



## Guidance for Mobile Air Conditioning (MAC) Sectors

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

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 the full requirements that have applied since 4<sup>th</sup> July 2010.

### 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 the full requirements.

The GB Fluorinated Greenhouse Gases Regulations 2009 (Statutory Instrument 2009 No. 261) lists the current required qualifications for MAC.

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

### 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 undertaking military operations) 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

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

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

The full requirement for personnel carrying out refrigerant recovery activities on MAC equipment containing HFC refrigerant will be to hold a valid certificate (“attestation”). Qualifications that meet the minimum requirements defined by the EC F gas Regulation have been developed and are available from the following four awarding bodies:

- ◆ City and Guilds of London Institute,
- ◆ The Institute of the Motor Industry (IMI),
- ◆ IMI Awards,
- ◆ The Institute of Road Transport Engineers (Irtec) – no qualifications available

At the time of writing the MAC qualifications available in GB that meet the minimum requirements of EC/307/2008 are shown in Table 1. Holders of any of the air conditioning qualifications detailed in Table 1 are deemed holders of a valid certificate for the purposes of the EC F gas Regulation and Commission Regulation 307/2008.

Personnel can also have a European qualification recognised under the mutual recognition provisions, see Section 6.

### 5. Taking Delivery

This obligation applies to an organisation taking delivery of F gases to undertake the activities described in Articles 3 and 4 of the EC F gas Regulation. In relation to working on air-conditioning in cars and light vans this is recovery. A company involved in carrying out recovery activities can only take delivery of containers of F gas if it employs relevant personnel that hold an appropriate attestation.

Regulation 11(1) of the Fluorinated Greenhouse Gases Regulations 2009 (Statutory Instrument No 261) makes it an offence for an employee to carry out recovery of an F gas and for the company to take delivery of F gases unless the employee doing the recovery is a qualified person. Clearly the qualification obligation only applies to those personnel who are actually undertaking the recovery activities and so does not prevent unqualified personnel from physically ordering or taking delivery of the F gases.

### 6. 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).



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This document has been prepared by F-Gas Support; the information provided is intended as guidance and must not be taken as formal legal advice nor as a definitive statement of the law. Ultimately only the courts can decide on legal questions and matters of legal interpretation. If you have continuing concerns you should seek legal advice from your own lawyers.

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 Local Government Group (LG Group formerly the Local Authorities Coordinators of Regulatory Services (LACORS)) and SKM Enviro.

**Table 1: Details of Certification and Evaluation Bodies and Qualification offered**

Certification and Evaluation Body	Contact Details	Qualification
<p>City and Guilds of London Institute 1 Giltspur Street, London, EC1A 9DD</p>	<p>Graham Goodwin T: 0207 294 2800 E: <a href="mailto:automotive@cityandguilds.com">automotive@cityandguilds.com</a> W: <a href="http://www.cityandguilds.com">www.cityandguilds.com</a></p>	<p>C&amp;G 5101 The course has 3 units if you complete all units this gives you a VRQ Level 3</p> <ul style="list-style-type: none"> <li>◆ 301 – Refrigerant Handling for Mobile A/C Systems *</li> <li>◆ 302 – Testing and Servicing Mobile A/C Systems</li> <li>◆ 303 – Advanced Diagnostics for Mobile A/C systems</li> </ul> <p>It is possible to take the 301 unit (*) only as it is sufficient to meet the minimum requirements of the EC F gas Regulation.</p>
<p>The Institute of the Motor Industry (IMI) Fanshaws, Brickendon, Hertford, SG13 8PQ</p>	<p>T: 01992 511521 E: <a href="mailto:imi@motor.org.uk">imi@motor.org.uk</a> W: <a href="http://www.motor.org.uk">www.motor.org.uk</a></p>	<p>There are 3 qualifications offered through the Automotive Technician Accreditation (ATA) route. Each meets the minimum requirements.</p> <ul style="list-style-type: none"> <li>◆ ATA Air Conditioning Refrigerant Handler (Qual Ref: IMIA/AC08/1)</li> <li>◆ ATA Air Conditioning - Service Technician (Qual Ref: IMIA/AC08/2)</li> <li>◆ ATA Air Conditioning - Diagnostic Technician (Qual Ref: IMIA/AC08/3)</li> </ul> <p>These ATA courses are being delivered by IMI Awards at their centres.</p>
<p>IMI Awards Ltd, Fanshaws, Brickendon, Hertford, SG13 8PQ</p>	<p>Rob Gray/ Ian Cheetham T: 01992 511521 M: 07920721071 E: <a href="mailto:info@imiawards.org.uk">info@imiawards.org.uk</a> W: <a href="http://www.imiawards.org.uk">www.imiawards.org.uk</a></p>	<ul style="list-style-type: none"> <li>◆ IMIAL Level 3 Award in Automotive Refrigerant Handling (QCF Version). (IMIAL Level 3 Award in Automotive Refrigerant Handling (EC842-2006) (QCF) QCA I.D NO: 500/6771/0)*</li> <li>◆ IMIAL Level 3 Certificate in Automotive Air Conditioning and Climate Control. (IMIAL Level 3 Certificate In Automotive Air Conditioning and Climate Control (EC842-2006) QCA I.D No: 500/4229/4)</li> <li>◆ IMIAL Level 3 Award in Automotive Refrigerant Handling. (IMIAL Level 3 Award in Automotive Refrigerant Handling (EC842-2006) QCA I.D NO: 500/4225/7)*</li> <li>◆ IMIAL Level 3 Diploma in Vehicle Accident Repair Mechanical, Electrical and Trim (MET) Competence (QCF) QCA I.D No: 500/9679/5</li> <li>◆ IMIAL Level 3 Diploma in Vehicle Accident Repair Mechanical, Electrical and Trim (MET) Principles (QCF) QCA I.D No: 500/9681/3</li> <li>◆ IMIAL Level 3 Award In Cargo Refrigerant Handling (EC842-2006) (QCF) QCA I.D No: 600/1954/2*</li> </ul> <p>* The Award level qualification is sufficient to meet the minimum requirements.</p>
<p>The Institute of Road Transport Engineers (Irtec) 22 Greencoat Place, London, SW1P 1PR</p>	<p>T: 0207 630 1111 E: <a href="mailto:irtec@irtec.org.uk">irtec@irtec.org.uk</a> W: <a href="http://www.irtec.org.uk">www.irtec.org.uk</a></p>	<p>No qualification is offered.</p>