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Economic Commission for Europe**Inland Transport Committee****Working Party on the Transport of Perishable Foodstuffs****Seventy-seventh session**

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Item 5 (b) of the provisional agenda

Proposals of amendments to ATP:**New proposals****Proposal of amendment to annex 1, appendix 2, paragraph 6.2.3: replacement of the original refrigerant fluid by other refrigerant fluid****Transmitted by the Government of France***Summary*

Executive summary: The purpose of this proposal is to suggest a correction and an opening in the procedure that allows for the replacement of refrigerant fluids with others.

Action to be taken: Amend the relevant paragraph, annex 1, appendix 2, paragraph 6.2.3, of the ATP Agreement.

Related documents: None.

Introduction

1. Paragraph 6.2.3 of annex 1, appendix 2, of the ATP Agreement provides a methodology for the replacement of the original refrigerant fluid of mechanically refrigerated equipment in service with another refrigerant – called a drop-in refrigerant – listed in a table that includes all possible replacements. The ATP Agreement offers in its 6 July 2021 version a single replacement for the original refrigerant R404A: drop-in refrigerant R452A. In fact, the ATP Agreement limits the options for replacement to only the two presented.

2. The gradual limitation on placing HFCs on the market has already compelled WP.11 to adopt, after lengthy discussions and significant changes made in the meeting, the amendment proposal put forward by Germany (ECE/TRANS/WP.11/2018/10). To cope with the urgency of the situation, only the replacement of refrigerant R404A with R452A was listed; it was a matter of all requests for replacement.

3. In the event that new refrigerants emerge in the more or less distant future, it makes sense to have a procedure defined by ATP that manages replacements for refrigerant fluids not yet brought under control.



4. Taking into account feedback from official ATP test stations and numerous tests performed on refrigeration units modified by the replacement of the refrigerant R404A with R452A, it is proposed to amend paragraph 6.2.3 by increasing its scope while reducing some of the tests for R404A to R452A refrigerant replacement.

I. Proposal

5. The current version of annex 1, appendix 2, paragraph 6.2.3 reads as follows:

At the request of the manufacturer, replacement of the original refrigerant fluid of a mechanically refrigerated equipment in service is allowed for the refrigerants described in the table below on the following conditions:

Original refrigerant	Drop-in refrigerant
R404A	R452A

(a) a test report or addendum confirming equivalence to a similar mechanically refrigerated unit with the drop-in refrigerant fluid is available; and

(b) an efficiency test according to 6.2.1 has been successfully carried out.

The manufacturer plate shall be modified or replaced to indicate the replacement refrigerating fluid and the required charge.

The original test report number shall be retained on the ATP certificate of compliance supplemented by a reference to the test report or addendum on which the replacement is based.

6. It is proposed to replace paragraph 6.2.3 with the following:

“At the request of the manufacturer, replacement of the original refrigerant fluid of mechanically refrigerated equipment in service is allowed under the following conditions:

(a) a test report or addendum confirming equivalence to a similar mechanically refrigerated unit with the drop-in refrigerant fluid is available in accordance with annex 1, appendix 2, section 4.5 of the ATP Agreement; and

(b) an efficiency test according to 6.2.1 or 6.2.2 has been successfully carried out.

In the event that the request is accepted, the manufacturer’s plate must be corrected accordingly.

In the particular case of replacement of the refrigerant fluid such as those mentioned in the table below, subparagraph (a) only requires the manufacturer to request from the official test station the issue of an addendum without any additional testing.

Original refrigerant	Drop-in refrigerant
R404A	R452A

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II. Justification

7. It is useful to propose a testing methodology that ensures the easy adoption of replacement refrigerating fluids while facilitating the replacements whose effect is now known.

III. Costs

8. There are no additional costs for the official ATP test stations or even for manufacturers.

IV. Feasibility

9. There are no additional requirements for official ATP test stations.

V. Enforceability

10. No problems are foreseen in implementing the proposals.
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