



Australian Government

MEA310 Inspect, test and troubleshoot aircraft pneumatic systems and components

Release: 2

MEA310 Inspect, test and troubleshoot aircraft pneumatic systems and components

Modification History

Release 2. Equivalent to MEA310 Inspect, test and troubleshoot aircraft pneumatic systems and components with amended prerequisite codes.

Application

This unit of competency requires application of hand skills, standard trade practices and systems knowledge in the inspection, testing and troubleshooting of both fixed and rotary wing aircraft pneumatic systems and components during the performance of scheduled or unscheduled maintenance. Maintenance may be performed individually or as part of a team.

The unit is part of the Mechanical Certificate IV (Aircraft Maintenance Stream) training pathway.

The unit is used in workplaces that operate under the airworthiness regulatory systems of the Australian Defence Force (ADF) and the Civil Aviation safety Authority (CASA).

Where a CASA licensing outcome is sought this unit forms part of the CASA requirement for the granting of the chosen maintenance certification licence under Civil Aviation Safety Regulation (CASR) Part 66, in accordance with the licensing provisions in the Companion Volume Implementation Guide.

Pre-requisite Unit

MEA303 Remove and install aircraft pneumatic system components

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. Inspect pneumatic systems and components | 1.1 Isolation tags already attached to the system or related systems are checked and aircraft configured for safe system inspection and operation in accordance with |
|---|--|

- specified procedures
- 1.2 Pneumatic system is visually or physically checked for external signs of defects in accordance with specified procedures while observing all relevant work health and safety (WHS) requirements
 2. Test pneumatic systems
 - 2.1 The aircraft and pneumatic systems are correctly prepared in accordance with specified procedures for the application of power
 - 2.2 Power is applied and system functionally tested in accordance with specified procedures for evidence of malfunction or leaks
 - 2.3 System calibration or adjustments are performed in accordance with specified procedures
 3. Prepare for troubleshooting
 - 3.1 Relevant maintenance documentation and modification status, including system defect/service difficulty reports, where relevant, are interpreted to identify an unserviceability
 4. Troubleshoot pneumatic systems
 - 4.1 Available information from maintenance documentation and inspection and test results is used, where necessary, to assist in fault determination
 - 4.2 Maintenance manual fault diagnosis guide and logical processes are used to ensure efficient and accurate troubleshooting to line replacement level
 - 4.3 Specialist advice is obtained, where required, to assist with the troubleshooting process
 - 4.4 Pneumatic system faults are located and the causes of the faults are clearly identified and correctly recorded in maintenance documentation, where required
 - 4.5 Fault rectification requirements are determined to assist in planning the repair or adjustment

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.

- | | |
|---|---|
| Pneumatic systems include: | <ul style="list-style-type: none">• De-icing• Air cycle air conditioning• Pressurisation• Fire-extinguishing |
| Components of pneumatic systems include: | <ul style="list-style-type: none">• Filters, valves, pumps, motors, actuators and regulators• Gauges (direct reading), temperature sensors, pressurisation controllers and temperature controllers• Heat exchangers, pressure vessels, condensers, compressors, expansion turbines and humidifiers• Rigid and flexible pipelines, hoses and fittings• Ducting |
| Electrical interface includes: | <ul style="list-style-type: none">• Associated electrical loom terminations and/or plugs |
| Procedures and requirements include: | <ul style="list-style-type: none">• Industry standard procedures specified by manufacturers, regulatory authorities or the enterprise |

Unit Mapping Information

Release 2. Equivalent to MEA310 Inspect, test and troubleshoot aircraft pneumatic systems and components

Links

Companion Volume implementation guides are found in VETNet -

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