



Australian Government

AVIO2009 Screen articles by interpreting X-ray images

Release: 1

AVIO2009 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 security controlled airport with screened air services, in compliance with relevant regulatory requirements of the Civil Aviation Safety Authority (CASA) 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 aviation technical skill requirements (physical, mental and task-management abilities) related to aviation security duties that complement the non-technical skills of ground operations 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

O – Security

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.

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.

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|---|--|
| Legislative requirements must include: | <ul style="list-style-type: none">• current Aviation Transport Security Act (and amendments)• notices made under the Act• organisation's transport security program |
| Articles must include one or more of the following: | <ul style="list-style-type: none">• bags• cabin baggage• checked baggage• display/promotional items• goods• personal belongings• packages• personal effects• tools of trade• work equipment |
| X-ray screening equipment must include: | <ul style="list-style-type: none">• 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 |

Unit Mapping Information

This unit replaces and is equivalent to AVIO2009B 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 AVIO2009 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 at an airport
- 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 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 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
- methods, techniques and equipment involved when using X-ray screening equipment to screen articles at an airport
- 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 contact 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 at an airport
- roles and responsibilities of airline and airport staff, law enforcement officers and/or other government officers in the aviation environment
- sections of the legislation relevant for using X-ray screening equipment to screen personal effects and checked baggage in an aviation environment
- site layout, organisational structures, organisation's transport security program and associated workplace procedures for aviation transport security screening
- 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 at an airport
- 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 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 an aviation 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.

As a minimum, assessment of knowledge must be conducted using the National Assessment Tool.

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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