

# Automotive and Bodyshop Competence Awards

## Recovery and Handling of Mobile Automotive Refrigerant

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### Accreditation Overview

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This accreditation will enable the candidate to demonstrate their:

- knowledge and skills in the recovery and handling of F-gas refrigerants from automotive mobile air conditioning (MAC) systems
- ability to correctly interpret the legislative and organisational requirements and procedures

### Practical Assessment Requirements

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**The candidate must be able to demonstrate, whilst being observed:**

- the use of appropriate Personal Protective Equipment (PPE) when handling F-gas refrigerants
- supporting your removal and replacement activities by referring to:
  - vehicle and gas related technical data
  - manufacturer's guidance
  - removal and replacement procedures
  - health, safety and legal requirements
- that the tools and equipment you require are calibrated and in a safe working condition to meet manufacturer's and legal requirements
- selecting and using the correct tools and equipment to identify refrigerant type and capacities
- selecting and using the correct tools and equipment for recovery, flushing and recharging of refrigerants
- carrying out all refrigerant recovery, flushing and recharging activities following:
  - recognised safe working methods
  - manufacturers' instructions
  - your workplace procedures
  - health, safety and legal requirements
- working in a way which reduces the risk of any refrigerant emissions
- carrying out suitable checks and any necessary rectification activities to ensure the system is free from leaks prior to recharging
- collecting and transferring waste materials to comply with current legislation and workplace policies
- accurate completion of work records, in the format required and pass them to the relevant person(s) promptly

## Knowledge Assessment Overview

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The knowledge assessment is set by Skills and Education Group Awards. For this accreditation this will be in the form of a centre invigilated multiple choice online test. The assessment has 25 multiple choice questions in total, which are selected at random.

**Please note:** candidates must achieve 70% in the legislative and organisational requirements and procedures section and 60% in the tools and equipment and operating principles section to achieve a pass. Failure to do so will require the candidate to take a resit of the complete online assessment, not just the failed section(s). Any candidate that is referred must be prevented from continuing with the skills (practical) assessment.

The maximum time allowed to complete the assessment is **50 minutes** and the questions will assess the knowledge from across the breadth of the criteria in the following way:

Subject	Number of questions	Min % Required
1. Legislative and organisational requirements and procedures	7	70%
2. Selecting and using appropriate tools and equipment	6	60%
3. Operating principles, functions and types of automotive mobile air conditioning (MAC) systems	12	

## Knowledge Assessment Requirements

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### Legislative and organisational requirements and procedures

The candidate needs to:

- understand the health, safety and environmental regulations relating to the handling of F-gas refrigerants within automotive mobile air conditioning (MAC) systems
- understand how the vehicle is powered and the associated health and safety risks
- understand the legal requirement to maintain and process appropriate F-gas records
- understand your workplace procedures for:
  - the referral of problems related to refrigerant handling
  - completion of work record
- understand the importance of selecting, using and maintaining the appropriate Personal Protective Equipment (PPE) when handling F-gas refrigerants

## Select and use appropriate tools and equipment

The candidate needs to:

- know how to select, check and use all tools and equipment required to recover, flush and recharge F-gases within automotive mobile air conditioning and climate control systems, including:
  - hand tools
  - special purpose equipment
  - general workshop equipment
  - air conditioning recovery equipment
  - refrigerant identifier
  - sealing equipment
- know how to use equipment to identify the type of refrigerant removed

## Operating principles, functions and types of automotive mobile air conditioning (MAC) systems

The candidate needs to:

- Understand the operating principles and functions of automotive mobile air conditioning (MAC) and climate control units containing F-gas refrigerants
- Know the types of refrigerants used in automotive systems and their properties and characteristics
- Understand the impact of F-gas emissions on the environment in relation to their global warming potential and climate change
- Understand the procedures for the safe handling of F-gas refrigerants when recovering, flushing and recharging automotive mobile air conditioning units
- Explain how to work in a way that minimises the risk of any refrigerant emissions
- Understand how to check air conditioning systems for refrigerant leaks and methods of rectification
- Explain how to handle refrigerant cylinders
- Understand the methods of storing removed mobile air conditioning (MAC) parts and the importance of storing them correctly

## Additional Prerequisites (not stated in the Centre Guidance)

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To be eligible to undertake this Accreditation the candidate must meet all prerequisites as stated in the Centre Guidance document and:

- have at least three months experience to ensure they have the sufficient skills and knowledge to recover and recharge a vehicle's AC system without consciously releasing refrigerant to the atmosphere

## Knowledge Assessment Requirements

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Access to the online test for this Award is through the following link:

<https://abcawards.surpass.com/LaunchTest>

Please don't forget to download and complete the invigilation form.