



Australian Government

MEASTR0015 Fabricate advanced structural components for aircraft

Release: 1

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Modification History

Release 1. Application changed. Elements and Performance Criteria changed. Foundation Skills made explicit. Range of Conditions removed, and relevant information moved to Assessment Requirements. Assessment Requirements clarified. Supersedes and is equivalent to MEA421 Fabricate advanced structural components for aircraft.

Application

This unit describes the skills and knowledge required to apply hand skills and use drawings, specifications and maintenance publications to fabricate advanced structural components involving complex and multiple curves and section shapes from aluminium alloys and steel alloys at various temper during scheduled or unscheduled maintenance. Work may be performed individually or as part of a team.

Applications include components for fixed and rotary wing aircraft.

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

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

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1. Interpret specifications and organise materials	1.1 Determine materials requirements using specifications and drawings 1.2 Determine procedure for fabricating component or components to plan equipment use and ensure specifications will be met 1.3 Identify required materials in accordance with specifications 1.4 Organise required materials and equipment in accordance with standard enterprise procedures
2. Prepare material and tooling	2.1 Translate required dimensions to materials in accordance with specifications 2.2 Prepare cutting and forming equipment and adjust to ensure accuracy of fabrication 2.3 Cut materials according to specifications, ensuring wastage is minimised, and maintain identification of surplus material, while observing all relevant work health and safety (WHS) requirements, including the use of material safety data sheets (MSDSs) and items of personal protective equipment (PPE) 2.4 Prepare materials requiring special treatment for appropriate processes 2.5 Perform solution treatment on materials in accordance with approved procedures and specifications
3. Form material	3.1 Manufacture required templates, where required, by forming method 3.2 Design and manufacture press tools as required by selected forming method 3.3 Operate forming equipment to form material in accordance with drawings and specifications 3.4 Perform required hand forming of materials to meet specifications
4. Hand correct fabricated components	4.1 Check components for irregularities and determine correction requirements to meet specifications 4.2 Remove irregularities to meet required dimensions and specifications
5. Inspect components	5.1 Inspect fabricated components to confirm dimensional accuracy and specifications are met 5.2 Use required checking fixtures to ensure requirements are met 5.3 Prepare components requiring special or further treatment for the

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	appropriate processes 5.4 Tag or identify completed components in accordance with 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 specifications and drawings.
- Numeracy skills to interpret technical information including drawings.

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 MEA421 Fabricate advanced structural components for aircraft.

Links

Companion Volume implementation guides are found in VETNet – -

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