Australian Government

UEERA0050 Install refrigerant pipe work, flow controls and accessories

Release: 1

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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 install refrigerant piping/tubing, fittings, flow controls and accessories for refrigeration and air conditioning systems in buildings and premises in accordance with relevant regulations, industry standards, codes of practice, manufacturer instructions, and industry and workplace requirements.

It includes working safely; applying industry standards; routing pipe work to specified locations; connecting installations, components and accessories; and documenting work.

The skills and knowledge in this unit will be applied by refrigeration and air conditioning technicians during the installation and repair of refrigeration and air conditioning systems.

To undertake this unit, the learner must have a 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 may 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.

The skills and knowledge described in this unit may, in some jurisdictions, also require a licence or permit to practice in the workplace subject to regulations for undertaking refrigeration and air conditioning 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 install pipe work, flow controls and accessories	**1.1** WHS/OHS hazards, risk control methods, relevant standards, codes and legislation are obtained and applied
	1.2 Safety hazards which have not previously been identified are noted, assessed and risk control measures implemented in accordance with workplace procedures
	1.3 Pipe work, flow control and accessory installation are sequenced in accordance with workplace procedures and job schedule
	1.4 Work details are determined from documentation and/or supervisor to establish scope of work to be completed
	1.5 Pipe work routes are planned within the constraints of the building structure, including heritage specifications, in accordance with workplace procedures
	1.6 Supervisor is consulted, as required, to ensure work is coordinated with others
	1.7 Materials to install pipe work, flow controls and accessories are obtained and checked against job requirements in accordance with workplace procedures
	1.8 Tools, equipment and testing devices to install pipe work, flow controls and accessories are obtained and checked for operational safety
2 Install pipe work, flow controls and accessories	**2.1** Circuits, machines and plant are checked as being isolated, where necessary, in accordance with workplace procedures and WHS/OHS requirements
	2.2 Pipe work, flow controls and accessories are installed with sufficient access for connections and maintenance in accordance with workplace procedures, industry

		standards and job specification
	2.3	Pipe work, flow controls and accessories are installed straight and square, in required locations and within acceptable tolerances in accordance with workplace procedures
	2.4	Dry nitrogen is used to prevent contamination while silver brazing refrigerant tubing and fittings in accordance with workplace procedures
	2.5	Problematic situations from installation of pipe work, flow controls and accessories are resolved in accordance with workplace procedures
	2.6	Checks on quality of pipe work, flow controls and accessories are undertaken, including pressure testing and repair of leaks, in accordance with workplace procedures and relevant industry standards
	2.7	Adjustment of settings and replacement of flow controls are undertaken, as required, in accordance with workplace procedures
	2.8	Pipe work, flow controls and accessories are installed without waste of materials, damage or contamination to apparatus, the surrounding environment and/or services using relevant sustainable energy practices in accordance with workplace procedures
3 Complete pipe work, flow controls and accessories installation	**3.1**	Worksite is cleaned and made safe in accordance with workplace procedures
	3.2	Final check of installed pipe work is made to verify that it complies with workplace and industry requirements
	3.3	'As-installed' pipe work, flow controls and accessories are documented 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.

Installing refrigerant pipe work, flow controls and accessories must include at least two different types of refrigeration and/or air conditioning systems, including the following:

- pipe work that includes suction lines, liquid lines, discharge lines and control lines
- flow controls that include both liquid and vapour flow controls - mechanical and electronic
- accessories that include pipe work fittings, hand valves, isolation valves, solenoid valves, check valves, reversing valves, filter/dryers, sight glasses, accumulators and oil separators

Unit Mapping Information

This unit replaces and is equivalent to UEENEEJ106A Install refrigerant pipe work, flow controls and accessories.

Links

Companion Volume implementation guides are found in VETNet - - https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b8a8f136-5421-4ce1-92e0-2b50341431b6