

TECHNICAL BULLETIN

EC517/2014 FLUORINATED GREENHOUSE GASES REGULATION: OBLIGATIONS ON CONTRACTORS

1 OBJECTIVE

The objective of this technical bulletin is to inform members of their legal obligations arising from the fluorinated greenhouse gases regulation EC517/2014, commonly referred to as the F Gas Regulation. This new regulation came into effect on 1st January 2015 repealing the previous version EC842/2006. This technical bulletin concentrates on what has changed for contractors in the new version.

The legal responsibility for compliance is on the end user or operator of the equipment using the gases covered in scope but the second version of the legislation (EC517/2014) also crucially has legal responsibility for some aspects placed upon contractors and this technical bulletin is aimed at advising members of what they need to do to comply.

Failure to comply with this legislation could result in a fine up to £5,000 if the case is tried in a Magistrates' Court, and an unlimited fine if tried in a Crown Court.

2 TECHNICAL INFORMATION

2.1 ARTICLE 3 PREVENTION OF EMISSIONS

The contractor – both the individual engineer/technician attending site and the company employing that engineer/technician – must be certified to carry out certain tasks such as installation, maintenance, service, repair, decommissioning, leakage checking and recovery of gases on stationary refrigeration, air conditioning and heat pump equipment and moveable room air conditioning appliances. Any work on refrigeration units of refrigerated trucks or trailers is also in scope for this regulation.

Company certification can be obtained via www.refcom.org.uk

2.2 ARTICLE 4 EQUIPMENT IN SCOPE AND LEAKAGE CHECKING REQUIREMENTS

The requirement for, and frequency of, leak checks is determined by the CO₂-eq of the total charge of the system as determined by the GWP (global warming potential) of the gas in the system. The intervals between leak checks can be doubled by fitting appropriate automatic leak detection systems.

Fluorinated greenhouse gases	Frequency of leak checks	
	No Leakage detection system	Leakage detection systems
5 tonnes CO ₂ -eq	12 months	24 months
50 tonnes CO ₂ -eq	6 months	12 months
500 tonnes CO ₂ -eq	3 months	6 months

A leakage detection system is defined as “a calibrated mechanical, electrical or electronic device for detecting leakage of fluorinated greenhouse gases which, on detection, alerts the operator”.

Leak checks in accordance with this regulation can be carried out as “indirect” leak checks by checking actual performance against design criteria and by use of proprietary hand held electronic leak detectors without the need for breaking into the refrigeration circuit itself.

Breaking into a circuit to connect manifold gauges should only be carried out when absolutely necessary as there is always the danger of unintentional release of a small amount of gas each time the hose is connected to the service port.

The CO₂-eq level thresholds for the most common refrigerants in use currently is shown in the table below:

Refrigerant	GWP	5 tonnes CO ₂ -eq (kg)	50 tonnes CO ₂ -eq (kg)	500 tonnes CO ₂ -eq (kg)
R32	675	7.407	74.074	740.741
R134a	1430	3.497	34.965	349.650
R245fa	1030	4.854	48.544	485.437
R404a	3922	1.275*	12.749	127.486
R407A	2107	2.373*	23.73	237.304
R407C	1774	2.818*	28.185	281.849
R407F	1850	2.703*	27.027	270.27
R410A	2088	2.395*	23.946	239.464
R422D	2729	1.832*	18.322	183.217
R437A	2550	1.961*	19.608	196.078
R507A	3985	1.255*	12.547	125.471
R1234yf	4	1.250	12.500	125.000
R1234ze	7	714.286	7,142.857	71,428.571

* Regular leak checks applicable only from 1 January 2017 onwards (see explanation below)

The new thresholds will have very important effects on equipment that works with high GWP refrigerants. Indeed, it will make the equipment liable to regular leak check although it contains less than 3kg of refrigerant (minimum threshold in Regulation 842/2006/EC). This is the case for refrigerants indicated in red in the table above.

2.3 ARTICLE 6 RECORD KEEPING

Although since the adoption of the original regulation EC842/2006 there has always been an obligation on owner/operators to maintain records of fluorinated greenhouse gases being used, there is now also an obligation for contractors themselves to keep a copy of the records for 5 years.

The information kept should record: quantity and type of gas installed in a system; quantity added due to installation trim charge; maintenance or servicing and leakage; whether this gas has been recycled or reclaimed; quantity of gas recovered; identity of the technician and company who carry out the work – certification number to be noted; dates and results of checks; and, where equipment is decommissioned, the details of recovery and disposal of gas are to be recorded.

Further information can be obtained from:
Certification requirements at <http://refcom.org.uk>

Guidance on the F Gas Regulation for contractors, Guidance on the use of low GWP refrigerants, Guide to flammable refrigerants use, and a template for F Gas log book record keeping are all available from AREA (the Air Conditioning & Refrigeration European Contractors Association) at <http://area-eur.be>

EC517/2014 full transcript is available from the European Union Council at <http://eur-lex.europa.eu/homepage.html>

Note: this document is based on knowledge available at the time of publication and is meant for general purposes. not for reliance on in relation to specific technical or legal issues, in which case you should always seek independent advice. No responsibility of any kind for any injury, death, loss, damage or delay however caused, resulting from the use of the advice and recommendations contained herein, is accepted by the authors or others involved in its publication (including the Building Engineering Services Association). 17/06/2016