



Australian Government

UEPMNT310 Maintain material crushers

Release: 2

UEPMNT310 Maintain material crushers

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 Minor release to update superseded pre-requisite units.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 undertake in-servicing, fault finding, diagnosis, out of service inspection, repair or overhaul of material crushers including roll and/or door assemblies.

Material crushers are used to reduce solid materials, they operate by using components such as balls, jaws or rollers that move or turn together with great force.

Competency in this unit requires the ability to plan work, conduct in-service testing of material crushers, remove material crusher's equipment to facilitate maintenance, maintain material crushers, replace and/or install material crushers 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** Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) regulations, legislative requirements, industry standards, codes of practice, manufacturers' specifications, environmental obligations and workplace procedures are reviewed in preparation for work
- 1.3** Resources are obtained and inspected for compliance with job specification
- 1.4** Relevant plans, drawings and manuals are selected and used, in accordance with 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 the workplace procedures
- 1.8** Work area is prepared, in accordance with workplace procedures

2 Conduct in-service testing

- 2.1** In-service tests are carried out, in accordance with

- workplace procedures
- 2.2** Faults are located, in accordance with workplace procedures, using appropriate tools, equipment and testing techniques
 - 2.3** Testing and fault finding results are analysed, in accordance with workplace procedures, to establish repairs or ascertain serviceability of material crusher
- 3 Remove equipment to facilitate maintenance**
- 3.1** Isolations are confirmed, where appropriate, in accordance with workplace procedures and site requirements
 - 3.2** Material crushers are disconnected, in accordance with workplace procedures
 - 3.3** Material crusher components are removed, in a manner which will assist in replacement, in accordance with workplace procedures
 - 3.4** Material crusher components are inspected for abnormalities, in accordance with workplace procedures
- 4 Maintain material crushers**
- 4.1** Components or subassemblies are dismantled, cleaned and examined to verify tolerances, in accordance with workplace procedures, to determine need to replace, overhaul or repair material crusher
 - 4.2** Sketches are made, data noted and components are marked for identification for reassembly or overhaul, in accordance with workplace procedures
 - 4.3** Dimensional inspection is performed, in accordance with workplace procedures, using precision measuring devices to determine compliance with relevant drawings and/or manufacturers' specification
 - 4.4** New components are inspected for compliance with manufacturers' specification and are prepared for assembly, in accordance with workplace procedures
 - 4.5** Components are weighed, measured and recorded, in accordance with workplace procedures and site requirements
 - 4.6** Components are reassembled and preliminary balance of equipment is obtained, maintained and adjusted by assembling components sequentially by appropriate

- weight, in accordance with workplace procedures
- 4.7** Plant and machinery is adjusted using appropriate techniques, in accordance with workplace procedures, manufacturers' specification and site tolerances
 - 4.8** All fastenings are torqued, in accordance with workplace procedures and manufacturers' specifications
 - 4.9** Components are levelled and aligned, using appropriate tools, in accordance with workplace procedures
- 5 Replace/install material crushers**
- 5.1** Equipment is prepared for material crushers to be replaced, in accordance with workplace procedures
 - 5.2** Material crushers are replaced, in accordance with workplace procedures and manufacturers' specification
 - 5.3** Alterations or corrections are undertaken, in accordance with workplace procedures
 - 5.4** Material crushers are levelled, aligned and coupled, in accordance with workplace procedures
 - 5.5** All fastenings are torqued, in accordance with workplace procedures, manufacturers' specification and site requirements
 - 5.6** Material crushers are given a test run and are monitored, as required, in accordance with workplace procedures and manufacturers' specification
- 6 Complete work**
- 6.1** Work is completed and appropriate personnel are notified, in accordance with workplace procedures
 - 6.2** Work area is cleared of waste, cleaned, restored and secured, in accordance with workplace procedures
 - 6.3** Tools and equipment are cleaned, maintained and stored, in accordance with workplace procedures
 - 6.4** 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 UEPMNT310B Maintain material crushers.

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 UEPMNT310 Maintain material crushers

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.

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 as per scheduled arrangements
- conducting material crusher in-service testing using in-service testing procedures to identify faults
- determining measuring equipment
- dismantling and reassembling components
- interpreting technical drawings, manufacturers' specifications and manuals
- maintaining material crushers using maintenance techniques and procedures
- planning for material crusher maintenance work
- removing equipment to facilitate material crusher maintenance using removal techniques
- replacing and installing material crushers using removal and installation techniques and procedures
- selecting materials and components
- testing, adjusting, replacing and overhauling crushers for desired material sizing
- using tools including specialised tools and jigs
- utilising levelling and alignment techniques
- working with permit to work system

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:

- component dismantling and reassembly
- crusher types and operating characteristics
- identification and use of measuring equipment
- legislation, industry standards, codes of practice and regulations
- maintenance of material crushers
- manufacturers' specifications and manuals
- materials and components
- permit to work system
- technical drawings
- tests, adjustments, replacements and overhaul requirements material crushers
- tolerances
- tools including specialised tools and jigs
- typical arrangements of power production plant
- 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.

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

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
- relevant and appropriate materials, tools, equipment and personal protective equipment currently used in industry
- applicable documentation including workplace procedures, industry standards, equipment specifications, regulations, codes of practice and operation manuals.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=1715b9fa-e7bd-441c-bb8d-cf22c9c825a8>