



The Voice of European Air-Conditioning, Refrigeration and Heat Pumps Contractors

Revision of the Fgas Regulation

AREA proposals for modifications

March 2021

In the context of the ongoing review of and impact assessment on the F-Gas Regulation 517/2014, AREA would like to put forward concrete proposals for amendments that would improve the content, application and enforcement of the regulation thereby contributing to better achieving its objectives.

1- Extend the F-gas training and certification requirements scheme to alternatives

A specific AREA proposal is presented separately.

2- Extend leak checking requirements to alternatives

AREA considers necessary to extend periodical inspections and leak checks to prevent safety risks on technicians, personnel and end-users. Since they were introduced in the 2006 F-gas Regulation, leak check requirements have proven to be effective and efficient, bringing lower leakage rates with positive climate and energy consumption impacts. With the increased use of alternative refrigerants, all of which present safety issues and many of which are flammable, regular leak checks are necessary to ensure safe and energy-efficient system operation. The [Real Decreto of Spain 552/2019](#), has been taken as guide for the following proposal because it already implements this part, taking into consideration state-of-the-art standard EN378.

Proposal

On the basis of the definitions in EN378, it is proposed to amend Article 4 on leak checks as follows:

- Points 1 to 4 would apply to fluorinated greenhouse gases of class A1
- A new part would be introduced for alternative refrigerant greenhouse gases:
“Operators of equipment that contains alternative refrigerant greenhouse gas in the quantities expressed below shall ensure that the equipment is checked for leaks at least every 12 months by appropriately certified personnel:
 - (a) 3kg of refrigerant classified as A1
 - (b) 1kg of refrigerant classified as A2, A2L and A3”

3- Centralised European F-gas database

Existing examples of F-gas databases in Italy ([IT](#) – [DEU](#)) but also in Poland and Estonia F-gas database prove to be effective to link together all the following parameters to check for consistency and policing the correct application of the legislation:

- **Logbook:** compiled directly online in the DB, linked to the operator and the equipment, despite changes in maintenance company
- **Account of every intervention:** periodical, scheduled or extraordinary to an equipment (which will be automatically listed in the DB if it was not present)
- **Vendor:** refrigerant sales registered in the DB and sold only by certified technicians and undertakings, listed in the DB
- **Account of every sale** of not hermetically sealed equipment, it should be registered in the DB (i.e. splits systems)
- **Technicians and undertakings:** list of certified technicians and undertakings publicly visible (search by province, name, fiscal code) in the DB
- **Refrigerant** emissions, purchase, import can be easily cross checked

Proposal

It is proposed to set up a centralised database in line with the record keeping obligations set by article 6. This could be done by updating Implementing Regulation 1516/2007.

Together with the requirements under articles 19 and 20 this would make it possible to have comprehensive data.

4- Extend to alternatives equipment on sales of refrigerants to non-certified companies/operatives

Existing Text in EC517/2014 Art11, paragraphs 4 and 5	Proposed new text	Justification
<p>For the purposes of carrying out the installation, servicing, maintenance or repair of the equipment that contains fluorinated greenhouse gases or whose functioning relies upon those gases for which certification or attestation is required under Article 10, fluorinated greenhouse gases shall only be sold to and purchased by undertakings that hold the relevant certificates or attestations in accordance with Article 10 or</p>	<p>For the purposes of carrying out the installation, servicing, maintenance or repair of the equipment that contains fluorinated and alternative refrigerant greenhouse gases or whose functioning relies upon those gases for which certification or attestation is required under Article 10, refrigerant greenhouse gases shall only be sold to and purchased by undertakings that hold the relevant certificates or attestations in accordance with</p>	<p>To ensure a uniform approach regardless of which greenhouse gas is under scrutiny, I have removed the word “fluorinated”.</p> <p>I have also added the wording at the very end of the last sentence.</p> <p>There have been cases of people seeking to circumvent the rules by stating that they do not want to buy the refrigerant gas for the</p>

