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**Economic Commission for Europe****Inland Transport Committee****Working Party on the Transport of Dangerous Goods****Joint Meeting of the RID Committee of Experts and  
the Working Party on the Transport of Dangerous Goods**

Bern, 16–20 March 2020

Item 5 (b) of the provisional agenda

**Proposals for amendments to RID/ADR/ADN:****New proposals****Carriage of equipment powered by lithium cells or batteries**

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

*Summary*

**Executive summary:** Machinery using liquid or gaseous fuels is exempted under special provision 363, but there is no provision exempting machinery of the same kind from regulation under certain conditions when it is powered by lithium batteries. The aim is to define the conditions allowing for an exemption of machinery powered by lithium batteries.

**Action to be taken:** Introduce a special provision XYZ in Chapter 3.3 for UN Nos. 3091 and 3481.

**Introduction**

1. Internal combustion machinery powered by a flammable liquid (UN No. 3528) or gas (UN No. 3529) or a liquid of Class 9 (UN No. 3530) is exempted from regulation if it meets the conditions set out in special provision 363. A similar exemption has not yet been established for machinery of the same kind when it is powered by lithium cells or batteries.

2. An apparatus (e.g. an industrial conveyor belt or a crane) powered by a liquid fuel is assigned to UN No. 3528 and is exempted under special provision 363, while an apparatus of the same kind powered by lithium batteries must be assigned to either UN No. 3091 or UN No. 3481, for which there is no provision similar to special provision 363.

\* Subprogramme 2 of the programme budget for 2020 (A/74/6 (Sect.20) and additional information).

\*\* Circulated by the Intergovernmental Organisation for International Carriage by Rail under the symbol OTIF/RID/RC/2020/23.



3. It does not appear that the exceptions set forth in 1.1.3 can address this gap. Neither 1.1.3.1 (c) nor 1.1.3.7 applies to equipment which is not intended to operate during carriage and which is powered by lithium batteries.
4. To address this gap in the case of carriage undertaken by enterprises which is ancillary to their main activity, the Joint Meeting may wish to consider a solution such as the following.

## Proposals

5. Add a special provision SP XYZ for UN Nos. 3091 and 3481.

“XYZ This entry also applies to lithium cells and batteries contained in equipment for the operation of that equipment (e.g. generators, compressors, heating units, cranes, etc.), other than those exempted under 1.1.3.7, when transported by enterprises as an ancillary activity. They are not subject to other provisions of ADR if they meet the following conditions:

- (a) The lithium cells or batteries shall comply with the provisions of 2.2.9.1.7;
- (b) The equipment shall be in compliance with the construction requirements specified by the competent authority of the country of manufacture;<sup>2</sup>
- (c) Cells and batteries when installed in equipment shall be protected from damage and short circuit, and the equipment shall be equipped with an effective means of preventing accidental activation. This requirement does not apply to devices which are intentionally active in carriage (radio frequency identification (RFID) transmitters, watches, sensors, etc.) and which are not capable of generating a dangerous evolution of heat. The equipment shall be packed in strong outer packagings constructed of suitable material of adequate strength and design in relation to the packaging’s capacity and its intended use unless the battery is afforded equivalent protection by the equipment in which it is contained;
- (d) Each item of equipment or package containing equipment shall be marked with the appropriate lithium battery mark, as illustrated in 5.2.1.9;

This requirement does not apply to:

- (i) Equipment containing only button cell batteries (including circuit boards); and
- (ii) Equipment containing no more than four cells or two batteries installed in equipment, where there are not more than two packages in the consignment;
- (e) When packages containing equipment are placed in an overpack, the lithium battery mark shall either be clearly visible or be reproduced on the outside of the overpack and the overpack shall be marked with the word “OVERPACK”. The lettering of the “OVERPACK” mark shall be at least 12 mm high;
- (f) Where the equipment contains 333 kg or less of lithium cells or batteries, it shall be labelled on two opposite sides in accordance with 5.2.2 and the quantity of lithium cells or batteries per transport unit must not surpass 333 kg;
- (g) Where the equipment contains more than 333 kg of lithium cells or batteries, it shall be placarded on two opposite sides. Placards shall

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<sup>2</sup> For example, compliance with the appropriate provisions of Directive 2006/42/EC of the European Parliament and of the Council of 17 May 2006 on machinery, and amending Directive 95/16/EC (Official Journal of the European Union No. L 157 of 9 June 2006, pp. 0024–0086).

correspond to the labels required in Column (5) of Table A of Chapter 3.2 and shall conform to the specifications given in 5.3.1.7. Placards shall be displayed on a background of contrasting colour, or shall have either a dotted or a solid outer boundary line; in such cases:

- The load shall not contain more than one item of equipment containing batteries;
- A transport document in accordance with 5.4.1 is required; this transport document shall contain the following additional statement: “Transport in accordance with special provision XYZ”;

(ADR only) – For carriage that includes passage through restricted tunnels, the transport unit shall display orange-coloured plates according to 5.3.2 and the tunnel restrictions according to 8.6.4 shall apply.”

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