



Australian Government

Assessment Requirements for UEEIC0026 Provide solutions to fluid circuit operations

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.

Performance Evidence

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

- applying appropriate circuit theorems and providing solutions derived from measurements and calculations and justification for such solutions
- applying relevant work health and safety (WHS)/occupational health and safety (OHS) requirements, including implementing risk control measures
- applying sustainable energy principles and practices
- completing work and documenting solutions to problem
- dealing with unplanned events/situations in accordance with workplace procedures in a manner that minimises risk to personnel and equipment
- documenting justification of solutions
- identifying fluid circuit operations
- isolating work area
- obtaining tools, equipment and testing devices
- preparing to provide solutions to fluid circuit problems
- providing solutions to circuit problems from measurements and calculations, including:
 - operation and construction of a basic hydraulic circuit
 - operation and construction of pneumatic circuit
- providing solutions to fluid circuit problems
- sourcing work materials
- testing or measuring live circuits
- using established problem-solving methods
- working with and referring to others to solve problems.

Knowledge Evidence

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

- common terms and definitions used in fluid power systems

- applications of fluid power
- Pascal's law relevant to force transfer, multiplication and intensification
- mathematical relationships involving:
 - temperature and volume (Charles law)
 - pressure and volume (Boyles law)
- fluid power principles relevant to components and the identification of components
- operation of fluid power components
- interpretation of fluid system operation from circuit diagrams
- operation and construction of basic pneumatic circuit
- operation and construction of a basic hydraulic circuit
- routing maintenance procedures
- safety requirements
- fluid circuit operation problems
- relevant circuit theorems, measurements and calculations, including providing solutions derived from measurements
- relevant job safety assessments or risk mitigation processes, including risk control measures
- relevant manufacturer specifications
- relevant tools, equipment and measuring devices
- relevant WHS/OHS legislated requirements
- relevant workplace documentation
- relevant workplace policies and procedures
- sustainable energy principles and practices
- terms and their definitions used in fluid power systems.

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, 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=b8a8f136-5421-4ce1-92e0-2b50341431b6>