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## Economic Commission for Europe

### Inland Transport Committee

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

##### Seventy-first session

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Item 5 (a) of the provisional agenda

##### Proposals of amendments to ATP:

Pending proposals

### **ATP renewal tests at six and nine years for dependent equipment the refrigeration unit of which is powered by the engine of the vehicle**

**Transmitted by the Government of France**

#### *Note by the secretariat*

France has transmitted a revised version of ECE/TRANS/WP.11/2011/16/Rev.3, considered at the seventieth session. Changes are underlined or struck out.

## Context

1. The Agreement on the International Carriage of Perishable Foodstuffs and on the Special Equipment to be Used for such Carriage (ATP), signed in 1970, originally included a test for the renewal of certificates at six years.
2. The tests were clearly set out for refrigerator equipment from the beginning. The tests for mechanically refrigerated equipment were based on limited requirements.
3. In 1995, ATP was amended to clarify these tests. An upper limit of six hours for cool-down to the class temperature was added. In 2008, the Working Party on the Transport of Perishable Foodstuffs (WP.11) voted in favour of a new agreement for cool-down tests with a view to the renewal of ATP certificates of independent mechanically refrigerated equipment. The shortcoming was thus partially rectified for independent mono-temperature equipment.
4. However, the method is inadequate for dependent and multi-temperature equipment. ATP remains very vague about the test for the renewal of dependent equipment.



5. France submitted an informal proposal on this matter in 2007, followed by a first formal proposal in 2008.

6. Taking account of the suggestions made by, successively, Spain in respect of the time periods, the Netherlands on external temperatures and transitional provisions, and Germany on units driven by the vehicle engine, the proposal was amended in 2009, 2010, 2011, 2012, 2013 and 2014. In the last two votes, only one objection to the proposal was received. In 2015, taking into account comments made by the Netherlands in 2014, the proposal was resubmitted to CERTE, which reiterated its recommendation to vote in favour of such an amendment. The arguments for the objection by the Netherlands were incorporated. Germany did not communicate the reasons for its objection in 2012, while it had voted in favour in 2011. Following the proposal of WP.11, France consulted Germany about amending the proposal and placed the item on the agenda of the meeting of the testing stations.

7. France is thus submitting a proposal that takes these communications into account.

## **Proposal**

8. For many years, the renewal of ATP certificates in France was based on a theoretical calculation of the ageing of the unit. This method is no longer valid given the changes in the foam.

9. The competent authority in France, in cooperation with Transfrigoroute France and Cemafroid, the official ATP testing station, worked on new protocols for the more than 10,000 tests conducted each year, of which 5,000 concern dependent equipment. The objective was to develop a robust, simple and cost-effective test.

## **Constraints for dependent equipment the refrigeration unit of which is powered by the engine of the vehicle**

10. Most dependent equipment is used for distribution. A significant amount, often more than 70%, of the time that the equipment is running is while the vehicle engine is idling. It requires significant cool-down capacity, but also sufficient capacity to maintain the class temperature while the engine is idling.

## **Proposed test protocol**

11. With this in mind, the following checks are proposed:

- Cool-down capacity of the unit under electric power or powered by the vehicle engine;
- Capacity to maintain the temperature below the class temperature while the engine is idling over a period of time with a known outside temperature.

## **Technical impact of the test**

12. These tests have been used in France since 2002. About 5,000 tests of pulley motor dependent equipment at six and nine years are conducted per year.

13. Of equipment that has not been properly serviced before testing, between 20% and 30% does not pass. With proper servicing, less than 3% of equipment fails.

~~Equipment is now serviced before testing.~~ The results clearly show the relevance of these tests if one compares vehicle performance before and after servicing. Servicing makes it possible to reduce the environmental impact of the equipment, as well as its energy consumption and CO<sub>2</sub> emissions.

14. Overall, the test protocol put in place in France in 2002 has greatly enhanced levels of performance and maintenance of the equipment. Equipment that cannot cool down to and maintain the temperature in class C may, if it passes the test for class A, be downgraded to this class.

## Economic impact of the procedure

15. Furthermore, there is a drop in fuel consumption and operating costs. The tests conducted show that equipment takes much longer to cool down before it is serviced than after. Both cool-down time and fuel consumption may double for poorly maintained equipment.

16. Given that in France the cost of the test is around 400 euros for a three-year renewal, introducing this procedure brings benefits in terms of energy savings and improved performance.

## Conclusion

17. On the basis of these findings, the proposed protocol seeks to harmonize ATP and establish a more equitable procedure. It concerns only equipment of which the refrigeration unit is powered by the engine of the vehicle.

18. To allow users to adapt, these provisions will apply only to equipment manufactured after these provisions take effect. Vehicles in service on this date may be tested under the protocol currently in force for as long as they remain in service.

## Proposed amendment

19. It is proposed that the text marked in bold below should be added to the text of the ATP agreement:

“Annex 1, appendix 2

6. [...]

### 6.2 Mechanically refrigerated equipment

#### Independent equipment

It shall be verified that, when the outside temperature [...]

[...] for a further period of not more than three years.

#### Dependent equipment, the refrigeration unit of which is powered by the engine of the vehicle

**It shall be verified that, when the outside temperature is not lower than 15° C, the inside temperature of the empty equipment can be maintained at the class temperature, after cool-down and stabilization, when the engine is running at the idle speed set by the manufacturer (where applicable), for a minimum period of one hour and thirty minutes.**

- One hour if the outside temperature is higher than or equal to +30° C,

- ~~One hour and twenty minutes if the outside temperature is higher than or equal to +25° C,~~
- ~~One hour and forty minutes if the outside temperature is higher than or equal to +20° C,~~
- ~~Two hours if the outside temperature is higher than or equal to +15° C.~~

If the results are satisfactory, the equipment may be kept in service as mechanically refrigerated equipment in its initial class for a further period of not more than three years.

(ii) Transitional provisions applicable [...] this provision should apply to equipment constructed after the entry into force of this provision."

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