



Australian Government

Assessment Requirements for MEM18083 Handle fluorocarbon refrigerants according to regulations

Release: 1

Assessment Requirements for MEM18083 Handle fluorocarbon refrigerants according to regulations

Modification History

Release 1. New Unit

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy the requirements of the elements and performance criteria on at least two (2) occasions and include at least one (1) instance of application on a system other than a self-contained low charge system:

- following work instructions, standard operating procedures (SOPS) and safe work practices
- identifying and applying regulations, codes and standards relevant to handling and/or disposal of fluorocarbons in regards to:
 - removing refrigerant from a self-contained low charge system and store it in an external cylinder
 - pumping-down refrigerant from a non self-contained low charge system, including:
 - complying with code limits for receivers
 - ensuring auxiliary receivers are fitted and suitable
 - inspecting joints, seals, gaskets and flanges for traces of refrigerant oil and repairing as necessary
 - leak testing evaporator, heat exchanger, expansion valve, solenoid valve, and other components, including placing low pressure side into positive pressure before testing
 - using air purgers in negative pressure systems
 - fitting of gauge isolation valves
 - mounting compressors, including anti vibration mountings and mufflers
 - aligning shafts
 - tensioning compressor drive belts
 - evacuating a factory matched evaporator and condenser system
- identifying coding and classification for at least six:
 - chlorofluorocarbons (CFCs)
 - hydrochlorofluorocarbons (HCFCs)
 - hydrofluorocarbons (HFCs)
- identifying flammable refrigerants and taking recommended actions as per fact sheets and Flammable Refrigerants Safety Guide published by The Australian Institute of Refrigeration, Air Conditioning And Heating (AIRAH).

Knowledge Evidence

Evidence required to demonstrate the required knowledge for this unit must be relevant to and satisfy the requirements of the elements and performance criteria and include knowledge of:

- safe work practices and procedures and use of personal protective equipment (PPE) when handling or working with refrigerants
- operating principles of refrigeration systems
- characteristics, properties and operating specifications of fluorocarbon refrigerants
- consequences of releasing quantities of ozone depleting refrigerants into the atmosphere
- ARC licensing criteria and regulations relating to handling fluorocarbon refrigerants
- methods of identifying and labelling stored refrigerants and the type of refrigerant used in a refrigeration system
- methods for recovery, storage and dispatch of fluorocarbon refrigerants to licensed reclamation facilities
- mandatory and recommended procedures in regulations, codes and standards for self-contained and non self-contained refrigeration and air conditioning systems work, including:
 - leak testing
 - charging of systems
 - recovery/pump down of refrigerants
 - evacuation
 - minimising refrigerant content of lubricant oil
 - aligning shafts
 - tensioning compressor belts
 - cleaning contaminated systems
- codes and standards for pipe joints and mountings
- safe handling and storage procedures for refrigerant cylinders
- rules and safe handling procedures for flammable refrigerants as published by AIRAH
- causes of contamination in refrigeration and air conditioning systems and their effect on refrigeration system performance
- relevant codes and regulations applying to fluorocarbon refrigeration and air conditioning systems not specifically mentioned above.

Assessment Conditions

- Assessors must:
 - have vocational competency in refrigeration system maintenance at least to the level being assessed with relevant industry knowledge and experience
 - satisfy the assessor requirements in the *Standards for Registered Training Organisations 2015* or its replacement and comply with the *National Vocational Education and Training Regulator Act 2011*, its replacement or equivalent legislation covering VET regulation in a non-referring state/territory as the case requires
- Assessment should be co-assessed with one or more MEM HVAC/R trade units applying to work on systems other than a self-contained low charge system

- Where possible assessment must occur in operational workplace situations. Where this is not possible or where personal safety or environmental damage are limiting factors, assessment must occur in a sufficiently rigorous simulated environment that reflects realistic operational workplace conditions. This must cover all aspects of workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills
- Conditions for assessment must include access to all tools, equipment, materials and documentation required, including relevant workplace procedures, product and manufacturing specifications
- Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>