



Refrigerant Handling Qualification

AC1

Information & Law

Climate change and global warming have increased worldwide awareness concerning the increasing concentrations of greenhouse gases in the atmosphere.

Previous voluntary attempts to establish a framework for countries to act upon reducing emissions failed. In 1997 developed nations decided to establish a binding formal agreement known as the Kyoto Protocol.

In 2002 the European council approved the Kyoto protocol and established the EU as a committed group of member states to reduce man made emissions of greenhouse gases which includes R134a.

Vehicles which have air conditioning systems have the potential to produce emissions of R134a to the atmosphere which is a gas listed in the Kyoto protocol.

R134a hydrofluorocarbon (chemical name: tetrafluoroethane)

European Parliament Regulation (EC) 842-2006 on certain fluorinated greenhouse gases affect the motor industry for MAC systems in the following ways:

- Training and certification of motor vehicle technicians
- Recovery of system refrigerant during the service and repair of a vehicle
- Taking delivery of R134a gas
- The handling of refrigerant cylinders and their complete recovery prior to disposal

A European Directive 2006/40/EC from the European parliament has also been released relating to emissions from vehicle air conditioning systems in order to achieve the EU's targets from the Kyoto protocol agreement.

This directive known as the MAC directive aims to control the rate of leakage of R134a and to phase out its use and any other fluorinated greenhouse gas that has a Global Warming Potential (GWP) of more than 150. R134a has a GWP of 1300 over 100 years.

The MAC directive has progressed with the Commission defining a leakage rate test of air conditioning systems that vehicle manufacturers have to conform to on new vehicle types. In an aftermarket scenario R134a should not be refilled with abnormal amounts until the system has been repaired.

Commission Regulation EC 307/2008 was published to give minimum requirements for refrigerant handling qualifications. These requirements have been taken by City & Guilds and IMIAL. These specific qualifications meet the requirements.

After July 4th 2010 all individuals working on Mobile Air Conditioning (MAC) systems (for cars and car derived vans) must have achieved, as a minimum requirement, a refrigerant handling qualification which meets Mobile Air Conditioning (MAC) Commission Regulation EC 842/2006 and the later Annex to Commission Regulation EC 307/2008.

Continuing to recover, transfer and handle refrigerant without these qualifications is punishable by law. This is applicable to the Employer and Employee.

Training & Qualifications

Reader Air Conditioning offers a stand alone qualification that meets the minimum requirements of regulation EC 307/2008

Qualification through IMI AC1 course where the candidate must be able to:

1	Demonstrate knowledge of the operation of A/C systems in motor vehicles
2	Demonstrate knowledge of the use and properties of the fluorinated greenhouse gases used as refrigerants in A/C systems in motor vehicles, the impact of the emissions of these gases on the environment (order of magnitude of their global warming potential in relation to climate change)
3	Summarise the relevant provisions of regulation (EC) No 842/2006 and Directive 2006/40/EC
4	Demonstrate knowledge of common procedures for recovering fluorinated greenhouse gases
5	Handle a refrigerant cylinder
6	Connect and disconnect a recovery set to and from the service ports of a motor vehicle A/C system containing fluorinated greenhouse gases
7	Operate a recovery set

Your Training Partner

Reader Air Conditioning are able to offer you in association with IMI a cost effective and convenient solution to meet the legal, mandatory requirement.

The refrigerant handling assessment can be carried out at our site or your premises using either equipment supplied by Reader Air Conditioning or your own familiar A/C service station and equipment.

- Minimal staff down time
- No travel or accommodation costs for your candidates
- Minimum work disruption

The practical assessment followed by a phase test and online test lasts approximately 3-5 hours per candidate depending upon their existing knowledge but they will need to show:

- Knowledge & Practical issues of Environment friendly recovery of R134a
- Handling refrigerant cylinder
- Operating Recovery Set

Prior to assessment the candidate will receive a course book from which to study or refresh knowledge on course requirements.

The cost includes:

- Assessor visit to site and use of equipment (if required)
- Course book
- Phase test & Online test
- IMI registration
- IMI certification
- Dedicated Automotive air conditioning training from a reputable training provider

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