



Australian Government

AVIB3006 Inspect and report on serviceability of aerodrome lighting systems

Release: 1

AVIB3006 Inspect and report on serviceability of aerodrome lighting systems

Modification History

Release 1. This is the first release of this unit of competency in the AVI Aviation Training Package.

Application

This unit involves the skills and knowledge required to inspect and report on serviceability of aerodrome lighting systems, in compliance with relevant regulatory requirements of the Civil Aviation Safety Authority (CASA) and national operating standards.

It includes inspecting and reporting faults in aerodrome lighting, making identified unserviceable condition/s safe, and confirming and reporting the return of aerodrome lighting to serviceable condition.

This unit addresses aviation technical skill requirements (physical, mental and task-management abilities) related to aerodrome operations duties of ground operational personnel, and contributes to safe and effective performance in complex aviation operational environments.

Operations are conducted as part of recreational, commercial and military aircraft activities across a variety of operational contexts within the Australian aviation industry.

Work is performed independently or under limited supervision as a single operator or within a team environment.

Licensing, legislative, regulatory or certification requirements are applicable to this unit.

Use for Defence Aviation is to be in accordance with relevant Defence Orders, Instructions, Publications and Regulations.

Pre-requisite Unit

Not applicable.

Competency Field

B – Equipment Checking and Maintenance

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

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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 system/s 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 conditions 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 |

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Faults in aerodrome lighting must include one or more of the following:	• changes to temporary or permanent published aerodrome information • electrical circuit failure • failure of: • aerodrome beacon • wind indicator lighting • obstruction lights • pilot activated lighting (PAL) • hazardous situations resulting in some or all of the aerodrome lighting becoming unserviceable • partial lighting failures • power supply failure • restoration of aerodrome serviceability
Aerodrome movement area facilities must include:	• apron • clearway • markers, markings and aerodrome lighting • runway and runway strip • runway end safety area • taxiway and taxiway strip
Temporary lighting must include one or more of the following:	• battery-powered lights • hard-wired portable lights • kerosene flares • solar powered lights • vehicle lighting
Workplace procedures for making a lighting problem safe must include:	• closing movement area (aerodrome closure) • contacting aerodrome user • partial closure of movement area
Suitable means of reporting must include one or more of the following:	• method of working plan (MOWP) • Notice to Airmen (NOTAM) • other written means of communication as appropriate (fax, email)

Procedures for initiating repairs or hazard removal must include one or more of the following:

- verbal communications
- notifying appropriate aerodrome lighting personnel or electrical contractors
- notifying relevant aerodrome personnel
- removing hazard/s
- serviceability inspection (following repairs)
- undertaking repairs

Unit Mapping Information

This unit replaces and is equivalent to AVIB3006A Inspect and report on serviceability of aerodrome lighting systems.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=4725260a-0af3-4daf-912b-ef1c2f3e5816>

Assessment Requirements for AVIB3006 Inspect and report on serviceability of aerodrome lighting systems

Modification History

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Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements, performance criteria and range of conditions on at least one occasion and include:

- adapting to differences in equipment and operating environment in accordance with workplace procedures
- applying relevant legislation and workplace procedures
- applying relevant systems (such as safety management systems [SMS]) and procedures to assess and/or mitigate risk that might arise during inspecting and reporting on serviceability of aerodrome lighting systems
- communicating effectively with others when inspecting and reporting on serviceability of aerodrome lighting systems
- completing documentation related to inspecting and reporting on serviceability of aerodrome lighting systems
- identifying and correctly using equipment required to inspect and report on serviceability of aerodrome lighting systems:
 - 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
- implementing work health and safety (WHS)/occupational health and safety (OHS) procedures and relevant regulations
- interpreting and following operational instructions and prioritising work
- modifying activities in accordance with workplace contingencies, situations and environments
- monitoring and anticipating operational problems and hazards and taking appropriate action

- monitoring work activities in terms of planned schedule
- operating electronic communications equipment to required protocols
- reading, interpreting and following relevant regulations, instructions, procedures, information and signs
- reporting faults in aerodrome lighting
- selecting and using required personal protective equipment (PPE) conforming to industry and WHS/OHS standards
- working collaboratively with others
- working systematically with required attention to detail without injury to self or others, or damage to goods or equipment.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements, performance criteria and range of conditions and include knowledge of:

- 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 workplace procedures, and arrangements for engaging a qualified electrician to carry out repairs
- basic features and characteristics of aerodrome lighting systems
- company logo/identification
- 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
- orange or yellow painting or distinctive marking (of vehicles regularly used on movement area)
- 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 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 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 driver's 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)
- Notice to Airmen (NOTAM)
- operational checklists
- plans and maps
- relevant legislative and regulatory requirements relating to inspecting and reporting on the obstacle limitation surfaces (OLS) as identified in:
 - Civil Aviation Safety Regulations (CASRs) and MOS Part 139 – Aerodromes
 - Defence Orders and Instructions
 - environmental sustainability
 - standards and recommended practices (SARPs) of the International Civil Aviation Organization (ICAO)
 - workplace relations
 - WHS/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:
- warning lights (orange/amber/yellow) mounted to be visible through 360 degrees
- weather information and its implications for workplace operations
- workplace procedures for inspecting and reporting on serviceability of aerodrome lighting systems.

Assessment Conditions

As a minimum, assessors must satisfy applicable regulatory requirements, which include requirements in the *Standards for Registered Training Organisations* current at the time of assessment.

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Assessment must occur in workplace operational situations. Where this is not appropriate, assessment must occur in simulated workplace operational situations that reflect workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to:

- a range of relevant exercises, case studies and/or simulations
- acceptable means of simulation assessment
- applicable documentation including workplace procedures, regulations, codes of practice and operation manuals
- relevant materials, tools, equipment and personal protective equipment currently used in industry.

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