<p>undertakings that employ persons holding a certificate or a training attestation in accordance with Article 10(2) and (5). This paragraph shall not prevent non-certified undertakings, who do not carry out the activities referred to in the first sentence of this paragraph, from collecting, transporting or delivering fluorinated greenhouse gases.</p>	<p>Article 10 or undertakings that employ persons holding a certificate or a training attestation in accordance with Article 10(2) and (5). This paragraph shall not prevent non-certified undertakings, who do not carry out the activities referred to in the first sentence of this paragraph, from collecting, transporting or delivering fluorinated and alternative refrigerant greenhouse gases as a third party supplier.</p>	<p>purposes outlined in the first sentence. It is an unnecessary legal loophole, so by adding the words “as a third party supplier” it still allows the sale for distributors etc (as in the spirit of the regulations) but makes it clear that third party contractors cannot do so.</p>
<p>Non-hermetically sealed equipment charged with fluorinated greenhouse gases shall only be sold to the end user where evidence is provided that the installation is to be carried out by an undertaking certified in accordance with Article 10.</p>	<p>Non-hermetically sealed equipment pre-charged with fluorinated and alternative refrigerant greenhouse gases shall only be sold to the end user or other non-certified entity where written evidence is provided that the installation is to be carried out by an undertaking certified in accordance with Article 10. The seller shall ensure the natural person identified is properly registered and have evidence of the acknowledgement from that installer of their intention to install the equipment being sold. The seller shall maintain records of the transaction for 5 years for inspection on demand by the local authority.</p>	<p>Cases of enforcing bodies saying that there is no specific requirement to keep records of the evidence have enabled online traders and rogue sellers to sell pre-charged systems to anybody, claiming that they asked if they were an end user and who would be installing the equipment and therefore making it a legal transaction. Enforcing bodies have asked for evidence and been told the seller did not know he had to keep records!</p> <p>The words “or other non-certified entity” have been added to allow for non-sector certified entities such as contractors who do not do the work themselves to be able to buy pre-charged systems in the same way an end user can, so long as they have verified evidence of what properly certified and registered entity will be performing the actual</p>

		<p>installation. The registered RACHP contractor is often an SME without sufficient credit available to them to allow for them to purchase the bulk quantities of equipment for a project and so a larger, “main contractor” may need to purchase the equipment as they have the financial standing for the credit facility. These added words will allow for that issue to be rectified whilst maintaining the integrity of the scheme itself.</p>
--	--	---

5- Use of recycled refrigerant

Existing text	Proposed new text	Justification
<p>Article 13, 3 (b) recycled fluorinated greenhouse gases with a global warming potential of 2 500 or more used for the maintenance or servicing of existing refrigeration equipment provided they have been recovered from such equipment. (...)</p>	<p>(b) recycled fluorinated greenhouse gases with a global warming potential of 2 500 or more used for the maintenance or servicing of existing refrigeration equipment provided they have been recovered from such equipment and have been in use for more than 6 months. (...)</p>	<p>In the present version, virgin gases can be transferred into a system and immediately back whereby it is classified as ‘recycled’. This can be used to circumvent the ban on virgin gases with more than 2500 GWP.</p> <p>The 6 months is not fixed on anything particular except that it is the shortest possible cycle for a leak check. It might also be possible to refer to article 6, but OTOH using first leak check as a criterion might be too much as it may be 24 months.</p>

6- Market surveillance / illegal trade

Non-refillable containers:

The current ban on *use* of non-refillable containers should be complemented with a ban on *sales*.

Certification schemes and notified bodies

As a complement to article 10 (10), implement an EU list of notified bodies and their certification schemes.

On the certificate, add a reference to applicable Implementing Regulation at the time of issuing of the certificate.

