



Australian Government

MEAMEC0053 Perform borescope inspections

Release: 1

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Modification History

Release 1. Application changed. Performance Criteria changed. Foundation Skills made explicit. Assessment Requirements clarified. Supersedes and is equivalent to MEA366 Perform borescope inspections.

Application

This unit describes the skills and knowledge required to perform and assess the results of remote visual inspections using borescopes, in conjunction with units relating to the inspection, testing and troubleshooting of piston engines and gas turbine engines (either installed in aircraft or in workshops).

If this unit is selected, one of the following units should also be selected:

- MEA313 Inspect, test and troubleshoot piston engine systems and components
- MEAMEC0013 Inspect, test and troubleshoot gas turbine engine systems and components
- MEA322 Test and troubleshoot gas turbine engine systems and components
- MEAMEC0067 Test gas turbine engines and engine modules after overhaul or repair

The unit is required for the grant of approval for Aircraft Maintenance Engineers to perform borescope inspections on aircraft system components and engines during scheduled or unscheduled maintenance.

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

Nil.

Competency Field

Aviation maintenance

Elements and Performance Criteria

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Set up borescope	1.1 Obtain and assemble applicable borescope equipment for use

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
equipment	1.2 Test assembled borescope equipment for correct operation
2. Perform borescope inspection	2.1 Prepare component or engine for safe borescope inspection in accordance with applicable maintenance data 2.2 Inspect borescope in accordance with applicable maintenance data or standard operating procedures
3. Record and assess borescope inspection results	3.1 Record and process borescope inspection results in accordance with standard enterprise procedures for the applicable borescope equipment 3.2 Record and report identified defects in accordance with standard enterprise procedures
4. Maintain and re-pack borescope equipment for storage	4.1 Disassemble, maintain and clean borescope equipment in accordance with manufacturer's instructions 4.2 Replace borescope equipment in transport or storage containers and store in accordance with standard 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 inspection documentation, procedures, specification (allowable limits) and manufacturer's instructions.
- Writing skills to complete inspection documentation.
- Numeracy skills to interpret and communicate data and technical information.

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 MEA366 Perform borescope inspections.

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 MEAMEC0053 Perform borescope inspections

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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 and demonstrated the ability to inspect borescopes at least two inspection events.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- types of borescopes and their applications
- how to assemble borescope equipment and prepare it for use
- use of associated imaging and recording equipment, including video and digital camera
- sources and uses of maintenance data to identify borescope inspection requirements, including:
 - borescope user manuals
 - engine maintenance manuals
 - servicing schedules
 - regulatory requirements, such as Airworthiness Directives or Special Technical Instructions
- borescope inspection techniques, safety, reporting and recording requirements
- types of borescope equipment, including:
 - rigid optical borescopes
 - flexible optical borescopes
 - video borescopes
 - camera attachments for optical borescopes
 - remote engine rotation equipment
- defect assessment techniques
- borescope maintenance and storage requirements.

Assessment Conditions

The following conditions of assessment represent the requirements of the regulators Defence Aviation Safety Authority (DASA) and Civil Aviation Safety Authority (CASA) and maintenance stakeholders and must be rigorously observed.

Skills must have been demonstrated under routine supervision in the workplace or in a simulated environment that reflects workplace conditions and contingencies encountered in performing borescope inspections. The following conditions must be met for this unit:

- use of suitable facilities, equipment and resources, including:
 - workplace procedures, manufacturing specifications, codes, standards, manuals, and reference materials relevant to performing borescope inspections
 - tools and equipment specified in maintenance documentation.
 - general-purpose tools and test equipment found in most routine situations.

Evidence of tasks demonstrating competency must be recorded in a log of industrial experience and achievement.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

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