



Brussels, XXX
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ANNEXES 1 to 2

ANNEXES

to the

Commission Implementing Regulation

establishing, pursuant to Regulation (EU) 2024/573 of the European Parliament and of the Council, minimum requirements for training attestations of natural persons and the conditions for the mutual recognition of such training attestations as regards certain mobile equipment containing fluorinated greenhouse gases and repealing Commission Regulation (EC) No 307/2008

ANNEX I

Minimum requirements as to the skills and knowledge to be covered by the training programmes

The training course referred to in Article 3(2) shall cover the following:

- (a) a theoretical module as indicated as (T) in the columns,
- (b) a practical module where the applicant shall perform the corresponding task with the relevant material, tools and equipment, indicated as (P) in the columns.

Minimum knowledge and skills		Attestation A	Attestation B	Attestation C
1.1	Basic understanding of the applicable EU and national legislation, in particular the F-gas Regulation. Basic knowledge of relevant environmental issues (climate change, EU climate objectives, the Paris Agreement, Kigali amendment of the Montreal Protocol, global warming potential of fluorinated greenhouse gases).	T	T	
1.2	Basic understanding of thermodynamics.	T	T	
1.3	Knowledge of the basic components and operation of air-conditioning and heat pump systems (including battery cooling) as well as refrigeration units in mobile equipment covered by this regulation, containing or relying on fluorinated greenhouse gases referred to in Art. 1 point (a) and, where relevant, on alternatives to these gases.	T	T	
1.4.	Basic knowledge of the use and properties of the fluorinated greenhouse gases referred to in Art. 1 point (a) and, where relevant, alternatives to these gases used as refrigerants in air-conditioning and heat pump systems as well as refrigeration units in mobile equipment covered by this Regulation, as well as the other important properties, as relevant, including flammability, toxicity or pressure requirements.	T	T	T
1.5	Basic understanding of the concept of Global Warming Potential (GWP), the use of fluorinated greenhouse gases and other substances as refrigerants, the impact of the emissions of fluorinated greenhouse gases on the climate (order of magnitude of their GWP) and relevant provisions of Regulation (EU) No 2024/573 and Directive 2006/40/EC.	T	T	T

	Basic understanding of the per- and polyfluoroalkyl substances (PFAS) problematic.			
2.	Leak checks			
2.1	Basic understanding of potential leakage points of air conditioning and heat pump equipment in vehicles.	T	T	
2.2	Methods and good practices to carry out leak checks of mobile air conditioning and heat pump systems as well as refrigeration units at various vehicle types to minimize refrigerant emissions.	T	T	
2.4	Check of equipment records prior to a check for leakage and identification of the relevant information on any repeating issues or problem areas to pay special attention to.	T	T	
2.5	Carrying out a visual and manual inspection of the whole system in accordance with Commission Regulation (EC) No 1516/2007 ¹ .	P	P	
2.6	Carrying out a check for leakage of the system using an indirect method in accordance with Regulation (EC) No 1516/2007 and the instruction manual of the system	P	P	
2.7	Use of portable measuring devices such as manometer sets, thermometers and multi-meters for measuring Volt/Amp/Ohm in the context of indirect methods for leakage checking, and interpret the measured parameters	P	P	
2.8	Carrying out a check for leakage of the system using one of the direct methods referred to in Regulation (EC) No 1516/2007	P		
2.9	Carrying out a check for leakage of the system using one of the direct methods which does not entail breaking into the refrigeration circuit, referred to in Regulation (EC) No 1516/2007	P	P	
2.10	Use of an appropriate electronic leak detection device.	P	P	
2.11	Filling in of the data in the equipment records.	T	T	
3	Maintenance, servicing and repair of mobile air-conditioning and heat pump systems in mobile equipment.			
3.1	Knowledge of good practices in servicing of air-conditioning and heat pump systems in mobile equipment.	T		
3.2	Conducting the standard operations of servicing	P		

¹ Commission Regulation (EC) No 1516/2007 of 19 December 2007 establishing, pursuant to Regulation (EC) No 842/2006 of the European Parliament and of the Council, standard leakage checking requirements for stationary refrigeration, air conditioning and heat pump equipment containing certain fluorinated greenhouse gases (OJ L 335, 20.12.2007, p. 10, ELI: <http://data.europa.eu/eli/reg/2007/1516/oj>).

	(refilling) and repair of: (a) mobile air-conditioning system in a selected vehicle covered by this regulation containing or relying on any fluorinated greenhouse gas referred to in Art. 1 point (a) and on any natural refrigerant, (b) mobile refrigeration unit in a selected vehicle covered by this regulation containing or relying on any fluorinated greenhouse gas referred to in Art. 1 point (a) and on any natural refrigerant.			
4. Environment-friendly recovery of fluorinated greenhouse gases				
4.1	Knowledge of common procedures for recovering fluorinated greenhouse gases taking into account the flammability aspect of some of these gases.	T		T
4.2	Knowledge of proper storage of recovered refrigerants and arrangements for reclamation and destruction as well as respective legal requirements including documentation and reporting, if applicable.	T	T	T
4.3	Handling a refrigerant cylinder.	P	P	P
4.4	Connecting and disconnecting a recovery set with minimal emissions to and from the service ports of an air-conditioning or heat pump system or refrigeration unit in at least two types of mobile equipment covered by this regulation containing fluorinated greenhouse gases referred to in Art. 1 point (a).	P		P
4.5	Operating a recovery set.	P		P

ANNEX II

Correlation table

Commission Regulation (EC) No 307/2008	This Regulation
Article 1	-
Article 2(1)	Article 2(1)
Article 2(2)	Article 2(2)
Article 2(3)	-
Article 3(1)	Article 3(1)
Article 3(2)	-
Article 3(3)	Article 3(2)
Article 3(4)	
Article 4(1)	-
Article 4(2)	-
Article 4(3)	-
Article 5(1)	Article 4(1)
Article 5(2)	Article 4(2)
Article 6	Article 6