



Australian Government

**Assessment Requirements for MEA394
Repair and/or overhaul aircraft piston
engine crankcase assembly components**

Release: 1

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Modification History

Release 1 - New unit of competency

Performance Evidence

Evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria under the specified conditions of assessment, and must include:

- applying relevant WHS procedures, including the use of MSDS and PPE
- using relevant maintenance documentation, specifications and aircraft/component manuals to:
 - recognise state of serviceability and overhaul or repair requirements for piston engine crankcase assembly components as listed in the Range of Conditions
 - dismantle and inspect crankcase assembly component parts for serviceability and identify repair requirements as applicable
 - repair/replace/modify crankcase component parts
 - assemble, test for correct operation and adjust crankcase assembly components
- correctly tagging, sealing and packaging completed components.

Evidence of transferability of skills and knowledge related to repair is essential. This shall be demonstrated through application across a number of different piston engine crankcase assembly components. Ability to assess component serviceability and interpret parts requirements will be necessary to supplement the required evidence. Capability to interpret inspection procedures and specifications (allowable limits) and apply them in practice is critical. The application of testing procedures should also clearly indicate knowledge of crankcase assembly operation.

Knowledge Evidence

Evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria and include knowledge of:

- how to obtain relevant MSDS
- the use of applicable items of PPE
- WHS procedures
- component inspection and wear measurement procedures
- non-destructive testing methods and application
- component repair and overhaul procedures and processes.

Assessment Conditions

- Competency should be assessed in the work environment, or simulated work environment, using tools and equipment specified in maintenance documentation. It is also expected that general purpose tools and test equipment found in most routine situations would be used where appropriate
- Knowledge of crankcase assembly operation and the relationship of individual components will be necessary to supplement evidence of ability to troubleshoot component faults before undertaking any action. The work plan should take account of applicable safety and quality requirements in accordance with the industry and regulatory standards.
- The following conditions of assessment represent the requirements of the Regulators (ADF and CASA) and maintenance stakeholders and must be rigorously observed.
- A person cannot be assessed as competent until it can be demonstrated to the satisfaction of the workplace assessor that the relevant elements of the unit of competency and the performance criteria are being achieved under routine supervision on at least one (1) item from each of the following groups:
 - crankshaft, gears, con rods and counterweights
 - camshaft, hydraulic tappets/cam followers and gears
 - propeller shaft, reduction drive gear and quill shaft
 - component gear drives/trains
 - crankcase castings, bearings, component mounting pads and studs
 - oil system components
 - supercharger and turbocharger components (may be omitted where not applicable to the enterprise)
 - propeller governor (may be omitted where not applicable to the enterprise)
- This shall be established via the records in the Log of Industrial Experience and Achievement or, where appropriate, an equivalent Industry Evidence Guide (for details refer to the Companion Volume Assessment Guidelines).
- Assessors must satisfy the requirements of the National Vocational Education and Training Regulator (Australian Skills Quality Authority, or its successors).

Links

Companion Volume implementation guides are found in VETNet -

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