



Australian Government

MEA318 Inspect aircraft hydro-mechanical, mechanical, gaseous and landing gear systems and components

Release: 2

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Modification History

Release 2. Equivalent to MEA318 Inspect aircraft hydro-mechanical, mechanical, gaseous and landing gear 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 of aircraft hydro-mechanical, mechanical, gaseous and landing gear systems and components of fixed wing aircraft 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 Aircraft Maintenance Engineer (AME) Certificate IV training pathways.

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
MEA305	Remove and install aircraft fixed wing flight control system components
MEA398	Remove and install aircraft hydro-mechanical and landing gear 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.

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| 1. Inspect hydro-mechanical 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 | Hydro-mechanical system and system components are visually or physically checked for external signs of defects in accordance with specified procedures while observing all relevant work health and safety (WHS) requirements, including the use of material safety data sheets (MSDS) and items of personal protective equipment (PPE) |
| 2. Inspect landing gear systems and components | 2.1 | Isolation tags already attached to the system or related systems are checked and aircraft configured, including jacking, where necessary, for safe system inspection and operation in accordance with specified procedures |
| | 2.2 | Landing gear system and system components are visually or physically checked for external signs of defects in accordance with specified procedures while observing all relevant WHS requirements, including the use of MSDS and items of PPE |
| 3. Inspect gaseous systems and components | 3.1 | 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 |
| | 3.2 | Gaseous system and system components are visually or physically checked for external signs of defects in accordance with specified procedures while observing all relevant WHS requirements |
| 4. Inspect mechanical systems and components | 4.1 | 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 |
| | 4.2 | Mechanical system and system components are visually or physically checked for external signs of defects in accordance with specified procedures while observing |

all relevant WHS 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.

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|---|---|
| Hydro-mechanical systems include: | <ul style="list-style-type: none">• Hydraulic systems• Fuel systems• |
| Components of hydro-mechanical systems include: | <ul style="list-style-type: none">• Hydraulic accumulators, filters, reservoirs, valves, pumps, motors, actuators, regulators and direct reading gauges• Fuel system filters, valves, pumps, and rigid and flexible storage cells/tanks• Rigid and flexible pipelines, hoses and fittings |
| Landing gear systems include:
(components of landing gear retraction, steering and braking systems are covered by hydro-mechanical and mechanical system components) | <ul style="list-style-type: none">• Retraction systems• Steering systems• Brake systems, including anti-skid, where applicable |
| Landing gear components include: | <ul style="list-style-type: none">• Wheel assemblies• Brake units• Struts/oleos |
| Gaseous systems include: | <ul style="list-style-type: none">• Pneumatic• Air cycle air conditioning• Pressurisation• Fire-extinguishing |
| Gaseous system components include: | <ul style="list-style-type: none">• Gauges (direct reading), temperature sensors, pressurisation controllers and temperature controllers• Heat exchangers, pressure vessels, condensers, compressors, expansion turbines, humidifiers, valves and |

	actuators
	• Rigid and flexible pipelines and fittings • Ducting
Mechanical systems include:	• Mechanical operating and locking systems • Mechanical flight control systems or the mechanical elements of power-assisted flight control systems
Mechanical system components include:	• Cables, pulleys, guides, fairleads, tension regulators, chains and sprockets • Control rods, torque tubes, bellcranks, screwjacks, clutches, springs, bearings and gears • Control sticks, wheels, columns, trim wheels or handles, and rudder pedals
Procedures and requirements include:	• Industry standard procedures specified by manufacturers, regulatory authorities or the enterprise

Unit Mapping Information

Release 2. Equivalent to MEA318 Inspect aircraft hydro-mechanical, mechanical, gaseous and landing gear 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>