



Australian Government

Assessment Requirements for MEAMEC0049 Maintain aircraft two stroke petrol engines

Release: 1

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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 MEA361 Maintain aircraft two stroke petrol engines.

Performance Evidence

There must be evidence the candidate has completed the tasks outlined in the elements and performance criteria of this unit, and demonstrated the ability to:

- maintain at least one item from each of the following groups:
 - two-stroke petrol aircraft engines, main components, including reduction gearboxes and accessories/drives
 - ignition systems
 - control systems
 - starter systems
 - fuel and air systems
 - cooling systems (liquid or air as applicable to enterprise)
 - exhaust systems
- recognise external and internal signs of defects in two-stroke petrol aircraft engines, components and system components through visual or physical inspection
- assist with testing of two-stroke petrol engine and engine system operation, be able to operate systems, monitor indications, record parameters and recognise correct function
- compile engine condition monitoring records
- rig and adjust engine controls and systems
- apply system testing procedures and all safety precautions associated with two-stroke petrol engine system operation and with consideration to dual inspection requirements associated with work on engine controls.
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Knowledge Evidence

There must be evidence the candidate has knowledge of:

- work health and safety (WHS) procedures associated with engine maintenance, including lifting and handling of heavy objects and how to obtain personal protective equipment (PPE) and material safety data sheets (MSDSs)
- fault diagnosis techniques
- two-stroke petrol aircraft engine layout and operation:
 - principles of operation of two-stroke engines

- component function, construction and materials
- engine operation
- engine power, efficiency and performance
- two-stroke aircraft engine fuels, oils and fuel or oil mixing
- components, layout and operation of two-stroke petrol aircraft engine:
 - fuel systems
 - ignition systems:
 - magneto
 - coil
 - spark plugs
 - ignition harnesses
 - switches
 - starting systems
 - induction systems
 - cooling systems (liquid and air)
 - exhaust systems
 - electrical and instrument system interfaces:
 - battery charging system
 - tachometer
- removal and installation procedures for two-stroke petrol aircraft engines and engine components
- petrol two-stroke aircraft engine maintenance requirements and troubleshooting
- maintenance manuals associated with engine maintenance
- regulatory requirements and standard procedures associated with engine maintenance.
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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 maintaining aircraft two-stroke petrol engines. 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 maintaining aircraft two-stroke petrol engines
 - tools and equipment specified in maintenance documentation
 - general-purpose tools and test equipment found in most routine situations.
 - maintenance documentation and procedures.

Testing of engines fitted to helicopters (where auxiliary drive is not available) shall 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>