



Australian Government

**Assessment Requirements for
MEAMEC0041 Maintain basic rotary wing
aircraft systems**

Release: 1

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Modification History

Release 1. Application changed. Elements and Performance Criteria changed. Foundation Skills made explicit. Assessment Requirements clarified. Supersedes and is equivalent to MEA352 Maintain basic rotary wing aircraft systems.

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:

- maintain at least one component from each of the following groups:
 - main rotor blades and tail rotor blades
 - rotor heads, swash plates and tail rotor pitch control assemblies
 - mechanical flight control components (collective and cyclic pitch levers, rudder pedals, cables, pulleys, guides, fairleads, bellcranks, rods, torque tubes, chains and sprockets)
 - main rotor, intermediate or tail rotor gearboxes
 - drive shafts and couplings
 - fuel systems
 - cabin heating systems
- rigid or flexible fuel tanks, selector or shutoff valves and rigid or flexible plumbing
- cabin heater ducting and control valves.
- use hand skills, tools and test equipment to test, adjust and troubleshoot the following on at least one occasion:
 - rotary wing mechanical control systems
 - helicopter airframe systems and components, including rotors and rotor system
- recognise system and component defects, external damage, correct/incorrect installation and security on at least one occasion for each of fuel systems and cabin heading systems
- remove, install and rig rotor systems and rotor or flight controls
- perform system functional tests and checks to isolate system faults
- apply procedures, cleanliness requirements and safety precautions at all times, and as relevant to the systems being maintained.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- work health and safety (WHS) precautions for airframe system maintenance, including the lifting and handling of heavy components and how to obtain personal protective equipment (PPE) and material safety data sheets (MSDSs)

- standard trade practices relating to tool and test or rigging equipment usage and installation or securing of system components
- theory of flight:
 - airflow
 - conditions of flight
 - lift and forces
 - drag
- rotary flight principles:
 - terminology relating to:
 - aerofoils
 - main rotor blades
 - rotor discs
 - rotors (main and tail)
 - aerodynamic characteristics:
 - aerofoil design
 - forces
 - rotor thrust and power requirements
 - vortex ring
 - autorotation
 - helicopter stability
- helicopter dynamic components:
 - main rotors:
 - blades
 - heads
 - linkages
 - tail rotors
 - swash plates
 - transmissions and drive shafts
- helicopter structure and airframe systems:
 - structure and layout
 - engine and transmission
 - flight control system layout and operation
 - cabin heater system layout and operation
 - fuel system layout and operation
- helicopter maintenance procedures and troubleshooting
- airframe system maintenance manuals
- relevant regulatory requirements and standard procedures, including requirements for engine and rotor system operation.

Assessment Conditions

The following conditions of assessment represent the requirements of the regulators (DASA and 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 basic rotary wing aircraft systems. 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 basic rotary wing aircraft systems
 - tools and equipment specified in maintenance documentation.
 - general-purpose tools and test equipment found in most routine situations.

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