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**Committee of Experts on the Transport of Dangerous Goods  
and on the Globally Harmonized System of Classification  
and Labelling of Chemicals****Sub-Committee of Experts on the Transport of Dangerous Goods****Forty-ninth session**

Geneva, 27 June-6 July 2016

Item 4 (d) of the provisional agenda

**Electric storage systems: Miscellaneous****Amendments to special provisions on the carriage of vehicles****Transmitted by the expert from France<sup>1</sup>****Introduction**

1. During the forty-eighth session of the Sub-Committee of Experts on the Transport of Dangerous Goods, the expert from France submitted a proposal to merge all the special provisions concerning vehicles in order to eliminate redundancies that might cause confusion (see ST/SG/AC.10/C.3/2015/58 (France)). These proposals are the result of discussions held during consideration by the RID/ADR/ADN Joint Meeting in September 2015 of new provisions of the Model Regulations in view of their transposition.
2. Most of the delegations were in favour of the first proposal, the majority preferring option 2. However, as no decision was taken, the present text also presents modified versions of both options in proposal 1 below.
3. In respect of the amendments to proposal 2 of the previous text, on lithium batteries, it was suggested that the text adopted by the International Maritime Organization (IMO) for special provision 962 of the International Maritime Dangerous Goods (IMDG) Code should be taken into account. This is done in proposal 2 below.
4. Proposal 1 below contains two options. Option 1 merges special provisions 312 and 385 applicable to UN No. 3166. This would seem to be the minimum change required to

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<sup>1</sup> In accordance with the programme of work of the Sub-Committee for 2015-2016 approved by the Committee at its seventh session (see ST/SG/AC.10/C.3/92, para. 95 and ST/SG/AC.10/42, para. 15).



eliminate the sources of confusion. It also seems that special provision 380 applicable to UN No. 3166 could be merged with special provisions 312 and 385.

5. Option 2 of proposal 1 is to combine special provisions 312, 380 and 385 applicable to UN No. 3166 and special provision 240 applicable to UN No. 3171.

6. It should be noted that neither of the texts proposed in option 1 and option 2 of proposal 1 contains any fundamentally new provisions.

7. Proposal 2 clarifies the provisions on prototype lithium batteries, small production runs and damaged batteries. It proposes using the text on lithium batteries adopted by IMO in special provision 962 of the IMDG Code (amendment 38-16).

8. Proposal 2 offers three options. Option 1 is drafted on the basis of proposal 1, option 1, being accepted. Option 2 is drafted on the basis of proposal 1, option 2, being accepted. If neither of the options in proposal 1 is adopted, the amendments proposed in option 3 could be adopted for the paragraphs in special provisions 240, 312 and 385, respectively.

9. Options 1, 2 and 3 of proposal 2 also propose the same amendments to special provision 363, as they include the provisions applicable to lithium batteries.

10. During the March 2016 session of the RID/ADR Joint Meeting, a further question was raised in respect of carriage of UN Nos. 3528, 3529 and 3530: were special provision 363 and packing instruction P005 completely independent of each other? It transpired that packing instruction P005 included safety provisions that could be useful even for carriage exempted under special provision 363, such as, for instance, the need to provide outer packaging when the means of containment of machinery or engines does not offer adequate protection.

11. The question was also raised of whether carriage could take place without special provision 363 being applied, as it is freestanding and seems to cover all possible cases. The Sub-Committee is requested to clarify the interpretation of the provisions.

12. If its interpretation concludes that the provisions (SP 363 and P005) are linked, the Sub-Committee might then consider adopting proposals 3 (a) and/or 3 (b).

## Proposal 1

### Option 1

- Delete special provision 380 in Chapter 3.3.
- Delete special provision 385 in Chapter 3.3.
- Delete special provisions 380 and 385 in Column (6) of the Table in Chapter 3.2 for UN No. 3166.
- Amend special provision 312 as follows:

“**312** This entry applies to vehicles powered by flammable liquid or gas internal combustion engines or fuel cells.

