



Australian Government

**Assessment Requirements for
MEAMEC0013 Inspect, test and
troubleshoot gas turbine engine systems and
components**

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Modification History

Release 1. Application changed. Elements and Performance Criteria changed. Foundation Skills made explicit. Range of Conditions removed, and relevant information moved to Assessment Requirements. Assessment Requirements clarified. Supersedes and is equivalent to MEA314 Inspect, test and troubleshoot gas turbine engine systems and components.

Performance Evidence

There must be evidence the candidate has completed all the tasks outlined in the elements and performance criteria of this unit, and demonstrated the ability to inspect, test and troubleshoot at least one item from each of the following groups:

- engine change unit, main components and accessories or drives
- control system
- ignition and starter systems
- fuel system
- oil system
- air system.
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Knowledge Evidence

There must be evidence the candidate has knowledge of:

- fault diagnosis techniques
- inspection procedures and specifications (allowable limits) and how to apply them
- gas turbine engine layout and operation:
 - types of gas turbine
 - operating principles and power output
 - gas path
 - intakes
 - compressors
 - combustion chambers
 - turbines
 - exhaust
 - thrust reversers
 - accessory drives
 - bearings and seals
 - maintenance requirements and troubleshooting procedures
- system and component operation, including electrical and instrument system interfaces:

- fuel control and fuels
- lubrication and lubricants
- air distribution
- starting
- ignition
- power augmentation
- instrumentation:
 - performance indication
 - condition indication
 - warning
 - presentation and interpretation of electronic displays
- fire warning and extinguishing
- control system and rigging of engine controls
- testing procedures and functional rigging checks
- maintenance manuals
- regulatory requirements
- engine spin or run procedures, including the operation of auxiliary power units (APUs)
- engine condition monitoring
- safety precautions for gas turbine engine system operation, including high energy ignition units
- dual inspection requirements for work on engine control systems
- relevant work health and safety (WHS) practices including the requirements for the lifting and handling of heavy components
- how to obtain material safety data sheets (MSDSs)
- selection and use of personal protective equipment (PPE) industry standard procedures specified by manufacturers, regulatory authorities and the enterprise.
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Assessment Conditions

The following conditions of assessment represent the requirements of the regulators Defence Aviation Safety Authority (DASA) and Civil Aviation Safety Authority (CASA) and maintenance stakeholders and must be rigorously observed.

Skills must have been demonstrated under routine supervision in the workplace or in a simulated environment that reflects workplace conditions and contingencies encountered in inspecting, testing and troubleshooting gas turbine engine systems and components. The following conditions must be met for this unit:

- use of suitable facilities, equipment and resources, including:
 - workplace procedures, manufacturing specifications, codes, standards, manuals, and reference materials relevant to inspecting, testing and troubleshooting gas turbine engine systems and components
 - tools and equipment specified in aircraft maintenance manuals

- general-purpose tools, test and ground support equipment found in most routine situations.

Testing of engines fitted to helicopters (where auxiliary drive is not available) may be carried out through the applicant directing a pilot qualified on type.

Evidence of tasks demonstrating competency must be recorded in a log of industrial experience and achievement.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=ce216c9c-04d5-4b3b-9bcf-4e81d0950371>