



Australian Government

**Assessment Requirements for
MEAA VI0004 Remove and install basic
aircraft instrument system components**

Release: 1

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Modification History

Release 1. Application changed. Elements and Performance Criteria changed. Foundation Skills made explicit. Range of Conditions removed, and relevant information moved to Assessment Requirements. Assessment Requirements clarified. Supersedes and is equivalent to MEA204 Remove and install basic aircraft instrument system components.

Performance Evidence

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

- remove and install basic aircraft instrument system components during scheduled or unscheduled maintenance activity to meet requirements on at least one component from each of the following:
 - pitot/static system components, airspeed indicators (ASIs), vertical speed indicators (VSIs) and counter pointer altimeters
 - directional gyros (DGs) and artificial horizons (AHs), both air and electrically driven
 - turn and bank and slip/turn coordinators
 - remote reading gyro compass system (may be omitted if not relevant to the enterprise)
 - direct reading compasses
 - piston engine indication system components (direct reading measuring instruments and temperature indication)
 - gas turbine engine indication system components (may be omitted if not relevant to the enterprise)
 - electrical systems indication (voltage, current, power and frequency)
 - basic fuel quantity indication system components
 - pneumatic/vacuum indication system components
- identify and locate the following during the above maintenance activity:
 - piston engine system temperature, pressure, speed (including mechanical and electrical tachometers), manifold pressure/boost (including aneroid type, syphon bellows and dual compartment type)
 - gas turbine engine indicating system temperature, pressure, speed, torque, fuel flow and vibration (may be omitted if not relevant to the enterprise)
 - auxiliary direct reading systems, including hydraulic pressure, pneumatic pressure and vacuum, and fuel storage quantities
 - flight systems, including attitude, altitude, air speed and outside air temperature (OAT)
 - direct reading compasses
 - remote reading gyro compass system components (may be omitted if not relevant to enterprise)

- correctly handle and observe maintenance precautions relating to gyroscopes, gimbals, and pitot/static systems (connections, heating and protrusions) during maintenance activity
- provide evidence of transferability of skills and knowledge related to removal and installation through application across the specified range of basic aircraft instrument system components from the above maintenance activity
- apply cleanliness requirements and safety precautions at all times, and as relevant to the systems being maintained, and follow work practices associated with electrostatic sensitive devices.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- component attachment methods
- connection of hardware and plugs
- work health and safety (WHS) practices relevant to the removal and installation of basic aircraft system components
- approved maintenance documentation and aircraft publications relating to basic aircraft instrument systems
- handling precautions relating to:
 - electrostatic sensitive devices
 - gyroscopes and gimbals
- basic instrument system and component operating principles relating to:
 - atmospheric and barometry
 - terminology and unit of measurement conversion
 - aircraft instrumentation requirements
 - instrument panel layout
 - pressure sensing elements
 - pitot static systems and testing requirements
 - gyroscopic principles
 - direct reading compasses
 - remote reading gyro compasses
 - temperature sensors
 - fluid quantity indication systems
- general layout and components of the following systems:
 - flight systems, including:
 - altitude (direct reading altimeters)
 - attitude, including directional gyros and artificial horizons (both air and electrically driven), turn and slip and turn coordinator
 - airspeed
 - OAT
 - remote reading gyro compass systems

- piston engine indication systems, including:
 - direct reading temperature
 - direct reading pressure (for example, oil pressure)
 - speed, including mechanical and electric tachometers
 - manifold pressure/boost, including aneroid, siphon bellows and dual compartment types
- gas turbine engine indication systems, including:
 - temperature and pressure
 - speed, including mechanical and electric tachometers
 - torque
 - fuel flow
 - vibration
- auxiliary direct reading systems, including:
 - electrical
 - hydraulic pressure
 - pneumatic pressure and vacuum
 - basic fuel quantity indication
- regulatory requirements and standard procedures relevant to the removal and installation of basic aircraft system components.

Assessment Conditions

The following conditions of assessment represent the requirements of the regulators (DASA and 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 removing and installing basic aircraft instrument system components. 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 removing and installing basic aircraft instrument system components
 - tools and equipment specified in maintenance manuals
 - items of ground support 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.

Links

Companion Volume implementation guides are found in VETNet -

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