Vehicles powered by a fuel cell engine shall be consigned under the entries UN No. 3166 VEHICLE, FUEL CELL, FLAMMABLE GAS POWERED or UN No. 3166 VEHICLE, FUEL CELL, FLAMMABLE LIQUID POWERED, as appropriate. These entries include hybrid electric vehicles powered by both a fuel cell and an internal combustion engine with wet batteries, sodium batteries, lithium metal batteries or lithium ion batteries, transported with the battery(ies) installed.

Other vehicles which contain an internal combustion engine shall be consigned under the entries UN 3166 VEHICLE, FLAMMABLE GAS POWERED or UN 3166 VEHICLE, FLAMMABLE LIQUID POWERED, as appropriate. These entries include hybrid electric vehicles powered by both an internal combustion engine and wet batteries, sodium batteries, lithium metal batteries or lithium ion batteries, transported with the battery(ies) installed.

Vehicles powered by wet batteries, sodium batteries, lithium metal batteries or lithium ion batteries, transported with the batteries installed, shall be consigned under the entry UN 3171 BATTERY-POWERED VEHICLE (see special provision 240).

If a vehicle is powered by a flammable liquid and a flammable gas internal combustion engine, it shall be assigned to UN 3166 VEHICLE, FLAMMABLE GAS POWERED.

For the purpose of this special provision, vehicles are self-propelled apparatus designed to carry one or more persons or goods. Examples of such vehicles are cars, motorcycles, trucks, locomotives, scooters, three- and four-wheeled vehicles or motorcycles, lawn tractors, self-propelled farming and construction equipment, boats and aircraft.

Dangerous goods, such as batteries, airbags, fire extinguishers, compressed gas accumulators, safety devices and other integral components of the vehicle that are necessary for the operation of the vehicle or for the safety of its operator or passengers, shall be securely installed in the vehicle and are not otherwise subject to these Regulations. However, lithium batteries shall meet the provisions of 2.9.4 except when otherwise provided for in these Regulations (e.g. for prototype batteries and small production runs under special provision 310 or damaged batteries under special provision 376).”

## Option 2

- Delete special provisions 240, 312, 380 and 385 in Chapter 3.3.
- Delete special provisions 312, 380 and 385 in Column (6) of the Table in Chapter 3.2 for UN No. 3166.
- Delete special provision 240 in Column (6) of the Table in Chapter 3.2 for UN No. 3171.
- Introduce the following new special provision into Chapter 3.3:

“~~3XX~~ Entry UN 3166 applies to vehicles powered by flammable liquid or gas internal combustion engines or fuel cells.

Vehicles powered by a fuel cell engine shall be consigned under the entries UN No. 3166 VEHICLE, FUEL CELL, FLAMMABLE GAS POWERED or UN No. 3166 VEHICLE, FUEL CELL, FLAMMABLE LIQUID POWERED, as appropriate. These entries include hybrid electric vehicles powered by both a fuel cell and an internal combustion engine with wet batteries, sodium batteries, lithium metal batteries or lithium ion batteries, transported with the battery(ies) installed.

Other vehicles which contain an internal combustion engine shall be consigned under the entries UN 3166 VEHICLE, FLAMMABLE GAS POWERED or UN 3166 VEHICLE, FLAMMABLE LIQUID POWERED, as appropriate. These entries include hybrid electric vehicles powered by both an internal combustion

engine and wet batteries, sodium batteries, lithium metal batteries or lithium ion batteries, transported with the battery(ies) installed.

If a vehicle is powered by a flammable liquid and a flammable gas internal combustion engine, it shall be assigned to UN 3166 VEHICLE, FLAMMABLE GAS POWERED.

Entry UN 3171 only applies to vehicles powered by wet batteries, sodium batteries, lithium metal batteries or lithium ion batteries and equipment powered by wet batteries or sodium batteries transported with these batteries installed.

