



Australian Government

UEERA0028 Determine noise and vibration encountered in HVAC/R applications

Release: 1

UEERA0028 Determine noise and vibration encountered in HVAC/R applications

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 determine noise and vibration encountered in heating, ventilation and air conditioning/refrigeration (HVAC/R) applications.

It includes measuring sound, noise and vibration encountered in HVAC/R systems. It also includes working safely, using problem-solving procedures, applying appropriate theorems and providing interpretations derived from measurements and calculations and justification for such interpretations.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

UEERA0001 Analyse the operation of HVAC air and hydronic systems

UEERA0002 Analyse the psychrometric performance of HVAC/R systems

UEERA0003 Analyse the thermodynamic performance of HVAC/R systems

or

UEERA0094 Verify functionality and compliance of refrigeration and air conditioning installations

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

UEECD0019 Fabricate, assemble and dismantle utilities industry components

UEECD0020 Fix and secure electrotechnology equipment

UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications

UEECD0016 Document and apply measures to control WHS risks associated with electrotechnology work

UEERA0059 Prepare and connect refrigerant tubing and fittings

UEERA0036 Establish the basic operating conditions of vapour compression systems

UEERA0035 Establish the basic operating conditions of air conditioning systems

UEERA0050 Install refrigerant pipe work, flow controls and accessories

UEERA0081 Select refrigerant piping, accessories and associated controls

UEERA0031 Diagnose and rectify faults in air conditioning and refrigeration control systems

UEERA0092 Solve problems in low voltage refrigeration and air conditioning circuits

UEERL0005 Locate and rectify faults in low voltage (LV) electrical equipment using set procedures

UEERL0004 Disconnect - reconnect electrical equipment connected to low voltage (LV) installation wiring

UEERL0001 Attach cords and plugs to electrical equipment for connection to a single phase 230 Volt supply

UEERL0002 Attach cords, cables and plugs to electrical equipment for connection to 1000 V a.c. or 1500 V d.c.

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 HVAC/R system to determine noise and vibration encountered in application

- 1.1** Work health and safety (WHS)/occupational health and safety (OHS) requirements and workplace procedures for a given work area are obtained and applied
- 1.2** WHS/OHS risk control work preparation measures and workplace procedures are followed
- 1.3** Nature of the problem is obtained from documentation or from work supervisor to determine the scope of work to be undertaken
- 1.4** Advice is sought from the work supervisor to ensure the work is coordinated effectively with others
- 1.5** Sources of equipment and products required for HVAC/R work are established in accordance with workplace procedures

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| | 1.6 | Tools, equipment and testing devices needed to carry out HVAC/R work are obtained and checked for correct operation and safety |
| 2 Determine HVAC/R application noise and vibration measurements | 2.1 | WHS/OHS risk control work measures and workplace procedures are followed |
| | 2.2 | Need to test or measure active HVAC/R systems is determined in accordance with WHS/OHS requirements and conducted in accordance with workplace safety procedures |
| | 2.3 | HVAC/R systems are checked and isolated in accordance with WHS/OHS requirements and workplace procedures |
| | 2.4 | Relevant technique or process methods are used to determine noise and vibration measurement encountered in HVAC/R application |
| | 2.5 | Unexpected situations are dealt with safely in accordance with workplace procedures and with the approval of authorised person/s in a manner that minimises risk to personnel and equipment |
| | 2.6 | Measurements are taken without damage to HVAC/R apparatus, circuits, the surrounding environment or services using sustainable energy practices with minimum waste and re-work |
| 3 Document HVAC/R application noise and vibration measurements and calculations | 3.1 | WHS/OHS work completion risk control measures and workplace procedures are followed |
| | 3.2 | Worksite is cleaned and made safe in accordance with workplace procedures |
| | 3.3 | Justification for alternative approach to determine noise and vibration measurements is documented and appropriate person/s notified in accordance with workplace procedures |
| | 3.4 | Work completion is documented and appropriate person/s 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.

Providing sound, noise and vibration measurements must include at least the following:

- two HVAC/R applications

Unit Mapping Information

This unit replaces and is equivalent to UEENEEJ131A Determine noise and vibration encountered in HVAC/R applications.

Links

Companion Volume implementation guides are found in VETNet - -

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