



RED DRAGON AIR CONDITIONING LTD

2-DAY CITY & GUILDS 5101 'LEVEL 3' AUTOMOTIVE AIR CONDITIONING COURSE

This 2-day City & Guilds certificate in 'Safe Refrigerant Handling for Mobile Air Conditioning Systems' (MACS) is the first module of a 3-module Level 3 certificate in Automotive Air Conditioning. It has been designed to offer the necessary training and subsequent qualifications necessary to satisfy the new European Union legislative changes and is aimed at anyone in the automotive industry from the mobile mechanic to large garages or workshops.

Our instructor is an approved City & Guilds and CITB instructor/assessor who has over 25 years of automotive experience and can offer invaluable advice and tips to our students.

The following information details the course content and what you can expect to gain from the course. Timings have been purposely omitted as we proceed through the course at a pace which suits the students; this is to ensure that everyone gets the maximum benefit from our instruction.

What's Covered

Day 1 – (approximately 70% theory and 30% practical)

- Introduction and administration
- Law & legislation (Montreal Protocol, Kyoto Protocol, British Standards etc.)
- Ozone & global warming
- Health & Safety
- COSHH
- The 4 functions of an A/C System
- Theory of heat transfer
- A/C terminology
- Pressure/Temperature relationship
- Identification of common refrigerants
- Refrigerant condition & state
- A/C system components
- A/C systems (Expansion valve & Fixed orifice tube)
- System operation (vapour compression refrigeration cycle)
- Safety features (sensors, switches, relays etc.)
- Servicing (Refrigerant recovery, pressure testing, system evacuation, re-charging refrigerant, leak detection, adding oil/UV dye, commissioning the system, customer reports)

Day 2 – (approximately 10% theory and 90% practical)

- Following on from day 1 with a continuation of practical tasks associated with servicing the A/C system
- **City & Guilds practical assessment**

What You Can Expect To Gain from the Course

This course will provide students with everything they need to know in order to carry out automotive air conditioning servicing tasks on their own (including cars, trucks, PCV's, boats, plant, and agricultural equipment).

We have a purpose built training rig which allows students to study all the working parts of an automotive air conditioning system. The training rig allows us to simulate faults found in common a/c systems and provides students with an opportunity to conduct electrical and mechanical fault finding activities.

All equipment used during the course is of excellent quality and students attending these courses are able to purchase a variety of equipment (including complete start-up packs) at discounted prices.

Location & Accommodation

The course is held at the Air Conditioning Training Centre Wales in Bridgend, just 1.5 miles from J35/M4.

Cost

The cost of this 2-day course is currently **£350.00 + VAT = £402.50** this includes course reference material, refreshments (tea, coffee & biscuits) and pub lunch!

Students are invited to extend this course by 1 extra day to include subjects covered in module 2 without the additional assessment and certification at a discounted rate of **£145.00 + VAT = £166.75** . Subjects covered include:

- **Basic Fault Diagnosis (Gauge, Mechanical, Electrical and Electronic Diagnosis)**
- **Repair Techniques (Component replacement, Flushing, Hose & Pipe Repairs etc.)**

If you have any further queries, please feel free to contact us on the numbers below to discuss things further or visit www.red-dragon-airconditioning.com and select the relevant tabs to the left of the welcome screen.

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