



## Guidance for Mobile Air Conditioning (MAC) Sectors

This Information Sheet provides guidance on the current and future minimum requirements for training and certification of personnel working on mobile air-conditioning (MAC) systems.

Please note that the requirements for MAC systems are not the same as those that apply to stationary refrigeration and air-conditioning systems. See Information Sheet RAC 5 that described the training requirements for stationary systems.

It is important to be aware that the training requirements described below cover:

- ◆ Current minimum requirements, which apply until 4<sup>th</sup> July 2010.
- ◆ Future requirements that apply after that date.

### 1. Summary of F Gas Regulations

For MAC systems containing HFCs the basis for all personnel certification is set out in the EC Regulation 842/2006 on certain fluorinated greenhouse gases (the F gas Regulation).

A further Commission Regulation, EC/307/2008 provides extra details and defines the minimum training and certification requirements for MAC systems.

The relevant EU Regulations as listed above provide the basis for both interim and future requirements.

The GB Fluorinated Greenhouse Gases Regulations 2008 (Statutory Instrument 2008 No. 41) lists the current required qualifications for MAC.

The above Regulations are collectively referred to as “the F gas Regulations”.

The Government is in the process of consulting on proposed new GB Regulations that would establish interim and final certification arrangements for personnel.

### 2. Which personnel must be qualified?

Personnel carrying out certain operations on MAC systems containing F gas refrigerants must have appropriate qualifications. These operations include the removal of F gas refrigerants from all mobile equipment (excluding those in military use) when the air conditioning systems are under maintenance or prior to disposal of the equipment.

Trainee personnel are exempt for up to 1 year, but they must work under the supervision of certificated personnel and must be enrolled on a relevant training course.

### 3. What are the topics to be covered in training?

The qualifications will cover the following areas:

- ◆ Operation of MAC systems containing F gas refrigerants,
- ◆ Environmental Impact of F gas refrigerants ,
- ◆ Environmental Regulations,
- ◆ Refrigerant recovery.

## 4. Personnel Requirements

System type	<b>MAC</b>
Refrigerant type	<b>HFC</b>
Refrigerant quantity	<b>Any quantity</b>

### Current Interim Requirements, MAC, HFC Refrigerants

The current minimum qualifications that apply in Great Britain are specified in GB Fluorinated Greenhouse Gases Regulations 2008 (Statutory Instrument No 41) which has applied from 15<sup>th</sup> February 2008. This Regulation specifies a number of alternative qualifications that apply to refrigerant recovery from MACs. These include:

- ◆ An in-house qualification (see Section 6 for more details).
- ◆ 22 alternative qualifications that only apply to MACs. See Section 7 of this Information Sheet for a full list of these qualifications.

The following more detailed refrigerant handling qualifications are also acceptable:

- ◆ City & Guilds Certificate in Handling Refrigerants Scheme 2078
- ◆ Construction Industry Training Board (CITB) Safe Handling of Refrigerants Reference 206710.

The Government is in the process of consulting on proposed interim arrangements for F gas qualifications that would include allowing holders of one of the above qualifications to have until July 2010 at the latest to obtain a new qualification meeting the EC minimum requirements.

This proposed interim period for those working on MAC systems is one year shorter than the interim period for stationary refrigeration and air-conditioning systems.

### Future Requirements from July 2010, MAC, HFC Refrigerants

The current qualifications will not meet the minimum requirements defined by the EC Regulation. It is expected that new qualifications that meet the EC minimum requirements will be introduced during 2008.

The future requirement for personnel carrying out refrigerant recovery activities on MAC equipment containing HFC refrigerant will be to hold a certificate of training (“attestation”). New qualifications will meet the training requirements defined in the Annex to Commission Regulation 307/2008. All personnel must obtain a new qualification before July 2010 or be enrolled in a course to obtain a new qualification.

The Government is in the process of consulting on proposals to introduce a requirement for personnel carrying out refrigerant handling activities on MAC equipment to hold one of these new qualifications that will meet the requirements of Commission Regulation 307/2008. Under these proposals, personnel would need to obtain the new qualification by 4<sup>th</sup> July 2010.