7- Definitions requiring clarification

20 (installation)

Current text	Proposed text	Justification
(Def. 20) 'installation' means joining two or more pieces of equipment or circuits containing or designed to contain fluorinated greenhouse gases, with a view to assembling a system in the location where it will be operated, that entails joining together gas carrying conductors of a system to complete a circuit irrespective of the need to charge the system after assembly;	'installation' means making available for the end user equipment that holds one or more circuits containing or designed to contain fluorinated or alternative refrigerant greenhouse gases, and making it operational at the location where it will be operated, that entails joining together gas carrying conductors of a system to complete a circuit irrespective of the need to charge the system after assembly;	This ensures consistency with the proposed extension of training and certification requirements to alternative refrigerant greenhouse gases

8- Extend to reefers, refrigerating systems placed on vessels, trains and any other type of transportation

Regulation 517/2014 includes stationary RACHP equipment and refrigeration units of refrigerated trucks and trailers and the MAC regulation covers air condition equipment of personal cars.

So far, there has been no regulation on RACHP equipment placed on other means of transportation vehicles like trains, buses, ships, etc.

AREA recommends widening the scope of articles 4, 5, 6, 8, 10, 11, 12, 14 and 15 of the F-Gas Regulation to:

- Refrigeration units of refrigerated containers
- Refrigeration systems (reefers) and air-conditioning units on ships or other types of vessels
- Air-conditioning equipment in buses and trains

Justification:

RACHP equipment used on means of transport stated above often contain quantities of fluorinated greenhouse gases exceeding 5 tonnes of CO₂ equivalent. Furthermore, they are subject of higher risk of leak, because of vibration caused by the movement of a vehicle they are placed on.

Usually personnel dealing with above mentioned equipment are people skilled in maintenance and repair of the whole vehicle, but they have no special qualification to work with refrigerants and RAC systems. Including them in the scope of f-gas regulation would increase the qualification level of technicians and reduce the risk of leaks.

9- COMMISSION IMPLEMENTING REGULATION (EU) 2015/2067 – article 5

Existing text	Proposed new text	Justification
1. Operators of the equipment listed in points (a) to (d) of Article 4(2) and containing fluorinated greenhouse gases in quantities of 500 tonnes of CO ₂ equivalent or more, shall ensure that the equipment is provided with a leakage detection system which alerts the operator or a service company of any leakage.	1. Operators of the equipment listed in points (a) to (d) of Article 4(2) and containing fluorinated greenhouse gases in quantities of 500 tonnes of CO ₂ equivalent or more, shall ensure that the equipment is provided with a leakage detection system which alerts the operator or a service company of any leakage. The detector must be suitable for detecting the refrigerant in use and it shall be placed as close as reasonably practical to most likely leakage point on the system – normally near to the discharge of the compressor where pressure is highest – or in the zone where leaked refrigerant is most likely to be concentrated.	<p>The current wording is too vague and allows for detectors to be used that would not be picking up leaks of some refrigerants, so it needs to be clarified that the detector chosen is actually suitable for the refrigerant in use.</p> <p>The current wording also leaves it open for the installer to place them in locations where a leak would not be detected. For example, there is little point in installing a leak detector on the ceiling if the refrigerant is heavier than air, nor would it be sensible to install a leak detector next to the low pressure side of the systems when leakage is most likely to occur on the high side.</p>
2. Operators of the equipment listed in points (f) and (g) of Article 4(2) and containing fluorinated greenhouse gases	2. Operators of the equipment listed in points (f) and (g) of Article 4(2) and containing fluorinated greenhouse gases	

in quantities of 500 tonnes of CO₂ equivalent or more and installed from 1 January 2017, shall ensure that this equipment is provided with a leakage detection system which alerts the operator or a service company of any leakage.

in quantities of 500 tonnes of CO₂ equivalent or more and installed from 1 January 2017, shall ensure that this equipment is provided with a leakage detection system which alerts the operator or a service company of any leakage. The detector must be suitable for detecting the refrigerant in use and it shall be placed as close as reasonably practical to most likely leakage point on the system – normally near to the discharge of the compressor where pressure is highest – or in the zone where leaked refrigerant is most likely to be concentrated.