



Australian Government

AVIW0020 Refuel aircraft

Release: 1

AVIW0020 Refuel aircraft

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 refuel aircraft in compliance with relevant regulatory requirements and national operating standards.

It includes conducting pre-operational checks on fueller/dispenser vehicle and equipment, loading fueller and positioning fueller/dispenser vehicle. It also includes carrying out refuelling operations, completing post-refuelling operations and completing documentation.

This unit addresses aviation technical skill requirements (physical, mental and task-management abilities) related to equipment and system operations 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.

Pre-requisite Unit

Not applicable.

Competency Field

W – Equipment and Systems Operations

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

PERFORMANCE CRITERIA

Elements describe the essential Performance criteria describe the performance needed to

outcomes.

demonstrate achievement of the element.

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| 1 Conduct pre-operational checks on fueller/dispenser vehicle and equipment | 1.1 Personal protective equipment (PPE) is selected and used in accordance with workplace procedures |
| | 1.2 Hazards are identified, risks are assessed and hazard management implemented |
| | 1.3 Pre-operational checks of fueller/dispenser vehicle and auxiliary equipment are conducted |
| | 1.4 Problems or defects identified during pre-operational checks are reported or rectified in accordance with workplace procedures and manufacturer requirements |
| | 1.5 Outcomes of pre-operational checks are reported and recorded |
| 2 Load fueller | 2.1 Vehicle is positioned at loading bay and all precautionary and reporting requirements are carried out |
| | 2.2 Vehicle is grounded and loading bay bonding lead is connected to fueller |
| | 2.3 Fueller is dipped and ullage is determined |
| | 2.4 Loading operations and quality control checks are completed |
| 3 Position fueller/dispenser vehicle | 3.1 Fueller/dispenser vehicle is moved to aircraft |
| | 3.2 Aircraft is approached following confirmation has been provided that is safe to approach the aircraft in accordance with the aircraft operator's manual suite and workplace procedures |
| | 3.3 Vehicle is positioned either underwing or standoff, depending on aircraft type |
| | 3.4 Appropriate precautions are taken to avoid risk of collision with aircraft control surfaces and engines |
| | 3.5 Fueller/dispenser vehicle is parked in a position that provides easiest route for evacuation in an emergency |
| 4 Carry out refuelling operations | 4.1 Vehicle is grounded and bonding lead is connected to aircraft |

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| | 4.2 | Pressure refuelling auxiliary equipment is positioned and hose is connected |
| | 4.3 | Hydrant dispenser delivery hoses and couplings are connected to aircraft and intake hose is connected to inlet coupler |
| | 4.4 | Aircraft is refuelled to required fuel quantity or tank capacity |
| 5 | Complete post-refuelling operations | |
| | 5.1 | Refuelling operations are completed |
| | 5.2 | Fuel sample is taken from filter sump/inlet and visual check is made prior to aircraft departure |
| | 5.3 | Hoses, couplings and auxiliary equipment are disconnected and stowed |
| | 5.4 | Hydrant dispenser lanyard is disconnected, and pit valve dust cover and hydrant pit lid are replaced |
| | 5.5 | Reel hoses are rewound and stowed |
| | 5.6 | Fueller/dispenser vehicle is driven either to depot or to next aircraft in accordance with workplace procedures, regulatory requirements and local instructions |
| 6 | Complete documentation | |
| | 6.1 | Hard copy documentation and paperwork is completed as required and airline representative's signature is obtained |
| | 6.2 | Electronic fuel management systems are used to report, record and verify refuel operations |

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 AVIW3006 Refuel aircraft.

Links

AVI Training Package Companion Volume Implementation Guide available on VET Net: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=4725260a-0af3-4daf-912b-ef1c2f3e5816>

Assessment Requirements for AVIW0020 Refuel aircraft

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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 standard operating procedures (SOPs)
- applying precautions and required action to minimise, control or eliminate identified hazards
- applying relevant legislation and workplace procedures
- communicating effectively with others
- identifying and correctly using relevant equipment
- identifying hazards, including:
 - contamination of, or from, materials being handled
 - dust
 - fuel vapours
 - hazardous or dangerous materials
 - hot engines, static electricity, sparks and other forms of ignition
 - jet blast
 - noise
 - other additives (such as water, methanol and icing inhibitors)
 - other vehicles on tarmac
 - rotating propellers
 - spill, leakages and ruptures
- implementing contingency plans
- implementing work health and safety (WHS) procedures and relevant regulations
- interpreting and following operational instructions and prioritising work
- modifying activities depending on 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 protocol
- reading, interpreting and following relevant regulations, instructions, procedures, information and signs
- reporting and/or rectifying identified problems promptly in accordance with regulatory requirements and workplace procedures and local instructions

- selecting and using required personal protective equipment (PPE) conforming to industry and WHS 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:

- differences in refuelling procedures for various types of aircraft
- emergency procedures
- manufacturer instructions for fueller vehicle and auxiliary equipment
- relevant Australian Standards
- relevant information/documents, including:
 - airport airside driver handbook
 - conditions of service, legislation and industrial agreements, including workplace agreements and awards
 - flight schedules
 - relevant International Air Transport Association (IATA) fuel guidelines
 - induction and training materials
 - loading and fuelling operational checklists
 - manufacturer specifications and instructions for fueller/dispenser vehicle and auxiliary equipment
 - workplace instructions and job specification
- relevant legislation and regulations such as the Australian Dangerous Goods (ADG) Code
- people to consult about refuelling operations, including:
 - aircrew
 - airline engineers or representatives
 - ground support staff
 - other refuelling staff
 - supervisors and managers
 - technical staff
- pre-operational checks of refueler, including:
 - air-pressure after start-up
 - auxiliary equipment
 - brake interlock override switch seal
 - brake test
 - fire extinguishers
 - radio check with base

- required documentation
- sampling equipment and water detection capsules
- serviceability of ladder or portable steps
- sufficient fuel levels in fueller for planned refuelling job
- vehicle parked in designated area
- visual inspection for leaks, defects and obstructions
- PPE including:
 - approved uniform
 - gloves
 - hearing protection
 - high visibility clothing
 - mask or respirator
 - safety glasses
 - safety headwear and footwear
- principles and processes of aircraft refuelling
- problems that may occur when refuelling an aircraft and appropriate action that should be taken in each case
- relevant sections of Civil Aviation Safety Regulations (CASRs) and Civil Aviation Orders and other regulations for the refuelling of aircraft
- relevant WHS and environmental procedures and regulations
- risks that exist when refuelling an aircraft and related risk control procedures and precautions
- selection and correct fitting of PPE
- workplace procedures for loading a fueller and refuelling aircraft.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

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 PPE currently used in industry.

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