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**Economic Commission for Europe**

Inland Transport Committee

**Working Party on the Transport of Perishable Foodstuffs**

**Eightieth session**

Geneva, 24-27 October 2023

Item 5 (b) of the provisional agenda

**Proposals of amendments to ATP:**

**new proposals**

 Proposed list of major components and key characteristics

 Transmitted by Transfrigoroute International

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| *Summary* |
| **Executive summary**: Following a proposal from Germany (ECE/TRANS/WP.11/2019/4), it was agreed that drafting a list of components and key characteristics that might affect the cooling capacity of the unit was necessary to clarify the meaning of the expression “no modification to major components” and the representatives of Transfrigoroute International offer to submit a proposal for consideration**Action to be taken:** Annex 1, Appendix 2, Model No. 12Annex 1, Appendix 2, Model No. 1 A**Related documents**: Report of the seventy-fifthsession (ECE/TRANS/WP.11/241) ECE/TRANS/WP.11/2021/17 (Germany) Informal document INF.6 of the seventy-seventh session (Transfrigoroute International) Report of the seventy-seventhsession (ECE/TRANS/WP.11/245) ECE/TRANS/WP.11/2022/7 (Transfrigoroute International) Report of the seventy-eighthsession (ECE/TRANS/WP.11/247) ECE/TRANS/WP.11/2022/18 (Transfrigoroute International) Report of the seventy-ninthsession (ECE/TRANS/WP.11/249) |
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 **Introduction**

1. In the report of the seventy-fifthsession, WP11 requested Transfrigoroute International (TI) to provide a list of major components (as detailed below):

 “3. Proposal to amend Annex 1, Appendix 1, Section 6 (a) and (b): Validity of test reports for mechanical refrigeration units

*Document*:ECE/TRANS/WP.11/2019/4 (Germany)

47. Several concerns were raised concerning the following:

* It was not specified to which competent authority the proposal was referring, the national competent authority or the competent authority of the country of manufacture;
* A clear definition of the expression “no modification to major components” was missing, making it difficult for competent authorities to decide on whether the extension of the validity of the type approval certificate was warranted;
* There was no reference to the version of the software used and in the opinion of some delegations, this information should be available.

48. It was agreed that drafting a list of components that might affect the cooling capacity of the unit was necessary to clarify the meaning of the expression “no modification to major components” **and the representatives of Transfrigoroute International will submit a proposal for consideration at the next session**.”

2. In fact, more important than the list major components, it is the detail of their key characteristics.

 Proposal

3. The proposal below is mainly based on existing Model 1 A and Model 12 of Annex 1, Appendix 2.

4. Today if we make a high-level functional analysis of a special equipment for the transport of perishable foodstuffs, we could list different functions as listed below:

* Power source
* Cold/heat production & distribution
* Insulation

5. Transfrigoroute International suggests to clearly separate components and their key characteristics related to each of above functions.

6. TI also suggests adding those lists at the end of Model 1A and Model 12 as a summary and referential of the key components and characteristics.

7. In regard to the multiple developments of alternative power sources for vehicles, including electrification, Transfrigoroute International suggests adjusting the list of major components and key characteristics related to power source as follows:

* List of major components related to Power source (to be added at the end of Model 12)

Compressor drive

Electrical Power source Type

 Current type (AC/DC)

 Nominal output power kW

 Nominal speed (if applicable) rpm

 Supply voltage V

 Supply frequency Hz

Internal Combustion Engine Type

 Number of cylinders

 Cubic capacity cc

 Nominal output power kW

 Nominal speed rpm

 Fuel

Hydraulic motor Type

 Method of drive

Other mechanical Nominal speed rpm

 Minimum speed rpm

***Note:*** *Each component or characteristic should be understood "if applicable".*

* List of major components related to cold/heat production & distribution (to be added at the end of Model 12)

Refrigerant Refrigerant fluid

 Refrigerant charge kg

Compressor Type

 Number of cylinders

 Cubic capacity cc

 Nominal speed of rotation rpm

Heat exchangers Type

*Condenser* Number of tubes

*Evaporator(s)* Fin pitch mm

 Nature of tube

 Diameter of tube mm

 Exchange surface area m2

 Frontal area m2

Heat exchangers Fans Number of fans

*Condenser* Fan type (axial/radial)

*Evaporator(s)* Number of blades per fan

 Diameter of fan mm

 Nominal power W

 Total nominal output at defined (m3/h)

 pressure

or

Nominal rotation speed rpm

 Method of drive

Expansion valve Type

***Note:*** *Each component or characteristic should be understood "if applicable".*

* List of major components related to Insulation (as per Annex 1, Appendix 2, Model No. 1 A)

Principal dimensions Total inside surface area Si of body m²

 Total outside surface area Se of body m²

Specifications of the body Top

walls a Bottom

 Sides

Structural peculiarities of Number of doors

body Number of vents

Number of ice-loading apertures

Accessories b Number and type

*a Nature and thickness of the main materials and thickness of panels constituting the body walls*

*b Accessories that can have an impact on K coefficient*

***Note:*** *Each component or characteristic should be understood "if applicable".*

 Justification

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| Cost: | No cost impact |
| Feasibility: | The proposal can easily be implemented in ATP. A transitional period is not needed. |
| Impact: | Thanks to this proposal, ATP could be easier to apply in case of multiple power source. This case will become more and more frequent, so it is important that ATP get adapted. |
| Enforceability: | Updated Model 1A and Model 12 could be monitored |