

TRENT VALLEY REFRIGERATION LTD

EC REGULATIONS FOR THE USE OF REFRIGERANTS.

There are currently two EC Regulations that could have a significant impact on the use of Refrigeration gases for companies in the UK.

These are:

1. **EC Regulation 2037/2000 on ozone depleting substances (ODS).**
2. **EC Regulation 842/2006 on certain fluorinated greenhouse gases (F-Gases).**

EC Regulation 2037/2000 on Ozone Depleting Substances.

The EC Regulation 2037/2000 came into force in 2000 and it has already banned the use of ozone depleting HCFC refrigerants such as **R22 in new systems.**

R22 remains a very common refrigerant in existing systems.

The Regulation will ban the use of R22 as a “top-up” fluid for maintenance between 2010 (for virgin fluid) and 2015 (for recycled fluid).

What this means is that R22 refrigerant that is currently used in refrigeration systems and equipment will not be allowed to have any gas replacement of R22 after 2010.

This is of crucial importance for these companies and means that all users of R22 systems need to consider alternative refrigerants or the purchase of new equipment.

There are, on the market replacements for refrigerant R22 that can be used in some R22 applications but unfortunately companies are slowing the manufacture of all compatible parts due to their high inefficiency compared to the new gasses. Also this creates a carbon footprint problem.

So if after 2010 for example, one of your company's refrigeration or air conditioning systems loses its R22 gas due to a leak then a replacement gas may be used, but if a compressor was to fail then a replacement may be difficult to obtain and is likely to be expensive.

Unfortunately a replacement gas for the certain systems may not be available due to the evaporator design being of the flooded type. So after 2010 if there is a leak on the system then it will become redundant.

Our professional opinion would be to budget over the coming years to replace the equipment.

New equipment installed can have substantial benefits for your company including:

- Saving money on costly replacement parts.
- Cutting your environmental emissions reducing your carbon footprint.

- Saving money on running cost with more efficient equipment.
- Taking advantage of tax benefits on ECA approved equipment.

EC Regulation 842/2006 on certain fluorinated greenhouse gases (F-Gases).

The F-Gas Regulation (842/2006) came into force in July 2006. It relates to the use of HFC refrigerants such as R134a, R404a, R407c and R410A. It imposes various obligations on the operators of refrigeration plant using HFC refrigerants that apply from July 2007.

After a long process through the European Parliament the F-Gas regulations became law when they were published in the EU Official Journal in June 2006.

The objective of this regulation is to contain, prevent and reduce emissions of the fluorinated greenhouse gases covered by the Kyoto Protocol. The regulation addresses containment, use, recovery, destruction, reporting, labelling, training, certification and some placing on the market prohibitions for the fluorinated gases.

HFCs are one group of fluorinated greenhouse gases covered by this legislation. HFCs are classified as one of the following gases

- **R134a**
- **R407c**
- **R410a**

The regulation does **not** ban the use of HFCs in any static refrigeration or air conditioning application. There is, however, a huge onus upon those working in the industry to apply these measures so that emissions are significantly reduced.

The relevant parts affecting the Refrigeration and Air Conditioning industry are detailed below.

CONTAINMENT

Operators of stationary refrigeration, air conditioning and heat pump equipment shall use all measures which are technically feasible and do not entail disproportionate cost to prevent leakage of HFCs and as soon as possible repair any detected leakage.

An operator is defined as; *the natural or legal person exercising actual power over the technical functioning of the systems covered by this regulation. A member state may in specific situations designate the owner as being responsible for the operator's obligations.*

These operators shall ensure systems are checked for leakage by certified personnel, as defined by the training and certification requirement and to the following schedule;

LEAKAGE INSPECTION

Systems shall be checked for leakage dependent on refrigerant charge:

- **3kg charge and above - check at least once every 12 months.**

- **30kg charge and above - check at least once every 6 months.**
- **300kg charge and above - check at least once every 3 months.**

The application shall be checked for leakage within 1 month after a leak has been repaired to ensure the repair was effective.

If a properly functioning appropriate leak detection system is in place, the frequency of the checks required for systems with 30kg or more are halved.

These must be checked at least once every twelve months to ensure they are functioning properly.

Checked for leakage' means that the system is examined for leakage using direct or indirect methods, focusing on those parts of the system most likely to leak.

By 4th July 2007 the commission shall establish the standard leak checking requirements.

RECORD KEEPING

Operators of equipment containing 3kg or more will need to maintain records on the quantity and type of HFC's installed. Any quantities added or recovered during maintenance, servicing and final disposal will need to be recorded along with leak checks, actions taken, the name of the service Company, the engineer or technician who performed the servicing and maintenance, dates and results of inspections. These records have to be made available to the competent authority upon request.

RECOVERY

Operators of refrigeration, air conditioning and heat pump equipment are responsible for putting in place arrangements for the proper recovery by certified personnel, who comply with the training and certification requirements, of fluorinated greenhouse gases to ensure their recycling, reclamation or destruction.

Recovery, for the purpose of recycling, reclamation or destruction must take place before the final disposal of that equipment and where appropriate, during its servicing and maintenance.

When a refillable or non-refillable container reaches the end of its life, the person utilising it for transport or storage purposes is responsible for putting in place arrangements for the proper recovery of any residual gases it contains to ensure their recycling, reclamation or destruction.

TRAINING AND CERTIFICATION

By 4th July 2007 The European Commission must define minimum qualifications for both companies and personnel using fluorinated greenhouse gases.

By 4th July 2008 Member States shall establish or adapt their own training and certification requirements for companies and all relevant personnel involved in installation, maintenance and servicing based on the minimum qualifications.

The UK has introduced the City & Guilds 2079 / CITB refrigerant handling qualification for personnel involved in installing, servicing and maintaining refrigeration and air conditioning systems which contain HFC's. (This replaces the outdated C&G 2078/CITB refrigerant handling qualification).

If you require any assistance on the F-GAS Regulations please do not hesitate to contact us.

