



Australian Government

AVIB3006A Inspect and report on serviceability of aerodrome lighting systems

Release 1

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Modification History

Release 1. This is the first release of this unit.

This unit replaces and is equivalent to AVIB3002B Inspect and report on aerodrome lighting systems.

Unit Descriptor

This unit involves the skills and knowledge required to inspect and report on serviceability of aerodrome lighting systems and includes inspecting and reporting faults in aerodrome lighting, making any identified unserviceable condition safe, and confirming and reporting the return of aerodrome lighting to serviceable condition.

Application of the Unit

Work must be carried out in compliance with the relevant regulatory requirements of the Civil Aviation Safety Authority (CASA).

Use for Australian Defence Force (Defence) Aviation is to be in accordance with relevant Defence Orders and Instructions and applicable CASA compliance.

Work is performed under limited supervision.

Work involves the application of relevant regulations, principles, protocols and procedures when inspecting and reporting on the serviceability of aerodrome lighting systems as part of aerodrome operations. All activities are carried out in accordance with relevant organisational policy and workplace procedures.

Licensing/Regulatory Information

Legislative/regulatory and/or personnel licensing/certification requirements are applicable to this unit.

Pre-Requisites

Nil.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

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| 1 Inspect aerodrome lighting serviceability | 1.1 | Access to aerodrome is arranged with appropriate authorities |
| | 1.2 | Lighting systems are prepared for serviceability inspection |
| | 1.3 | Lighting systems are inspected for serviceability, and faults or hazardous situations that may affect aircraft safety are identified |
| | 1.4 | Hazardous situation created by faulty lighting systems is rectified or made safe as required, in accordance with workplace procedures and regulatory requirements |
| 2 Report faults in aerodrome lighting | 2.1 | Requirement for official notification of lighting faults is assessed |
| | 2.2 | Suitably qualified aerodrome staff or electrical contractors are contacted for repairs as required |
| | 2.3 | Relevant authorities or organisations are notified of damage to aerodrome lighting, switching mechanisms and circuits in accordance with workplace procedures and regulatory requirements |
| 3 Make unserviceable condition safe | 3.1 | Faulty lights are replaced or repaired in accordance with workplace procedures and regulatory requirements, with minimal disruption to aircraft movements |
| | 3.2 | Relevant authorities or organisations are notified of works that may disrupt aerodrome operations in accordance with workplace procedures and regulatory requirements |
| | 3.3 | Temporary lighting is installed as required |
| 4 Report return of aerodrome lighting to serviceable condition | 4.1 | Restored aerodrome lighting systems are inspected and confirmed for serviceability |
| | 4.2 | Temporary lighting is removed |
| | 4.3 | Relevant authorities or organisations are notified of restoration of lighting serviceability in accordance with workplace procedures and regulatory requirements |

Required Skills and Knowledge

This section describes the knowledge and skills required for this unit.

Required knowledge:

- Aerodrome layout including access routes
- Aircraft schedules and their use in inspecting and reporting on serviceability of aerodrome lighting systems
- Allowable minor repairs under electrical codes and/or workplace procedures and arrangements for engaging a qualified electrician to carry out repairs
- Basic features and characteristics of aerodrome lighting systems
- Different operating conditions:
 - all weather conditions
 - day and night
 - variety of terrain conditions
 - various forms of transport such as vehicle, other motorised/towed equipment
- Effects on serviceability of aerodrome caused by lighting faults
- Equipment used in inspecting and reporting on serviceability of aerodrome lighting systems
- Operation of airband radio equipment as used to communicate with air traffic control (ATC) and/or pilots
- Permanent aerodrome lighting:
 - aerodrome beacon
 - approach lighting
 - apron:
 - edge lights
 - flooding lights
 - illuminated wind indicators
 - obstacle lighting
 - Pilot Activated Lighting (PAL)
 - Precision Approach Path Indicator (PAPI)
 - runway:
 - end identification lights
 - end lights
 - edge lights
 - threshold lights
 - standby power
 - taxiway:

- centreline lights
- edge lights
- 'T' Visual Approach Slope Indicator System (T-VASIS)
- Problems, safety hazards and risks that exist when inspecting serviceability of aerodrome lighting systems and related assessment/management measures that may need to be taken into account
- Procedures for servicing and minor maintenance of equipment used in inspecting and reporting on serviceability of aerodrome lighting systems
- Purpose and application of aerodrome markers, markings and temporary lighting
- Radio frequencies applicable to the aerodrome:
 - Automatic Terminal Information Services (ATIS)
 - Common Traffic Advisory Frequency (CTAF)
 - other air traffic agencies (such as ATC or Flight Information Region (FIR))
 - Aerodrome Weather Information Broadcast (AWIB)
- Relevant information/documents:
 - Aerodrome Emergency Plan (AEP) and procedures to be followed for each aerodrome emergency
 - aerodrome Drug and Alcohol Management Plan (DAMP)
 - Aerodrome Manual
 - aerodrome safety management system (SMS) and safety/security policies and principles of risk assessment and risk management
 - Aeronautical Information Publication (AIP)
 - AIP - En Route Supplement Australia (ERSA)
 - airline timetables
 - Airside Drivers Handbook and/or airside driving requirements for the aerodrome
 - Australian Standards
 - conditions of service, legislation and industrial agreements including workplace agreements and awards
 - equipment manufacturer specifications for inspecting and reporting on aerodrome lighting systems
 - induction and training material
 - logbooks
 - Manual of Standards (MOS Part 139 - Aerodromes)
 - Notices to Airmen (NOTAMs)
 - Operational checklists
 - plans and maps

- Relevant legislative and regulatory requirements relating to inspecting and reporting on the OLS as identified in:
 - Civil Aviation Safety Regulations (CASRs) and Manual of Standards (MOS) Part 139
 - Defence Orders and Instructions
 - environmental sustainability
 - standards and recommended practices (SARPs) of the International Civil Aviation Organization (ICAO)
 - workplace relations
 - work health and safety (WHS)/occupational health and safety (OHS) and environmental, procedures and regulations including Drug and Alcohol Management Plan (DAMP)
- Reporting procedures
- Requirements for completing relevant documentation and/or incident reporting
- Vehicle or other mobile obstacle markings and equipment:
 - company logo/identification
 - orange or yellow painting or distinctive marking (of vehicles regularly used on movement area)
 - warning lights (orange/amber/yellow) mounted to be visible through 360o
- Weather information and its implications for workplace operations
- Workplace procedures for inspecting and reporting on serviceability of aerodrome lighting systems

Required skills:

- Adapt appropriately to cultural differences in the workplace, including modes of behaviour and interactions with others
- Adapt to differences in equipment and operating environment in accordance with workplace procedures
- Apply the relevant systems (such as SMS) and procedures to assess and/or mitigate risk that might arise during inspecting and reporting on serviceability of aerodrome lighting systems
- Communicate effectively with others when inspecting and reporting on serviceability of aerodrome lighting systems
- Complete documentation related to inspecting and reporting on serviceability of aerodrome lighting systems
- Identify and correctly use equipment required to inspect and report on serviceability of aerodrome lighting systems such as:
 - computer
 - hand tools
 - lights
 - maintenance equipment

- markers
- radio/s - non-ops/HF radio, airband/VHF radio
- telephone
- vehicle with flashing light
- vehicle siren/loud speaker
- Implement WHS/OHS procedures and relevant regulations
- Interpret and follow operational instructions and prioritise work
- Modify activities according to workplace contingencies, situations and environments
- Monitor and anticipate operational problems and hazards and take appropriate action
- Monitor work activities in terms of planned schedule
- Operate electronic communications equipment to required protocols
- Read and interpret instructions, regulations, procedures and other information relevant to inspecting and reporting on serviceability of aerodrome lighting systems
- Report faults in aerodrome lighting
- Select and use required personal protective equipment (PPE) conforming to industry and WHS/OHS standards
- Work collaboratively with others when inspecting and reporting on serviceability of aerodrome lighting systems
- Work systematically with required attention to detail without injury to self or others, or damage to goods or equipment

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills, the range statement and the assessment guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the Elements, Performance Criteria, Required Skills, Required Knowledge and include demonstration of applying:

- required knowledge and skills
- relevant legislation and workplace procedures
- other relevant aspects of the range statement

Context of and specific resources for assessment

Performance is demonstrated consistently over time and in a suitable range of contexts.

