



Australian Government

UEPOPS248 Operate and monitor an internal combustion dual fuel reciprocating engine

Release: 1

UEPOPS248 Operate and monitor an internal combustion dual fuel reciprocating engine

Modification History

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 operate, inspect and monitor internal combustion dual fuel reciprocating engines.

Typically, internal combustion dual fuel reciprocating engines are fed with fossil fuels such as petrol, gas, diesel or oil. Internal combustion dual fuel reciprocating engines in the form of combustion turbines drive the largest electric generators.

Competency in this unit requires the ability to plan work, operate internal combustion dual fuel reciprocating engine plant, change fuel type during operation, test internal combustion dual fuel reciprocating engine plant operations, analyse internal combustion dual fuel reciprocating engine plant faults, monitor and inspect internal combustion dual fuel reciprocating engine plant and the completion of all documentation. Individuals will, in general, work under supervision, in a power generating facility as an operator.

Power generation plant operators are typically trained and authorised to isolate, prepare plant and issue 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 may require a licence or training permit to practice in the workplace where work is carried out on gas and electrical installations. Additional conditions may apply under state and territory legislative and regulatory licensing requirements.

Pre-requisite Unit

There are no prerequisite units.

Competency Field

Operations

Unit Sector

Electricity generation

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

PERFORMANCE CRITERIA

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

1 Plan and prepare work

- 1.1** Safety issues related to operating and monitoring internal combustion dual fuel reciprocating engines are identified, in accordance with workplace procedures and Work, Health and Safety (WHS)/Occupational Health and Safety (OHS) regulations and legislative requirements
- 1.2** Work requirements are identified, in accordance with workplace procedures, from appropriate personnel and documentation
- 1.3** Documentation to determine internal combustion dual fuel reciprocating engine plant status is assessed and evaluated, in accordance with workplace procedures
- 1.4** Inspection and field preparations for internal combustion dual fuel reciprocating engine plant service are carried out, in accordance with workplace procedures and manufacturers' recommendations
- 1.5** Internal combustion dual fuel reciprocating engine plant operational prerequisites are established, in accordance with workplace procedures and manufacturers' recommendations
- 1.6** Sequence for recommissioning of internal combustion dual fuel reciprocating engine plant is determined, in accordance with workplace procedures and site requirements

2 Operate internal combustion dual fuel reciprocating engine plant

- 2.1** Internal combustion dual fuel reciprocating engine plant is operated, in accordance with workplace procedures and manufacturers' operating recommendations
- 2.2** Internal combustion dual fuel reciprocating engine plant is monitored and observed, in accordance with workplace procedures, to detect deviations from normal

		operating conditions
	2.3	Corrective actions are taken to rectify internal combustion dual fuel reciprocating engine plant abnormalities, in accordance with workplace procedures and manufacturers' recommendations
3 Change fuel type during operation	3.1	Changeover of fuel type is monitored and observed, in accordance with workplace procedures, to detect deviations from expected results
	3.2	Corrective actions are taken, in accordance with workplace procedures and manufacturers' recommendations
4 Test internal combustion dual fuel reciprocating engine plant operation	4.1	Operational tests are performed, in accordance with workplace procedures
	4.2	Internal combustion dual fuel reciprocating engine plant is observed, in accordance with workplace procedures, for correct operational response
	4.3	Corrective action is taken, in accordance with workplace procedures, when response does not meet with documentation, plant integrity or personnel safety requirements
	4.4	Appropriate personnel are notified, in accordance with workplace procedures, when defects are detected
5 Analyse internal combustion dual fuel reciprocating engine plant faults	5.1	Cause of abnormal internal combustion dual fuel reciprocating engine plant operating conditions are identified, in accordance with workplace procedures, by analysing technical and operational information
	5.2	Corrective action is taken, in accordance with workplace procedures
	5.3	Internal combustion dual fuel reciprocating engine plant integrity and personnel safety is maintained, in accordance with workplace procedures, and in consultation with appropriate personnel and technical and operational documentation
6 Monitor and inspect internal combustion dual fuel reciprocating engine plant	6.1	Internal combustion dual fuel reciprocating engine plant to be monitored and inspected is physically identified, in accordance with workplace procedures

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| | 6.2 | Internal combustion dual fuel reciprocating engine plant is monitored and inspected for normal operation or to detect deviations, in accordance with workplace procedures |
| | 6.3 | Corrective action is taken, in accordance with workplace procedures |
| | 6.4 | Appropriate personnel are notified, in accordance with workplace procedures, when defects are detected |
| 7 Complete documentation | 7.1 | Internal combustion dual fuel reciprocating engine plant problems, abnormalities and status are reported in accordance with workplace procedures |
| | 7.2 | Documentation is updated, 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 UEPOPS248B Operate and monitor an internal combustion dual fuel reciprocating engine.

Links

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