



**Australian Government**

# **MEA368 Shot peen aircraft components**

**Release: 2**

# MEA368 Shot peen aircraft components

## Modification History

Release 2. Equivalent to MEA368 Shot peen aircraft components with amended prerequisite codes.

## Application

This unit of competency requires application of hand skills and the use of relevant process documentation to shot peen aircraft components, such as structural components and components of engines, propellers and landing gear shock struts from fixed and rotary wing aircraft during scheduled or unscheduled maintenance.

The unit is part of the Mechanical Certificate IV training pathway and 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

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

## Unit Sector

## Elements and Performance Criteria

Elements describe the essential outcomes.

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

1. Prepare for shot peening task
  - 1.1 Process documentation is obtained and correctly interpreted
  - 1.2 Shot peening equipment is prepared in accordance with the applicable process
2. Apply shot peening process to Almen strip
  - 2.1 The correct Almen strip is selected and fitted and equipment set up with the correct stand-off distance and regulated air pressure or spindle speed in accordance with the process documentation
  - 2.2 Applicable work health and safety (WHS) provisions are observed, including the use of material safety data sheets (MSDS) and personal protective equipment (PPE)
  - 2.3 The process is correctly applied to the Almen strip
  - 2.4 The Almen strip distortion is measured to ensure that it is within the specified tolerance
  - 2.5 Equipment settings are adjusted and the Almen strip test repeated, if required
  - 2.6 Settings that produce specified Almen strip distortion are recorded and the test strip is presented for inspection
3. Apply shot peening process to component
  - 3.1 The component is cleaned and masked in accordance with process documentation
  - 3.2 Shot peening is applied in accordance with the process documentation using equipment settings derived from Almen test strip and while observing all WHS requirements, including use of MSDS and PPE
  - 3.3 The shot peened surface is checked for required density and coverage and re-peened, if necessary
  - 3.4 The shot peened component is checked for cleanliness to ensure that all contaminants have been removed in accordance with the process documentation
4. Complete shot peening task
  - 4.1 Task completion is recorded in accordance with standard enterprise procedures
  - 4.2 Shot peened component is presented for inspection, along with Almen test strip and completed documentation

- 4.3 Where applicable, the component is tagged, sealed or packaged in accordance with 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>Shot peening equipment includes:</b>         | <ul style="list-style-type: none"><li>• Air pressure or rotor propulsion of shot and either fixed or portable shot peen units</li></ul>  |
| <b>Stand-off distance applies to:</b>           | <ul style="list-style-type: none"><li>• nozzle distance from surface for air pressure shot peening processes, or</li><li>• spindle distance from job for rotor shot peening</li></ul>                |
| <b>Regulated air pressure or spindle speed:</b> | <ul style="list-style-type: none"><li>• The specified air pressure applied to the shot nozzle or the specified revolutions per minute (r.p.m.) of the spindle in the rotor peening process</li></ul> |
| <b>Procedures and requirements include:</b>     | <ul style="list-style-type: none"><li>• Industry standard procedures specified by manufacturers, regulatory authorities or the enterprise</li></ul>  |

## Unit Mapping Information

Release 2. Equivalent to MEA368 Shot peen aircraft components

## Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=ce216c9c-04d5-4b3b-9bcf-4e81d0950371>