (Munich, 10 May 2011)

Transmitted by the Government of Germany^{1,2}

Summary

Explanatory summary: In connection with the development and commercial launch of alternative vehicle propulsion systems, there is an increasing use of vehicles powered by flammable gases. In the context of maintenance and repair work, quality assurance activities for vehicles and their components and environmentally friendly disposal, used gas tanks or gas storage systems with different degrees of filling have to be carried. The existing provisions do not offer the possibility of carrying such gas tanks properly and in accordance with the law.

Decision to be taken: Introduce a new special provision on the carriage of used gas tanks and gas storage systems.

Related documents: Document OTIF/RID/RC/2010/19 (ECE/TRANS/WP.15/AC.1/2010/19), related informal documents INF.19 and INF.48 from Germany, OTIF/RID/RC/2010-A (ECE/TRANS/WP.15/AC.1/118), paragraphs 57 and 58, ECE/TRANS/WP.15/AC.1/2010/40, related informal documents INF.12 from the Netherlands and INF.28 from Belgium, as well as the report of the last Joint Meeting ECE/TRANS/WP.15/AC.1/120 paragraph 40; Multilateral agreement M221.

¹ In accordance with the programme of work of the Inland Transport Committee for 2010-2014 (ECE/TRANS/208, para 106, ECE/TRANS/2010/8, programme activity 02.7 (c)).

² Circulated by the Intergovernmental Organisation for International Carriage by Rail (OTIF) under the symbol OTIF/RID/RC/2011/40.

1. The informal working group on the carriage of vehicle fuel gas tanks and gas storage systems removed from motor vehicles powered by gases met on 10 May 2011 in Munich on the basis of an appropriate mandate from the RID/ADR/ADN Joint Meeting.
2. The meeting was attended by experts from Finland, France, Germany, the Netherlands, Spain, Switzerland, United Kingdom and OTIF and was chaired by Dr. Mair (BAM, Germany).
3. The working group made use of the opportunity to obtain a visual impression of the tanks and valves used for this purpose. After a long and detailed debate the working group accepted in principle the following wording for a new special provision. Owing to the lack of time, the provisions concerning marking and documentation are based on a draft by the chairman.

Proposal for Chapters 3.2 and 3.3 – Introduction of a new special provision for the carriage of vehicle fuel gas tanks and gas storage systems removed from motor vehicles powered by gases of UN numbers 1011, 1049, 1075, 1954, 1965, 1969, 1971 or 1978

4. Chapter 3.2, Table A

For UN numbers 1011, 1049, 1075, 1954, 1965, 1969, 1971 and 1978, add special provision xxx to column (6).

5. Chapter 3.3

Add the following new special provision xxx:

“xxx For the carriage of fuel gas containment systems designed to be fitted in motor vehicles containing this gas sub-section 4.1.4.1, Chapter 5.2, Chapter 5.4 and Chapter 6.2 of RID/ADR need not be applied, provided the following conditions are met:

- (a) The fuel gas containment systems shall meet ECE Regulation No. R 67, R 110 or R 115 or EC-Regulation No. 79/2009³ in combination with Regulation (EU) No. 406/2010⁴, as applicable.
- (b) The fuel gas containment systems shall be leakproof and shall not exhibit any signs of external damage which may affect their safety.

NOTE 1: Criteria may be found in standard ISO 11623:2002 Transportable gas cylinders – Periodic inspection and testing of composite gas cylinders (or ISO CD 19078 Gas cylinders - Inspection of the cylinder installation, and requalification of high pressure cylinders for the on-board storage of natural gas as a fuel for automotive vehicles).

NOTE 2: If the fuel gas containment systems are not leakproof or overfilled or if they exhibit damage that could affect their safety, they shall only be carried in salvage pressure receptacles in conformity with RID/ADR.

³ Regulation (EC) No 79/2009 of the European Parliament and of the Council of 14 January 2009 on type-approval of hydrogen-powered motor vehicles, and amending Directive 2007/46/EC.

⁴ Commission Regulation (EU) No 406/2010 of 26 April 2010 implementing Regulation (EC) No 79/2009 of the European Parliament and of the Council on type-approval of hydrogen-powered motor vehicles.

(c) All valves shall be so closed as to be gastight under normal conditions of carriage. If the body of the closure of a fuel gas containing system has two valves integrated in line, but one of the valves does not work properly or only one valve is integrated, all openings with the exception of the opening of the pressure relief device shall be so closed as to be gastight under normal conditions of carriage.

(d) Fuel gas containment systems shall be carried in such a way as to prevent any damage to the valves and any other pressurised part of the fuel gas containment systems and unintentional release of the gas under normal conditions of carriage. The fuel gas containment system shall be secured so as to prevent slipping, rolling or vertical movement.

(e) Fuel gas containment systems shall satisfy the provisions of 4.1.6.8 (a), (b), (c), (d) or (e).

(f) The marking and labelling provisions of Chapter 5.2 shall be met, unless fuel gas containment systems are consigned in a handling device. If so, the markings and danger labels shall be affixed to the handling device.

(g) Documentation

Every consignment that is carried in accordance with this special provision shall be accompanied by a transport document, containing at least the following information:

- (i) The UN number of the gas contained in the fuel gas containment systems, preceded by the letters "UN";
 - (ii) the proper shipping name of the gas;
 - (iii) the label model number;
 - (iv) the number of fuel gas containment systems;
 - (v) in the case of liquefied gases the total mass of gas of each fuel gas containment system and
in the case of compressed gases the total water capacity of each fuel gas containment system followed by the nominal working pressure;
 - (vi) the names and the addresses of the consignor and the consignee.
- (i) to (v) shall appear according to the example.

Example 1: "UN 1971 natural gas, compressed, 2.1, 1 vehicle fuel gas storage system of 50 l in total, 200 bar".

Example 2: "UN 1965 hydrocarbon gas mixture, liquefied, n.o.s., 2.1, 3 vehicle fuel gas storage systems, each of 15 kg gas mass".

(i) The other provisions of RID/ADR shall be observed."
