



**Australian Government**

# **MEA333 Maintain aircraft piston engine components or parts**

**Release: 1**

# MEA333 Maintain aircraft piston engine components or parts

## Modification History

Release 1 - New unit of competency

## Application

This unit of competency requires application of hand skills and use of maintenance documentation to dismantle, inspect, maintain and assemble aircraft piston engine components or parts during scheduled or unscheduled maintenance under the guidance of a qualified person. Work under the guidance of a qualified person may be performed individually or as part of a team.

Applications include piston engine components or parts in a workshop.

The unit is part of a Mechanical Certificate II training pathway. Achievement of this unit will contribute towards the attainment of units MEA392 Disassemble aircraft piston engines, MEA393 Repair and/or overhaul aircraft piston engine cylinder assembly components, MEA394 Repair and/or overhaul aircraft piston engine crankcase assembly components and MEA395 Reassemble aircraft piston engines.

The unit is used in workplaces that operate under the airworthiness regulatory systems of the Australian Defence Force (ADF) and the Civil Aviation safety Authority (CASA).

## Pre-requisite Unit

|        |  |
|--------|--|
| MEA101 | Interpret work health and safety practices in aviation maintenance                           |
| MEA103 | Plan and organise aviation maintenance work activity   |
| MEA105 | Apply quality standards applicable to aviation maintenance processes                         |
| MEA107 | Interpret and use aviation maintenance industry manuals and specifications                   |
| MEA108 | Complete aviation maintenance industry documentation   |
| MEA109 | Perform basic hand skills, standard trade practices and fundamentals in aviation maintenance |

## Competency Field

Aviation maintenance

## Unit Sector

## Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

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|--|---|
| 1. Prepare to dismantle inspect, maintain and assemble piston engine components or parts | 1.1 Maintenance and/or repair requirements as defined by the qualified person, standard enterprise procedures and the relevant maintenance documentation are understood   |
|  | 1.2 Tagging and repair instructions are accurately specified in accordance with standard enterprise procedures and as directed by a qualified person for parts requiring specialist repair  |
|  | 1.3 Appropriate materials, tools, equipment and assembly or fabrication jigs, where applicable, are selected and prepared for the particular maintenance and repair requirements in accordance with standard enterprise procedures and relevant maintenance documentation   |
| 2. Dismantle, inspect, maintain and assemble aircraft piston engine components or parts  | 2.1 Components are removed and/or disassembled in accordance with standard enterprise procedures, relevant maintenance documentation and qualified person guidance while observing all relevant work health and safety (WHS) requirements, including the use of material safety data sheets (MSDS) and items of personal protective equipment (PPE) |
|  | 2.2 Routine maintenance, repair or modification procedures are carried out, as approved by relevant manufacturers' bulletins or procedures, in accordance with required standard enterprise procedures and specifications while observing all relevant WHS requirements, including the use of MSDS and items of PPE                                 |
|  | 2.3 Component parts are assembled within specified tolerances and in accordance with standard enterprise procedures and the appropriate maintenance documents   |
|  | 2.4 Where applicable, and as required by the qualified person, assistance is provided in the final adjustment   |

- and testing of components to confirm serviceability
3. Complete maintenance, repair or modification activities
- 3.1 Required documentation is completed and processed in accordance with standard enterprise procedures
- 3.2 Maintained/repaired or modified components are tagged, sealed and packaged within specified procedures

## Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

## Range of Conditions

This field allows for different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

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| <b>Routine work:</b>                        | <ul style="list-style-type: none"><li>• Is carried out using basic operational knowledge and a defined range of skills ('routine' work is that which follows a customary or regular course or procedure)</li></ul>  |
| <b>Work outcomes</b>                        | <ul style="list-style-type: none"><li>• Are achieved by applying known solutions chosen from a limited range of pre-determined options consistent with standard enterprise procedures. This includes accepting responsibility for own work in terms of quality of outcomes using pre-determined specifications of quality</li></ul>       |
| <b>Scope of work:</b>                       | <ul style="list-style-type: none"><li>• Note that the scope of any repair or modification and the procedure to be followed will be provided by the qualified person, and will be within the scope of the unit of competency MEA109 Perform basic hand skills, standard trade practices and fundamentals in aviation maintenance</li></ul> |
| <b>Maintain includes:</b>                   | <ul style="list-style-type: none"><li>• Removal and installation, cleaning, inspection for wear or damage and consequent replacement of parts, and routine adjustment and lubrication where applicable, in accordance with standard enterprise procedures</li></ul>   |
| <b>Components to be maintained include:</b> | <ul style="list-style-type: none"><li>• Hoses, pipes, ducts and components of:<ul style="list-style-type: none"><li>• cooling systems</li><li>• engine cylinder assemblies</li><li>• engine crankcase assemblies</li><li>• accessory drives</li><li>• lubrication systems</li></ul></li></ul>   |
| <b>Procedures and requirements include:</b> | <ul style="list-style-type: none"><li>• Industry procedures specified by manufacturers, regulatory authorities or the enterprise</li></ul>  |

## Unit Mapping Information

Release 1 – equivalent to MEA333B Dismantle, inspect, maintain and assemble aircraft piston engine components or parts

## Links

Companion Volume implementation guides are found in VETNet -

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