



Australian Government

UEERA0079 Safely handle refrigerants and lubricants

Release: 1

UEERA0079 Safely handle refrigerants and lubricants

Modification History

Release 1. This is the first release of this unit of competency in the UEE Electrotechnology Training Package.

Application

This unit involves the skills and knowledge required to Safely handle refrigerants and lubricants used in refrigeration and air conditioning systems.

It includes relevant legislation applicable to the safe handling and storage of refrigerants and lubricants, types and common properties, identification of hazards, and safe filling of refrigerant cylinders.

The skills and knowledge of this unit of competency will be applied by refrigeration and air conditioning technicians during the installation, commissioning and repairing of refrigeration and air conditioning systems.

To undertake this unit, the learner must have a current Trainee Refrigerant Handling Licence as it includes work on refrigeration and air conditioning equipment that carries the risk of a fluorocarbon refrigerant being emitted.

The skills and knowledge described in this unit require a national Refrigerant Handling Licence as it includes work on refrigeration and air conditioning equipment that carries the risk of a fluorocarbon refrigerant being emitted while decanting the refrigerant or manufacturing, installing, commissioning, servicing, maintaining or decommissioning refrigeration and air conditioning equipment.

Additional and/or other conditions may apply in some jurisdictions subject to regulations related to refrigeration, air conditioning and electrical work. Practice in the workplace and during training is also subject to work health and safety (WHS)/occupational health and safety (OHS) regulations.

Pre-requisite Unit

UEECD0007 Apply work health and safety regulations, codes and practices in the workplace

Competency Field

Refrigeration and air-conditioning

Unit Sector

Electrotechnology

Elements and Performance Criteria

ELEMENTS

PERFORMANCE CRITERIA

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

1 Prepare to transfer/decant refrigerants and lubricants

- 1.1** WHS/OHS hazards, risk control methods, relevant industry standards, codes of practice and legislation are obtained and applied in accordance with workplace procedures
- 1.2** Work details are determined from documentation and/or supervisor to establish scope of work to be completed in accordance with workplace procedures
- 1.3** Work tasks are sequenced in accordance with job schedule and workplace procedures
- 1.4** Supervisor is consulted to ensure work is coordinated with others in accordance with workplace procedures
- 1.5** Tools, equipment and testing devices to complete the work are obtained and checked for operational safety in accordance with workplace procedures

2 Transfer/decant refrigerants and lubricants

- 2.1** Checks are carried out to ensure cylinders and/or containers employed in the refrigerant transfer and/or decanting process are fit for purpose and free of contaminants in accordance with workplace procedures and industry standards
- 2.2** Calculations are performed to determine the safe filling capacity of the transfer/storage cylinder/container in accordance with workplace procedures and industry standards
- 2.3** Refrigerants and lubricants are transferred/decanted safely using appropriate equipment, and the cylinders/containers are labelled in accordance with relevant codes of practice and industry standards
- 2.4** Refrigerants and lubricants are transferred/decanted without waste of materials and damage to apparatus, the surrounding environment and services using relevant

		sustainable energy practices in accordance with workplace procedures and industry standards
	2.5	Leaks are located and rectified using appropriate testing methods in accordance with relevant codes of practice and industry standards
3 Complete and report on transfer/decanting of refrigerants and lubricants	3.1	WHS/OHS work completion risk control measures are applied in accordance with workplace procedures
	3.2	Worksite and equipment are cleaned and made safe in accordance with workplace procedures
	3.3	Completion of work is documented in an auditable logbook and supervisor notified in accordance with workplace procedures

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the UEE Electrotechnology Training Package Companion Volume Implementation Guide.

Unit Mapping Information

No equivalent unit.

Links

Companion Volume implementation guides are found in VETNet - -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b8a8f136-5421-4ce1-92e0-2b50341431b6>

Assessment Requirements for UEERA0079 Safely handle refrigerants and lubricants

Modification History

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Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria on at least two separate occasions and include:

- applying relevant work health and safety (WHS)/occupational health and safety (OHS) requirements, including using risk control measures
- determining the safe fill capacity of a refrigerant cylinder
- safely handle refrigerants in accordance with standards, codes and regulatory requirements
- documenting work, including refrigerant usage and removal
- implementing relevant legislation, industry standards, codes of practice and regulations
- testing for refrigerant leaks
- transferring and decanting refrigerant
- transferring lubricant.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria and includes knowledge of:

- compressor lubricant transferring equipment, procedures and requirements
- compressor lubricant types, applications, properties and safe handling
- decanting methods, including pressure differential, including pumping and temperature differential
- environmental impact of climate change, including global warming potential (GWP)
- environmental impact of ozone depletion, including ozone depletion potential (ODP)
- leak detection methods, equipment, procedures and requirements
- properties of an ideal refrigerant
- refrigerant cylinder requirements and safe handling, including recovery cylinders
- refrigerant properties, including classes, types and applications, boiling point, glide, composition, including components and safe handling, including flammability, toxicity and high pressure
- relevant legislation, industry standards, codes of practice and regulations
- relevant risk mitigation processes while handling refrigerants and lubricants, including

- potential hazards, risk control methods and safe working practices
- safe fill ratios and relevant calculations
- system contamination, prevention and removal, including types of contaminants and their effects on the operation of a system
- terms, including primary, secondary, expendable, pure, azeotropic, zeotropic, blends, bubble point, dew point and critical point.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

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.

Resources for assessment must include access to:

- a range of relevant exercises, case studies and/or other simulations
- relevant and appropriate materials, tools, equipment and personal protective equipment (PPE) currently used in industry
- applicable documentation, including workplace procedures, industry standards, equipment specifications, regulations, codes of practice and operation manuals.

Links

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