

Department for Environment, Food and Rural Affairs

Guidance for Mobile Air Conditioning (MAC) Sectors

Guidance: F Gas and Ozone Regulations

Information Sheet MAC 1: Overview

April 2012

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This Information Sheet is the first in a series that provides guidance on compliance with the EU F gas Regulation and the EU MAC Directive in relation to mobile air-conditioning systems (MAC systems) in Great Britain. The purpose of these Regulations is to reduce greenhouse gas emissions which contribute to global warming. These Regulations apply to all mobile equipment and more specifically to the use of MACs in cars and light vans. Certain obligations apply to the use of refrigerants containing F gas refrigerants in MAC systems. The key obligations in the EU F gas Regulation apply to companies that service existing MAC systems and to car dismantlers, whilst the MAC Directive affects manufacturers of new vehicles using MAC systems and those servicing these systems.

Please note, this Information Sheet only refers to use of MAC systems. Other Information Sheets cover the use of stationary refrigeration and air-conditioning (RAC) and other uses of F gases. Refer to Information Sheet GEN 3 to check whether you have any other uses of F gases.

Summary of Key Obligations under the EU F Gas Regulation

The vast majority of vehicles using MAC systems use HFC refrigerants, which are F gases. Normally, this is HFC-134a. When F gases are used in MAC systems, the servicing or dismantling company must ensure that it meets the requirements in EU Regulation 842/2006 and the GB Fluorinated Greenhouse Gases Regulations 2009 (Statutory Instrument No 261). The obligations for servicing and dismantling companies are described in detail in Information Sheet MAC 5. In summary, the EU F gas Regulation requires:

Recovery	Refrigerant recovery during vehicle maintenance and at end of vehicle life.
Training	Use of personnel with prescribed minimum qualifications (see Information Sheet MAC 5).
Taking Delivery	Companies taking delivery of containers of F gas need to employ personnel with appropriate qualifications if undertaking F gas recovery.

Summary of Key Obligations under the MAC Directive

In addition to the above Regulation, there are further obligations regarding the manufacture of new vehicles under the MAC Directive (EU Directive 2006/40/EC), specifically it applies to cars and light vans (M1 and N1 class 1). In summary, this Directive requires:

Phase-Out	Phase-out of HFC-134a usage in new vehicle types starting in 2011.
Leakage	Maximum limits on leakage from MAC systems in new vehicles.
Refilling	Abnormal leaks must be repaired before systems are refilled.

Who is responsible for meeting these obligations?

The MAC obligations under the EU F gas Regulation are the responsibility of the servicing company (during vehicle maintenance) or the vehicle dismantler (at the end of the vehicle's life).

The MAC Directive is concerned with the type of MAC systems that can be used in new vehicles, specifically cars and light vans (M1 and N1 class 1) and is therefore aimed at vehicle manufacturers and MAC system suppliers. There are also some obligations applicable to the activities of those companies carrying out retrofitting of MAC systems and on those refilling/ servicing the systems.

Relevant Information for MAC Sector

Defra has produced a set of information sheets that will help service and dismantling companies understand their obligations under the F gas Regulations.

The following information sheets will be of relevance:

Number	Content of Information Sheet
Information Sheets on Mobile Air Conditioning Sector Issues	
MAC 1	Short overview of obligations for MAC sector.
MAC 2	Background to F gas use in the MAC sector. Sources of emissions. Emission reduction opportunities. Alternative refrigerants.
MAC 3	Detailed description of key obligations for MAC sector.
MAC 4	Getting Started – advice on the steps to take to achieve compliance.
MAC 5	Qualifications & Certification – details about the training and certification requirements for MAC personnel.
General F Gas and ODS Information Sheets	
GEN 1	Glossary of Terms related to F gas and ODS Regulations
GEN 2	Background to F gas and ODS fluids
GEN 3	Overview of markets and equipment affected by the F gas and ODS Regulations
GEN 4	Links to full copies of all relevant Regulations and legislation
GEN 5	Guidance on estimating refrigerant charge

The information in this document is intended as guidance and must not be taken as formal legal advice or 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.

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