



Australian Government

**MEA365 Assess structural
repair/modification requirements and
evaluate structural repairs and
modifications**

Release: 1

MEA365 Assess structural repair/modification requirements and evaluate structural repairs and modifications

Modification History

Release 1 - New unit of competency

Application

This unit of competency requires interpretation of structural repair and modification data to determine required action and to determine the compliance with airworthiness requirements of completed structural repairs or modifications. In addition, the performance of colour contrast dye penetrant non-destructive testing (NDT) on applicable components is included.

Applications include both fixed and rotary wing aircraft.

The unit covers some of the competencies required to progress from an Aircraft Maintenance Engineer (AME) at Certificate IV to the granting of a chosen maintenance certification licence under Civil Aviation Safety Regulation (CASR) Part 66, in accordance with the licensing provisions in the Companion Volume Implementation Guide.

The skills and knowledge covered by the units of competency listed in the MEA Aeroskills Training Package for Aircraft Maintenance Engineer at Certificate IV are prerequisite to the attainment of the elements of competency specified in this unit. This includes full coverage of the CASR Part 66 Syllabus subjects/topics listed in the Companion Volume CASA Interface.

Pre-requisite Unit

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. Assess structural repair or modification requirements | 1.1 Structural repair requirements are determined from maintenance manuals or approved repair schemes |
| | 1.2 Damage beyond repair scheme limits is referred to relevant personnel/authorities |

- 1.3 Modification requirements are determined from approved drawings and specifications/ instructions or requirements are referred to relevant personnel/authorities
- 1.4 Completed work is evaluated for compliance with airworthiness requirements
2. Perform colour contrast dye penetrant NDT
 - 2.1 Inspection requirements are identified from relevant maintenance data or to confirm a visually identified defect
 - 2.2 Surfaces to be inspected are prepared for the dye penetrant process
 - 2.3 Dye penetrant materials are selected in accordance with standard operating procedures
 - 2.4 Penetrant test is performed in accordance with standard operating procedures and while observing all relevant work health and safety (WHS) precautions
 - 2.5 Defect indications are checked and identified in accordance with standard operating procedures
 - 2.6 Penetrant testing equipment is correctly maintained and stored while observing all relevant WHS requirements, including the use of material safety data sheets (MSDS) and items of personal protective equipment (PPE)
 - 2.7 Results are recorded in accordance with standard enterprise and regulatory requirements

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.

Range of tasks and practices • Standard practices for structural repair and modification,

- includes:** including damage measurement and assessment against approved repair schemes
- The process for referral of damage details and modification requirements to relevant personnel/authorities
 - Supervision of repair scheme and modification incorporation, including evaluation of work against drawings and specifications
 - Scheduled or unscheduled maintenance
 - Individual activities or supervision of other personnel performing maintenance tasks classified in CASR part 145 as specialist maintenance, including:
 - non-destructive inspection
 - welding
 - surface plating
 - surface finishing
 - preparing structural repair components
 - machining
- Surface preparation for dye penetrant NDT includes:**
- Removal of surface finishes where applicable
 - Thorough cleaning of the surface
 - Drying of the surface
 - Processes included in standard procedures
- Dye penetrant materials include:**
- Appropriate surface cleaning materials
 - Emulsifiers
 - Developers
 - Materials for surface cleaning after testing
- Procedures and requirements include:**
- Industry standard procedures specified by manufacturers, regulatory authorities or the enterprise

Unit Mapping Information

Release 1 – equivalent to MEA365A Assess structural repair/modification requirements and evaluate structural repairs and modifications

Links

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