## 5. What is the status of a non-UK personnel qualification?

The EC F gas Regulation requires that Member States give mutual recognition to certification of suitable qualifications from other EU countries. This will only apply to a “full qualification” that meets the minimum requirements specified in Commission Regulation 307/2008. In some EU countries the existing qualifications already meet or go beyond these minimum requirements. The European Commission will be compiling a list of qualifications that meet the new minimum requirements (not available at the time of writing this document).

Interim personnel certificates issued by other EU Member States will not be valid in the UK and vice versa.

## 6. What is an in-house qualification?

**In-house qualification** means a qualification verified by a certificate of competence or other written confirmation issued by an employer to such of its employees who have successfully completed a course of training provided by that employer relating to the work in question, but for which no external certificate is available.

A **course of training** provided by an employer must enable an employee who has been trained to carry out relevant work satisfactorily. An employer must keep a record of training must provide a copy to an employee which shows the name of employee trained, course provided, dates provided and date of completion or other confirmation that course was completed.

## 7. Full list of current qualifications

During the interim period, until 4<sup>th</sup> July 2010, one of the qualifications listed in Schedule 1 (Parts 1 & 2) of the GB Fluorinated Greenhouse Gases Regulations 2008 (Statutory Instrument 2008 No. 41) must be held by all MAC personnel involved in refrigerant recovery and refrigerant handling. These are:

### PART 1

1. City & Guilds Certificate in Handling Refrigerants Scheme 2078.
2. Construction Industry Training Board Safe Handling of Refrigerants Reference 206710.

### PART 2

1. An in-house qualification.
2. Automotive Technician Accreditation – Air Conditioning Refrigerant Handler.
3. Automotive Technician Accreditation – Air Conditioning Service Technician.
4. Automotive Technician Accreditation – Air Conditioning Diagnostic Technician.
5. Automotive Technician Accreditation – Senior Mechanical Electrical Trim Technician.
6. City & Guilds 5101–01 Certificate in Refrigerant Handling for Mobile Air Conditioning systems.
7. City & Guilds 5101–02 Certificate in Servicing Mobile Air Conditioning Systems.
8. City & Guilds 5101–03 Certificate in Advanced Diagnostics for Mobile Air Conditioning Systems.
9. City & Guilds 5101–04 level 3 Certificate in Mobile Air Conditioning Systems.
10. City & Guilds 5101 unit 301 Refrigerant Handling for Mobile Air Conditioning Systems.
11. City & Guilds 4101–55 Certificate in Vehicle Maintenance and Repair (Air Conditioning and Climate Control).
12. City & Guilds 4101 unit V87 Air conditioning and climate control systems.
13. City & Guilds 4100–03 Level 3 Progression Award in Automotive Vehicle Servicing and Repair (Air Conditioning and Climate Control).
14. City & Guilds 4100 Unit 7.
15. Institute of the Motor Industry (IMI) level 3 unit–Refrigerant handling AC1.
16. City & Guilds 3791–10 Automotive Air Conditioning –Part One.
17. City & Guilds 3791–10 Automotive Air Conditioning –Part Two.

18. City & Guilds 3791–10 Automotive Air Conditioning –Part Three.
19. City & Guilds 6048–01 Motor Vehicle Air Conditioning (Service and Repair).
20. City & Guilds 7543-01 Level 3 Award in Basic Mobile Air Conditioning Systems (QCA trial only).
21. City & Guilds 7543-02 Level 3 Award in Diagnosis and Repair of Mobile Air Conditioning/Climate Control Systems (QCA trial only).
22. Institute of the Motor Industry (IMI) level 3 Diploma in Automotive Air Conditioning and Climate Control.
23. Institute of the Motor Industry (IMI) level 2 Vehicle Air Conditioning Technician.



### How to Contact F-Gas Support:

**Telephone Help Line:** 0161 874 3663 **Website:** [www.defra.gov.uk/fgas](http://www.defra.gov.uk/fgas)

**Email:** [fgas-support@enviros.com](mailto:fgas-support@enviros.com) **Post:** F-Gas Support, P O Box 481, Salford, M50 3UD

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F-Gas Support is a Government funded team set up to help organisations understand their obligations under the EU Fluorinated Greenhouse Gases and Ozone Regulations. F-Gas Support is also working with Regulators to promote compliance. It is being run on behalf of Defra and the devolved administrations by the Local Authorities Coordinators of Regulatory Services (LACORS) and Enviros.