



Australian Government

**Assessment Requirements for UEGNSG139
Repair and maintain stationary gas fuelled
turbine engines**

Release: 1

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Modification History

Release 1: This is the first release of this unit of competency in the UEG Gas Industry Training Package.

Performance Evidence

- applying relevant work health and safety (WHS)/occupational health and safety (OHS) requirements, including:
 - applying workplace procedures and practices
 - using of risk control measures
- applying sustainable energy principles and practices
- documenting and reporting ‘as-installed’ plant and equipment components, pipe-work, flue/exhaust systems and accessories
- dealing effectively with unplanned events in accordance with workplace procedures, in a manner that minimises risk to personnel and equipment
- repairing and maintaining gas fuelled turbine engines up to a capacity of 5 gigajoule per hour (GJ/hr) (1,300 kilowatt), including:
 - disconnecting engine
 - conducting maintenance
 - finding faults
 - rectifying faults without damage
 - reconnecting
 - providing written reports on work undertaken.

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:

- authority to proceed requirements, including:
 - regulatory requirements (scope and restrictions)
 - relevant industry standards and codes of practice
 - required documentation and submissions
- compliance requirements, including design specification, regulations, codes of practice, industry standards and manufacturer specifications back to commissioned settings

- disconnect requirements, workplace procedures and manufacturers specifications
- exhaust/flue requirements
- fault-finding techniques including:
 - taking readings and gathering information
 - symptoms and possible faults
 - logical fault diagnosis sequence and flow charts
 - manufacturer fault diagnosis tables
 - confirming actual fault
- fuel train requirements, including pipe-work and connections, valves, metering devices, regulating valves and electrical controls
- gas fuel types, properties and applications
- gas fuelled turbine engine overview, including types, major components, operating principles, manufacture specifications and diagrams
- location/site ventilation requirements, including environment, piping requirements for gas fuel train pipe-work and suitable equipment/equipment plant locations
- reconnection requirements and workplace procedures, including:
 - manufacturer specifications and procedures
 - inspection of the installed engine, pipe-work, components and accessories
 - pressure testing and purging
 - testing engine operation first without and then with fuel
 - testing and adjusting regulator, operation and safety controls
 - exhaust gases analysis
- relevant stationary gas fuelled turbine engines design manufacturer specifications
- relevant safe work method statements (SWMS)/job safety assessments or risk mitigation processes, including:
 - hazardous area requirements
 - safe working practices
 - site safety
- relevant WHS/OHS legislated requirements
- relevant workplace documentation and reports, including:
 - 'as-installed' plant and equipment components, pipe-work, flue/exhaust systems and accessories
- relevant workplace policies and procedures
- repair and maintenance gas fuelled turbine engines up to a capacity 5 GJ/hr (1,300 kilowatt) requirements, including:
 - gas train pipe-work and components
 - exhaust/flue system
 - ventilation system
 - oil change
 - oil and air filter replacement.

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 must occur in suitable workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in suitable 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, facilities, equipment and personal protective (PPE) equipment currently used in industry
- resources used should reflect current industry practices for repair and maintenance of stationary gas fuelled turbine engines
- 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=6a6c032e-ffcb-4f3d-8063-415efbd261e8>