For the purpose of this special provision, vehicles are self-propelled apparatus designed to carry one or more persons or goods. Examples of such vehicles are cars, motorcycles, scooters, three- and four-wheeled vehicles or motorcycles, trucks, locomotives, bicycles (pedal cycles with a motor) and other vehicles of this type (e.g. self-balancing vehicles or vehicles not equipped with at least one seating position), wheelchairs, lawn tractors, self-propelled farming and construction equipment, boats and aircraft. This includes vehicles transported in a packaging. In this case some parts of the vehicle may be detached from its frame to fit into the packaging.

Examples of equipment are lawnmowers, cleaning machines or model boats and model aircraft. Equipment powered by lithium metal batteries or lithium ion batteries shall be consigned under the entries UN 3091 LITHIUM METAL BATTERIES CONTAINED IN EQUIPMENT or UN 3091 LITHIUM METAL BATTERIES PACKED WITH EQUIPMENT or UN 3481 LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT or UN 3481 LITHIUM ION BATTERIES PACKED WITH EQUIPMENT, as appropriate.

Dangerous goods, such as batteries, airbags, fire extinguishers, compressed gas accumulators, safety devices and other integral components of the vehicle that are necessary for the operation of the vehicle or for the safety of its operator or passengers, shall be securely installed in the vehicle and are not otherwise subject to these Regulations. However, lithium batteries shall meet the provisions of 2.9.4 except when otherwise provided for in these Regulations (e.g. for prototype batteries and small production runs under special provision 310 or damaged batteries under special provision 376).”

- Assign special provision 3XX to UN Nos. 3166 and 3171 in Column (6) of the Table in Chapter 3.2.

## **Proposal 2**

### **Option 1**

#### **If proposal 1, option 1, is adopted:**

- In special provision 312, where the text below appears:  
“However, lithium batteries shall meet the provisions of 2.9.4 except when otherwise provided for in these Regulations (e.g. for prototype batteries and small production runs under special provision 310 or damaged batteries under special provision 376).”

replace it with the following:

“However, lithium batteries shall meet the provisions of 2.9.4 except that 2.9.4 (a) does not apply when pre-production prototype batteries or batteries of a small production run, consisting of not more than 100 batteries, are installed in the vehicles and the vehicles are manufactured or permitted under regulations in force in the country of manufacture or the country of use.

Where a lithium battery installed in a vehicle is damaged or defective, the battery shall be removed and transported according to SP 376, unless otherwise approved by the competent authority.”

- In special provision 363, where the text below appears:

“However, lithium batteries shall meet the provisions of 2.9.4 except when otherwise provided for in these Regulations (e.g. for prototype batteries and small production runs under special provision 310 or damaged batteries under special provision 376).”

replace it with the following:

“However, lithium batteries shall meet the provisions of 2.9.4 except that 2.9.4 (a) does not apply when pre-production prototype batteries or batteries of a small production run, consisting of not more than 100 batteries, are installed in the machinery or engines and the machinery or engines are manufactured or authorized as provided for in the regulations in force in the country of manufacture or the country of use.

Where a lithium battery installed in machinery or engines is damaged or defective, the battery shall be removed and transported according to SP 376, unless otherwise approved by the competent authority.”

## Option 2

### If proposal 1, option 2, is adopted:

- In special provision 3XX, where the text below appears:

“However, lithium batteries shall meet the provisions of 2.9.4 except when otherwise provided for in these Regulations (e.g. for prototype batteries and small production runs under special provision 310 or damaged batteries under special provision 376).”

replace it with the following:

“However, lithium batteries shall meet the provisions of 2.9.4, except that 2.9.4 (a) does not apply when pre-production prototype batteries or batteries of a small production run, consisting of not more than 100 batteries, are installed in vehicles or equipment and the vehicles or equipment are manufactured or authorized as provided for in the regulations in force in the country of manufacture or the country of use.

Where a lithium battery installed in a vehicle or equipment is damaged or defective, the battery shall be removed and transported according to SP 376, unless otherwise approved by the competent authority.”