Resources for assessment include access to:

- a range of relevant exercises, case studies and/or other simulated practical and knowledge assessment, and/or
- access to an appropriate range of relevant operational situations in the workplace.

In both real and simulated environments, access is required to:

- relevant and appropriate materials and equipment, and
- applicable documentation including workplace procedures, regulations, codes of practice and operation manuals..
- Assessment of this unit must be undertaken by a registered training organization.
- As a minimum, assessment of knowledge must be conducted through appropriate written/oral tests.
- Practical assessment must occur in an appropriate range of situations in the workplace

Method of assessment

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance.

- Aerodromes may include:
- certified aerodromes
 - Defence aerodromes
 - joint-user aerodromes
 - registered aerodromes
 - other (unclassified) aerodromes
- Relevant authorities for reporting purposes may include:
- aerodrome:
 - operator or delegated person
 - users
 - Air Traffic Control (ATC)
 - Australian Defence Force Command for military bases
 - Civil Aviation Safety Authority
 - NOTAM Office (Airservices Australia)
- Faults in aerodrome lighting may include:
- changes to temporary or permanent published aerodrome information
 - circuit failure
 - failure of:
 - aerodrome beacon
 - lighting to the wind indicator
 - obstruction lights
 - Pilot Activated Lighting (PAL)
 - hazardous situations resulting in some or all of the aerodrome lighting becoming unserviceable
 - partial lighting failures (such as described in MOS Part 139 – Aerodromes)
 - power supply failure
 - restoration of aerodrome serviceability
- Regulatory requirements may include:
- Defence Orders and Instructions
 - electrical codes and regulations
 - environmental sustainability
 - Civil Aviation Safety Regulations (CASRs)
 - standards and recommended practices (SARPs) of the International Civil Aviation Organization (ICAO)
 - workplace relations
 - work health and safety (WHS)/occupational health and safety (OHS) and environmental, procedures and regulations including Drug and Alcohol Management Plan (DAMP)
- Aerodrome movement area
- apron

- facilities include:
- clearway
 - markers, markings and aerodrome lighting
 - runway and runway strip
 - runway end safety area
 - taxiway and taxiway strip
- Persons notified may include:
- aerodrome tenants/users
 - airline personnel and managers
 - ATC
 - contractors
 - emergency services personnel
 - other aerodrome/workplace personnel and managers
 - relevant technical staff
 - safety personnel
 - security personnel
- Temporary lighting includes:
- battery powered lights
 - hard-wired portable lights
 - kerosene flares
 - solar powered lights
- Workplace procedures for making the lighting problem safe may include:
- closing movement area (aerodrome closure)
 - contacting aerodrome user
 - partial closure of movement area
- Suitable means of reporting may include:
- Method of Working Plan (MOWP)
 - Notices to Airmen (NOTAMs)
 - other written means of communication as is appropriate (fax, email)
 - verbal communications
- Procedures for initiating repairs or hazard removal may include:
- notifying appropriate aerodrome lighting personnel or electrical contractors
 - notifying relevant aerodrome personnel
 - removing hazard/s
 - serviceability inspection (following repairs)
 - undertaking repairs
- Hazards situations may include:
- aircraft:
 - movements
 - noise
 - propellers and rotors
 - dust
 - exposed electrical leads and connections
 - foreign object debris (FOD)
 - fumes
 - hazardous/toxic materials

- Workplaces may include:
- high voltage electrical cables
 - jet blast, propwash
 - other personnel airside
 - other vehicles airside
 - slippery surfaces
 - aerodrome environs
 - airside
 - entire aerodrome
 - landside
 - offices
- Workplace procedures may include:
- airside driving rules
 - company procedures
 - enterprise procedures
 - organisational procedures
 - standard operating procedures (SOPs)

Unit Sector(s)

Not applicable.

Competency Field

B - Equipment Checking and Maintenance