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Proposal to amend Annex 1, Appendix 2, paragraph 3.4: Measuring the effective heating capacity

Transmitted by the Government of Germany

Summary	
Executive summary:	A provision on how to measure the effective heating capacity of mechanically refrigerated and heated appliances for type approval is lacking in the ATP agreement and therefore should be added.
Action to be taken:	Amend Annex 1, Appendix 2, paragraph 3.4
Related documents:	None

Introduction

1. Annex 1, Appendix 2, paragraph 4 stipulates the procedure for measuring the effective refrigerating capacity of mechanically refrigerated appliances for type approval.

2. However, a provision on how to measure the effective heating capacity of mechanically refrigerated and heated appliances for type approval is lacking in the ATP agreement and therefore should be added.

Proposed amendment

3. Add a new clause (a) in Annex 1, Appendix 2, paragraph 3.4.3 to read as follows:

"(a) The general procedure for measuring the effective refrigerating capacity of mechanically refrigerated appliances stipulated in paragraph 4.1 and 4.2 shall be applied after adapting it such that it can be used to measure heating appliances using a calorimeter box.

The temperature at the air inlet of the thermal appliance or at the air inlet of the evaporator inside the calorimeter box shall be $+12^{\circ}$ C.

For the measurement of the effective heating capacities of classes A, E and I, one test at a mean outside temperature (T_e) of -10°C shall be carried out.

For the measurement of the effective heating capacities of classes B, F and J, tests at two mean outside temperatures (T_e) shall be carried out: one at -10°C and the other at -20°C.

For the measurement of the effective heating capacities of classes C, D, G, H, K, or L, three tests shall be carried out. One test at a mean outside temperature (T_e) of $-10^{\circ}C$, another test at the minimum outside temperature required by the class and one test at an intermediate outside temperature to allow an interpolation for the effective heating capacities for other inbetween class temperatures.

For purely electric heating systems a minimum of one test shall be carried out to measure the effective heating capacities of classes A, B, C, D, E, F, G, H, I, J, K or L. This test should be carried out at +12°C at the air inlet of the evaporator and the minimum outside temperature required by the class.

If the measurement of the effective heating capacity is carried out at the lowest outside temperature required by the class, no further test shall be required.

If the measurement of the effective heating capacity is not carried out at the lowest temperature required by the class, an additional functional test of the heating appliance shall be carried out. This functional test shall be done at the minimum temperature required by the class (e.g. -40° C for class L) to verify that the heating appliance and its drive system (e.g. diesel engine driven generator) starts and works properly at the lowest temperature.".

4. Adapt the existing paragraph 3.4.3 in Annex 1, Appendix 2 in a new clause (b) as follows:

(b) When the measurement is carried out on equipment, the basic requirements for the test procedure for the first stage are described in paragraphs 3.2.2 and 3.2.3 of this appendix; those for the second stage are described in paragraphs 3.3.3 and 3.3.4 of this appendix.

Impact

Cost: No impact.

Feasibility: The proposed amendment can easily be implemented in ATP. A transitional period is not needed.

Enforceability: No problems are expected.