- In special provision 363, where the text below appears:

“However, lithium batteries shall meet the provisions of 2.9.4 except when otherwise provided for in these Regulations (e.g. for prototype batteries and small

production runs under special provision 310 or damaged batteries under special provision 376).”

replace it with the following:

“However, lithium batteries shall meet the provisions of 2.9.4, except that 2.9.4 (a) does not apply when pre-production prototype batteries or batteries of a small production run, consisting of not more than 100 batteries, are installed in machinery or engines and the machinery or engines are manufactured or authorized as provided for in the regulations in force in the country of manufacture or the country of use.

Where a lithium battery installed in machinery or an engine is damaged or defective, the battery shall be removed and transported according to SP 376, unless otherwise approved by the competent authority.”

### Option 3

#### **If neither proposal 1, option 1, nor proposal 1, option 2, are adopted:**

- In special provision 240, replace the following:

“However, lithium batteries shall meet the provisions of 2.9.4 except when otherwise provided for in these Regulations (e.g. for prototype batteries and small production runs under special provision 310 or damaged batteries under special provision 376).”

replace it with the following:

“However, lithium batteries shall meet the provisions of 2.9.4, except that 2.9.4 (a) does not apply when pre-production prototype batteries or batteries of a small production run, consisting of not more than 100 batteries, are installed in vehicles or equipment and the vehicles or equipment are manufactured or authorized as provided for in the regulations in force in the country of manufacture or the country of use.

Where a lithium battery installed in a vehicle or equipment is damaged or defective, the battery shall be removed and transported according to SP 376, unless otherwise approved by the competent authority.”

- In special provision 312, replace the following:

“However, lithium batteries shall meet the provisions of 2.9.4 except when otherwise provided for in these Regulations (e.g. for prototype batteries and small production runs under special provision 310 or damaged batteries under special provision 376).”

replace it with the following:

“However, lithium batteries shall meet the provisions of 2.9.4, except that 2.9.4 (a) does not apply when pre-production prototype batteries or batteries of a small production run, consisting of not more than 100 batteries, are installed in vehicles and the vehicles are manufactured or authorized as provided for in the regulations in force in the country of manufacture or the country of use.

Where a lithium battery installed in a vehicle is damaged or defective, the battery shall be removed and transported according to SP 376, unless otherwise approved by the competent authority.”

- In special provision 363, replace the following:

“However, lithium batteries shall meet the provisions of 2.9.4 except when otherwise provided for in these Regulations (e.g. for prototype batteries and small production runs under special provision 310 or damaged batteries under special provision 376).”

replace it with the following:

“However, lithium batteries shall meet the provisions of 2.9.4, except that 2.9.4 (a) does not apply when pre-production prototype batteries or batteries of a small production run, consisting of not more than 100 batteries, are installed in machinery or engines and the machinery or engines are manufactured or authorized as provided for in the regulations in force in the country of manufacture or the country of use.

Where a lithium battery installed in machinery or an engine is damaged or defective, the battery shall be removed and transported according to SP 376, unless otherwise approved by the competent authority.”

- In special provision 385, replace the following:

“However, lithium batteries shall meet the provisions of 2.9.4 except when otherwise provided for in these Regulations (e.g. for prototype batteries and small production runs under special provision 310 or damaged batteries under special provision 376).”

replace it with the following:

“However, lithium batteries shall meet the provisions of 2.9.4, except that 2.9.4 (a) does not apply when pre-production prototype batteries or batteries of a small production run, consisting of not more than 100 batteries, are installed in vehicles and the vehicles are manufactured or authorized as provided for in the regulations in force in the country of manufacture or the country of use.

Where a lithium battery installed in a vehicle is damaged or defective, the battery shall be removed and transported according to SP 376, unless otherwise approved by the competent authority.”

## **Proposal 3**

### **Proposal 3 (a)**

- In special provision 363, at the end of (g), add a subparagraph (vii) as follows:

“(vii) the conditions of carriage specified in packing instruction P005 are met.”

### **Proposal 3 (b)**

- In packing instruction P005, draft the first paragraph as follows:

“This instruction applies to UN Nos. 3528, 3529 and 3530, and is applicable only in relation to the conditions of carriage laid out in special provision 363 in Chapter 3.3.”