

# C5, City and Guilds 6187-21 Hydrocarbon Refrigerants Training and Assessment

This one day course provides an experienced engineer with the skills and knowledge to safely handle HC refrigerant during installation, service, maintenance and disposal, and to understand how HC refrigerants are safely applied. The following topics are included:

- Environmental benefits of using hydrocarbon (HC) refrigerants;
- Properties and hazards of HCs;
- Safe handling, including charging and recovery;
- Service procedures for HC systems including accessing and sealing systems, leak testing, brazing, evacuation and component replacement;
- Cylinders, cylinder storage and transport;
- Performance of HCs;
- Overview of HC system design, including maximum HC charge sizes;
- Standards and regulations.

Refrigerants covered include:

• HCs: R290 (propane), R1270 (propene), R600a (isobutane)

The course is a mix of theory, videos, practical, discussion sessions and "toolbox talks" with the emphasis on active participation. Numbers on the course are usually limited to six. Trainees are provided with high quality course notes.

### Cost

The course cost is £495 per person excluding VAT. This cost includes course notes, lunch, C & G certification and the BOC / CCL ID card.

## Location

The course is run at our training centre a few minutes from junction 8 of the M5. We provide joining information with directions, start time and a list of local hotels.

## **About Cool Concerns Training**

Our training is developed by the working director Stephen Benton and delivered by training centre manager Alan Snelling. We are engineers and have a wide and varied range of practical and theoretical experience within the refrigeration, air conditioning and heat pump industry.

We provide training which is up to date, informative and fun with the emphasis on practical 'hands on' mixed with high quality presentations and supported by relevant documentation and notes. All our training is designed to use trainees' time as efficiently as possible to minimise expensive down time. We draw on our wide range of experience to prepare and deliver industry leading training sessions. We limit numbers on each session to ensure an effective trainer to trainee ratio.



## C & G 6187-21 HC Pathway Unit

The City and Guilds assessment comprises a theory multiple choice paper and a practical skills test. The 30 question theory paper covers the topics outlined above. For the practical assessment candidates must carry out the following tasks:

- Plan and prepare to repair a small HC system, including production of a risk assessment and a listing of PPE;
- Establish a safe work area;
- Calculate the capacity of a recovery cylinder;
- Recover HC from the system and purge with nitrogen;
- Un-braze a component and braze in a replacement;
- Pressure test for strength and leak tightness;
- Charge the system accurately;
- Ensure the system is working correctly;
- Seal and leak test the system;
- Complete the relevant records.



The C & G 6187-21 HC certificate is a pathway unit. It is a stand-alone qualification at level 2 but has the pre requisite of a category 1 or 2 FGas Qualification.

### Special Note:

Engineers who attend this course must already have a category 1 or 2 FGas qualification and we will require a copy of the certificate before the training / assessment day is attended. Failure to provide the FGAS certificate will result in the assessment being postponed at additional cost.

Successful completion of the City and Guilds 6187-21 Hydrocarbon Refrigerant qualification enables an engineer to be entered onto the register of trained engineers maintained by BOC.

## For more information or to book contact:

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