



Australian Government

AVIO0014 Screen articles by interpreting X-ray images

Release: 1

AVIO0014 Screen articles by interpreting X-ray images

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 screen articles by interpreting X-ray images at a transport security protection workplace, in compliance with relevant regulatory requirements and national operating standards.

It includes: setting up and testing X-ray screening equipment; operating X-ray screening equipment; interpreting X-ray images; and taking appropriate action when weapons, explosives and prohibited items are detected.

This unit addresses transport security technical skill requirements (physical, mental and task-management abilities) related to transport security duties of aviation, maritime and air cargo security personnel, and contributes to safe and effective performance in operational transport security environments.

Operations are conducted as part of transport security across a variety of operational aviation, maritime and air cargo contexts within the Australian 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.

Pre-requisite Unit

Not applicable.

Competency Field

O – Security

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

PERFORMANCE CRITERIA

Elements describe the essential outcomes.

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

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|---|---|
| 1 Set up and test X-ray screening equipment | 1.1 X-ray screening equipment is set up in accordance with workplace procedures |
| | 1.2 Required daily X-ray screening equipment tests are carried out in accordance with workplace procedures |
| | 1.3 X-ray screening equipment safety risks are identified and controlled during set up and testing, in accordance with workplace procedures |
| 2 Operate X-ray screening equipment | 2.1 X-ray equipment is operated in accordance with workplace procedures |
| | 2.2 X-ray screening equipment safety risks are identified and controlled during operation, in accordance with workplace procedures |
| 3 Interpret X-ray images of screened articles | 3.1 X-ray images of screened articles are interpreted in accordance with workplace procedures |
| | 3.2 Image enhancement functions are used effectively in accordance with workplace procedures |
| | 3.3 Colours on X-ray image are correctly interpreted in accordance with workplace procedures |
| | 3.4 Article shapes and sizes on X-ray image are correctly interpreted in accordance with workplace procedures |
| | 3.5 Prohibited items, weapons and explosives on X-ray image are correctly detected in accordance with workplace procedures |
| 4 Take appropriate action when weapons, explosives and prohibited items are detected | 4.1 Suspected explosives are reported to screening point supervisor and appropriate action is taken, in accordance with legislative requirements and workplace procedures |
| | 4.2 Suspected weapons or prohibited items are reported to screening point supervisor and appropriate action is taken, in accordance with legislative requirements and workplace procedures |

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.

Unit Mapping Information

This unit replaces and is equivalent to AVIO2009 Screen articles by interpreting X-ray images.

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 AVIO0014 Screen articles by interpreting X-ray images

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:

- communicating effectively with others
- completing relevant documentation
- identifying, selecting, using and routinely checking relevant equipment, processes and procedures when using X-ray screening equipment in a transport security protection screening environment
- identifying and responding to screening equipment failure during testing
- identifying and responding to screening equipment failures during screening of articles at an airport
- implementing work health and safety (WHS)/occupational health and safety (OHS) procedures /Occupational Safety and Health (OSH) and relevant regulations
- manipulating X-ray images using enhancement functions to identify weapons and prohibited items correctly
- modifying activities in response to different workplace contingencies, risk situations and environments
- operating X-ray screening equipment correctly in accordance with workplace procedures
- reading, interpreting and following relevant regulations, instructions, procedures, information and signs
- responding to and reporting security incidents and/or suspected presence of weapons, explosives and prohibited items detected using X-ray screening equipment at an airport
- taking appropriate action when X-ray screening equipment identifies a weapon, explosive or prohibited item
- using correct procedures, set up and test X-ray screening equipment while meeting WHS/OHS/OSH requirements
- using X-ray screening equipment accurately to detect and identify prohibited weapons, explosives or prohibited items in articles being screened
- working collaboratively and liaising with others when interpreting X-ray images at an airport.

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:

- components, operating principles and characteristics of typical weapons, explosives and prohibited items that may be contained in articles being screened
- features of X-ray images that indicate the possible presence of weapons, explosives or prohibited items in articles, including the meaning of colour (metals, organics and inorganics), shape and size
- Legislative requirements including:
 - applicable to aviation transport security protection only
 - current Aviation Transport Security Act (and amendments)
 - current Aviation Transport Security Regulations
 - notices made under the Aviation Transport Security Act and the Regulations
 - organisation's transport security program as approved under the Aviation Transport Security Act
 - other regulations relating to security screening at an airport
 - applicable to maritime transport security protection only
 - current Maritime Transport and Offshore Facilities Security Regulations 2003
 - notices made under the Regulations
 - organisation's transport security program as approved
- methods, techniques and equipment involved when using X-ray screening equipment to screen articles
- organisation's transport security procedures and policies applicable for using X-ray screening equipment to screen articles
- peculiarities and limitations of the X-ray imaging process and how to overcome these using workplace procedures when interpreting X-ray images of articles
- prohibited items and weapons as outlined in legislation
- relevant law enforcement agency contacts details
- reporting requirements as detailed in the organisation's transport security program and workplace procedures for security incidents
- reporting requirements for detecting the presence of weapons, explosives or prohibited items using X-ray equipment
- roles and responsibilities of airline and airport staff, law enforcement officers and/or other government officers in a transport security protection environment
- sections of the legislation relevant for using X-ray screening equipment to screen personal effects and checked baggage in a transport security protection environment
- site layout, organisational structures, organisation's transport security program and associated workplace procedures in a transport security protection screening environment
- threat image projection system capability – a software program capable of projecting virtual images of threat articles such as a gun, knife, or improvised explosive device within the X-ray image of a bag under examination and of providing immediate feedback to observer
- transport security procedures to be followed when an item cannot be cleared using X-ray screening equipment
- typical issues that may occur when using X-ray equipment to screen articles at an airport and

appropriate action to take to resolve and avoid these issues

- WHS/OHS/OSH requirements relevant to setting up and operating X-ray screening equipment
- workplace procedures for carrying out daily, weekly or monthly tests of X-ray screening equipment
- workplace procedures to be followed when screening equipment does not meet the required standard during testing
- workplace procedures to be followed when screening equipment fails during screening of articles to enter a security zone.

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

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

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
- X-ray screening equipment includes:
 - X-ray screening equipment that has threat image projection system capability and is capable of differentiation between organic and inorganic material
 - single or multi view X-ray equipment.

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