



Australian Government

MEA160 Manage aircraft and equipment system performance testing

Release: 1

MEA160 Manage aircraft and equipment system performance testing

Modification History

Release 1. Equivalent to MEA122 Manage aircraft/equipment system performance testing.
Code changes due to changed titles.

Application

This unit of competency describes the skills and knowledge required to use performance testing in establishing the airworthiness state of aircraft and aircraft systems, through means such as aircraft flight testing, engine ground runs, system functional tests, and test equipment calibration. Work may be performed individually or as part of a team.

The unit applies to performance testing during scheduled and unscheduled maintenance. It is used in workplaces that operate under the airworthiness regulatory systems of the Australian Defence Force (ADF) and the Civil Aviation Safety Authority (CASA).

This unit forms part of the CASA requirement for maintenance certification licences under Civil Aviation Safety Regulation (CASR) Part 66. Where a CASA licensing outcome is sought, users must refer to the licensing provisions in the MEA Aeroskills Companion Volume Implementation Guide.

Pre-requisite Unit

MEA126 Manage aircraft maintenance activities

Competency Field

Aviation maintenance management

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1. Plan and specify performance tests for aircraft and equipment systems

PERFORMANCE CRITERIA

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

- 1.1 Establish performance test requirements for aircraft and equipment system according to airworthiness regulations, policies, and procedures, including work health and safety (WHS) requirements associated with engine running and system functional testing

ELEMENTS**PERFORMANCE CRITERIA**

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| | 1.2 Program aircraft and systems performance tests in conjunction with designated personnel |
| | 1.3 Communicate aircraft and systems performance test specifications to designated personnel according to organisational policies and procedures |
| | 1.4 Manage test equipment calibration according to regulatory requirements and organisational policies and procedures |
| 2. Assess aircraft and equipment systems performance | 2.1 Assess test results for compliance with test specifications |
| | 2.2 Identify and diagnose non-compliant test results in consultation with designated personnel |
| | 2.3 Assess aircraft and equipment systems for airworthiness compliance |
| 3. Produce performance testing documentation | 3.1 Produce and report rectification recommendations according to airworthiness policies and procedures |
| | 3.2 Document test results according to approved guidelines |

Foundation Skills

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

Unit Mapping Information

Release 1. Equivalent to MEA122 Manage aircraft/equipment system performance testing.

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 MEA160 Manage aircraft and equipment system performance testing

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Performance Evidence

There must be evidence the candidate has completed the tasks outlined in the elements and performance criteria of this unit, which must include the ability to:

- manage the following aircraft and equipment system performance testing:
 - aircraft maintenance and validation test flights
 - engine ground runs
 - system functional tests
 - test equipment calibration
- produce and report recommendations from performance testing, including:
 - completed test schedules
 - auditable reports.

During the course of the above performance testing, the candidate must:

- demonstrate effective communication, consultation, and problem-solving skills when working with designated personnel to program and conduct performance testing and diagnose non-compliance
- demonstrate effective reading and writing skills to complete the required research into performance test requirements and write reports
- observe regulatory requirements
- apply work health and safety (WHS) requirements associated with engine ground runs and system functional testing.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- procedures and documentation action for test flights and engine ground runs
- procedures for functional testing of systems and evaluating results
- regulatory requirements and organisational policies and procedures relating to:
 - managing test equipment calibration
 - assessing aircraft and equipment systems for airworthiness compliance
 - protocols for communicating aircraft and systems performance test specifications
 - WHS procedures relating to engine ground runs and system functional testing

- documenting test results
- key compliance requirements for performance test specifications
- airworthiness regulations, policies and procedures relating to establishing and reporting performance test requirements for aircraft and equipment system, including:
 - Civil Aviation Regulations (CARs) and associated advisory circulars (ACs)
 - Civil Aviation Safety Regulations (CASRs), Manuals of Standards and associated Acceptable Means of Compliance and Guidance Material
 - AAP 7001.053 Technical Airworthiness Maintenance Manual
 - Airworthiness Directives (ADs)
 - maintenance management plan
 - aviation maintenance organisation expositions
 - continuing airworthiness management organisation expositions
 - procedures manuals
 - work instructions
 - flight test schedules
 - maintenance manuals.

Assessment Conditions

The following conditions of assessment represent the requirements of the regulators (Australian Defence Force [ADF] and Civil Aviation Safety Authority [CASA]) and maintenance stakeholders, and must be rigorously observed.

This unit may be assessed on the job, off the job, or a combination of both. Where assessment occurs off the job, an appropriate simulation must be used where the range of conditions reflects realistic workplace situations encountered when managing aircraft and equipment system performance testing.

The candidate must be permitted to refer to relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals, and reference materials.

The candidate must have access to:

- tools, equipment, and materials required to demonstrate the performance evidence above
- designated personnel required for the tasks described in the elements, performance criteria and performance evidence, including:
 - maintenance test pilots
 - authorised engineering officers
 - authorised airworthiness representatives
 - accountable managers/responsible managers
 - senior maintenance managers
 - continuing airworthiness management personnel
 - authorised maintenance personnel.

Candidate capability of providing the required performance and knowledge evidence must be established via the records in the Maintenance Management Competency Log. Where the individual does not have a Competency Log, evidence of capability can be gathered through direct observation, supervisor's reports, project work, samples and questioning.

Assessors of this unit must satisfy the assessor requirements in applicable vocational education and training legislation, frameworks and/or standards.

Where the unit is to be used for CASA licensing purposes the assessor must also meet the criteria specified in the CASR Part 147 Manual of Standards.

Links

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