



Australian Government

UEPMNT305 Maintain industrial fans

Release: 2

UEPMNT305 Maintain industrial fans

Modification History

Release 2. Minor release to update superseded pre-requisite units.

Release 1. This is the first release of this unit of competency in the UEP Generation Training Package.

Application

This unit involves the skills and knowledge required to maintain and/or overhaul industrial fans. It may involve fault finding, diagnosis, repair and may require the removal and replacement of rotating elements with modulating controls.

Industrial fans typically provide a large flow of air or gas to power or cool a power generation facility's plant and equipment. The diagnosis and repair of faults requires the systematic investigation of any industrial fan malfunction.

Competency in this unit requires the ability to plan work, remove industrial fans for maintenance, maintain industrial fans, replace and/or install industrial fans and to report on all completed work tasks. Individuals will, in general, work under supervision in an electrical, electronic and/or mechanical equipment repair workshop or on site.

Power generation maintenance personnel are typically trained and authorised to receive permits to work.

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

Note: Workplace practice

The application of the skills and knowledge described in this unit of competency may require a licence or training permit to practice in the workplace, where work is carried out on gas and electrical installations. Additional and/or other conditions may apply under state and territory legislative and regulatory licensing requirements.

Pre-requisite Unit

MEM09002 Interpret technical drawing

MEM12023 Perform engineering measurements

MEM18001 Use hand tools

MEM18002 Use power tools/hand held operations

MEM18003 Use tools for precision work

MEM18006 Perform precision fitting of engineering components

MEM18055 Dismantle, replace and assemble engineering components

Competency Field

Maintenance

Unit Sector

Electricity generation

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Plan and prepare for work

PERFORMANCE CRITERIA

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

- 1.1 Requirements including scope of work and assigned roles are identified and confirmed with appropriate personnel or by site inspection, in accordance with workplace procedures
- 1.2 Occupational Health and Safety(OHS)/Work, Health and Safety (WHS) regulations, legislative requirements, industry standards, codes of practice, manufacturers' specifications, environmental obligations and workplace procedures are reviewed in preparation for work
- 1.3 Resources for work activities are obtained and inspected for compliance with job specification
- 1.4 Relevant plans, drawings and manuals are selected and used, in accordance with the workplace procedures
- 1.5 Correct materials and components for work are obtained and inspected, in accordance with workplace procedures, for compliance with job specification
- 1.6 Work is planned, sequenced and prioritised, in accordance with workplace procedures
- 1.7 Potential hazards are identified, and risk control measures are selected and implemented, in accordance with workplace procedures
- 1.8 Work area is prepared, in accordance with workplace procedures

2 Remove industrial fan for

- 2.1 Isolations are confirmed, where appropriate, in

maintenance	accordance with workplace procedures
	2.2 Industrial fans are disconnected, in accordance with workplace procedures
	2.3 Industrial fans are removed, in a manner which will assist in replacement, in accordance with workplace procedures
	2.4 Industrial fans are inspected for abnormalities, in accordance with workplace procedures
3 Maintain industrial fans	3.1 Maintenance is performed on industrial fans, in accordance with manufacturers' specification and workplace procedures
	3.2 Components are disassembled or assembled and preliminary balance of equipment is obtained, maintained and adjusted by assembling components of an appropriate weight, in accordance with workplace procedures and manufacturers' specification
	3.3 Sketches are made, data noted and components are marked for identification or reassembly, in accordance with workplace procedures
	3.4 New components are obtained and inspected for compliance with manufacturers' specification, in accordance with workplace procedures
	3.5 Dimensional inspection is performed with precision measuring devices to ensure compliance with manufacturers' specifications and results are recorded, in accordance with workplace procedures
	3.6 Industrial fans are reassembled, applying appropriate principles and techniques, in accordance with workplace procedures and manufacturers' specifications
	3.7 Modifications or alterations to industrial fans are undertaken, in accordance with workplace procedures
4 Replace or install industrial fans	4.1 Equipment is prepared for industrial fan replacement, in accordance with workplace procedures
	4.2 Industrial fans are replaced, in accordance with workplace procedures and manufacturers' specification
	4.3 Industrial fans are levelled, aligned, coupled and

connected, in accordance with workplace procedures

- 4.4 All fastenings are torqued, in accordance with workplace procedures and manufacturers' specification
- 4.5 Machinery, plant and industrial fans are given a test run, monitored and adjusted, as required, in accordance with workplace procedures and manufacturers' specification

5 Complete work

- 5.1 Work is completed, and appropriate personnel are notified, in accordance with workplace procedures
- 5.2 Work area is cleared of waste, cleaned, restored and secured, in accordance with workplace procedures
- 5.3 Tools and equipment are maintained and stored, in accordance with workplace procedures
- 5.4 Work completion details are finalised, 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 Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is equivalent to UEPMNT305B Maintain industrial fans.

Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=1715b9fa-e7bd-441c-bb8d-cf22c9c825a8>

Assessment Requirements for UEPMNT305 Maintain industrial fans

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, performance criteria and range of conditions on at least two separate occasions and includes:

- applying Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) requirements including:
 - emergency procedures
 - hazard identification
 - risk control measures
 - safe working practices
- communicating with personnel
- completing work using completing work procedures
- determining installation techniques and procedures
- dismantling and assembling components
- identifying and using measuring equipment
- implementing legislation, industry standards, codes of practice and regulations
- interpreting manufacturers' specifications and manuals
- maintaining industrial fans
- planning and preparing for industrial fan maintenance work
- recognising worn or damaged components
- removing industrial fan for maintenance
- replacing and installing industrial fans
- selecting materials and components
- using removal and balancing techniques
- using tools
- utilising permit to work system
- working with maintenance techniques and procedures including coupling, levelling, aligning and working to defined tolerances

Knowledge Evidence

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

- defined tolerances
- dismantle and reassemble techniques
- legislation, industry standards, codes of practice and regulations
- maintain industrial fans
- manufacturers' specifications and manuals
- measurement equipment
- permit to work system
- recognition of worn or damaged components
- selection of materials and components
- techniques for coupling, levelling and alignment
- tool use
- WHS/OHS legislated requirements including:
 - emergency procedures
 - hazard identification
 - risk control measures
 - safe working practices
- workplace documentation
- workplace policies and procedures

Assessment Conditions

As a minimum, assessors must satisfy applicable regulatory requirements, which include requirements in the Standards for Registered Training Organisations current at the time of assessment.

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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.

Assessment must occur in workplace operational situations. Where this is not appropriate, assessment must occur in simulated workplace operational situations that reflect workplace conditions.

Resources for assessment must include access to:

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

currently used in industry

Links

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