



Australian Government

MEAMEC0074 Reassemble aircraft piston engines

Release: 1

MEAMEC0074 Reassemble aircraft piston engines

Modification History

Release 1. Application changed. Performance Criteria changed. Foundation Skills made explicit. Assessment Requirements clarified. Supersedes and is equivalent to MEA395 Reassemble aircraft piston engines.

Application

This unit describes the skills and knowledge to apply hand skills and use theory knowledge and maintenance publication procedures to reassemble aircraft piston engines during workshop repair and/or overhaul. Note that this relates to the bare engine and does not include the assembly of a quick engine change (QEC) unit. For QEC build-up refer to unit MEA396 Assemble aircraft piston engine quick engine change unit.

This unit applies to fixed and rotary wing aircraft piston engines and components. Work can be performed individually or as a member of a team.

The unit is used in workplaces that operate under the airworthiness regulatory systems of the Civil Aviation Safety Authority (CASA) and the Defence Aviation Safety Authority (DASA).

Any other relevant legislation, industry standards and codes of practice within Australia must be applied.

Pre-requisite Unit

MEA107 Interpret and use aviation maintenance industry manuals and specifications

MEA154 Apply work health and safety practices in aviation maintenance

MEA155 Plan and organise aviation maintenance work activities

MEA156 Apply quality standards during aviation maintenance activities

MEA157 Complete aviation maintenance industry documentation

MEA158 Perform basic hand skills, standard trade practices and fundamentals in aviation maintenance

Competency Field

Aviation maintenance

Elements and Performance Criteria

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Prepare to assemble	1.1 Interpret and match engine build requirements by part and serial

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piston engine	numbers 1.2 Gather correct engine sub-assemblies and components for engine assembly and confirm their serviceability state and modification status in accordance with the relevant maintenance documentation and quality procedures 1.3 Obtain required hardware and plumbing and confirm as approved items
2. Reassemble piston engine	2.1 Prepare piston engine sub-assemblies and components for reassembly in accordance with maintenance manual and enterprise procedures 2.2 Assemble and adjust components in accordance with the maintenance manual and/or enterprise procedures, and seek required supervisory guidance for complex adjustments 2.3 Assemble engine and adjust components and linkages in accordance with maintenance data requirements while observing relevant work health and safety (WHS) procedures, including the use of material safety data sheets (MSDSs) and personal protective equipment (PPE) 2.4 Prepare reassembled engine for testing 2.5 Complete required documentation in accordance with standard enterprise procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

- Reading skills to interpret maintenance documentation, procedures, specifications (allowable limits) and manufacturer's instructions.
- Writing skills to complete maintenance documentation.
- Numeracy skills to interpret and communicate data and technical information.

Other foundation skills essential to performance are explicit in the performance criteria of this unit.

Unit Mapping Information

Release 1. Supersedes and is equivalent to MEA395 Reassemble aircraft piston engines.

Links

Companion Volume implementation guides are found in VETNet –

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

Assessment Requirements for MEAMEC0074 Reassemble aircraft piston engines

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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 reassemble the following piston engine subassemblies on at least one engine type maintained by the enterprise:

- crankcase assembly
- cylinder assemblies
- external lubrication system components
- propeller governor (where applicable to the enterprise)
- fuel system components
- ignition system components
- exhaust system components
- turbocharger and waste gate (where applicable to the enterprise).
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Knowledge Evidence

There must be evidence the candidate has knowledge of:

- how to obtain relevant material safety data sheets (MSDSs)
- the use of applicable items of personal protective equipment (PPE) for reassembling aircraft piston engines
- enterprise procedures, including work health and safety (WHS) and quality, for reassembling aircraft piston engines
- aircraft piston engine fault diagnosis techniques
- aircraft piston engine system and component operation
- aircraft piston engine reassembly and component adjustment requirements.
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Assessment Conditions

Skills must have been demonstrated under routine supervision in the workplace or in a simulated environment that reflects workplace conditions and contingencies encountered in reassembling aircraft piston 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 reassembling aircraft piston engines
- 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.

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