Australian Government

Department of Education, Employment and Workplace Relations

AVIW3006B Refuel aircraft

Revision Number: 1

AVIW3006B Refuel aircraft

Modification History

Not applicable.

Unit Descriptor

Unit Descriptor

This unit involves the skills and knowledge required to refuel an aircraft in accordance with workplace procedures and regulatory requirements, including conducting required pre-operational checks on fueller/dispenser vehicle and equipment, loading the fueller, correctly positioning the fueller/dispenser vehicle and carrying out the required refuelling operations. It also includes the skills and knowledge required to complete all post-refuelling operations and required refuelling documentation. Licensing, legislative, regulatory or certification requirements are applicable to this unit.

Application of the Unit

Application of the Unit

Work must be carried out in accordance with workplace procedures and relevant regulatory requirements.

Use for ADF Aviation is to be in accordance with relevant Defence Orders and Instructions and applicable CASA compliance.

Work is performed under some supervision usually within a team environment.

Work involves the application of operational procedures and regulatory requirements to the refuelling of aircraft across a variety of operational contexts within the Australian aviation industry.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Employability Skills 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

ELEMENT	PERFORMANCE CRITERIA
1 Conduct pre-operational checks on fueller/dispenser vehicle and equipment	1.1 Pre-operational checks of fueller/dispenser vehicle and auxiliary equipment are conducted in accordance with workplace procedures and manufacturers requirements
	1.2 Problems and/or defects identified during pre-operational checks are reported/rectified in accordance with workplace procedures and manufacturers requirements
	1.3 Outcomes of pre-operational checks are recorded in accordance with workplace procedures, regulatory requirements and manufacturers requirements
2 Load fueller	2.1 Vehicle is positioned at the loading bay and all precautionary and reporting requirements are carried out in accordance with workplace procedures
	2.2 Vehicle is grounded and the loading bay bonding lead is connected to the fueller in accordance with workplace procedures and regulatory requirements
	2.3 Fueller is dipped and ullage determined
	2.4 Loading operations and quality control checks are completed in accordance with operational instructions, workplace procedures and regulatory requirements
3 Position fueller/dispenser vehicle	3.1 Fueller/dispenser vehicle is started and driven to aircraft in accordance with workplace procedures, regulatory requirements and local instructions
	3.2 The aircraft is approached only after checks are made to confirm that aircraft engines have stopped and aircraft wheel chocks are in place
	3.3 Vehicle is positioned and parked either underwing or standoff depending on aircraft type in accordance with workplace procedures, regulatory requirements and local instructions
	3.4 Appropriate precautions are taken to avoid risk of collision with aircraft control surfaces and engines
	3.5 Parking position of fueller/dispenser vehicle provides easiest route for evacuation in the event of an emergency
4 Carry out refuelling operations	4.1 Vehicle is grounded and the bonding lead is connected to the aircraft in accordance with workplace procedures and regulatory requirements
	4.2 In the case of pressure fuellers, auxiliary equipment is positioned and hose is connected in accordance with workplace procedures, regulatory requirements and local instructions
	4.3 Care is taken that dust caps are not placed inside wing panels
	4.4 In the case of hydrant dispensers, delivery hoses and couplings are connected to the aircraft and intake hose is connected to the

ELEMENT	PERFORMANCE CRITERIA
	inlet coupler. This is done in accordance with workplace procedures, regulatory requirements and local instructions
	4.5 Aircraft is fuelled in accordance with the workplace fuelling checklist and procedures, airline instructions, regulatory requirements and local instructions
5 Complete post-refuelling operations	5.1 Fuelling completion operations are conducted in accordance with workplace procedures, regulatory requirements and local instructions
	5.2 Fuel sample is taken from the filter sump/inlet and visual check is made prior to aircraft departure in accordance with workplace procedures, regulatory requirements and local instructions
	5.3 Hoses, couplings and auxiliary equipment are disconnected and stowed in accordance with workplace procedures
	5.4 In the case of hydrant dispensers, lanyard is disconnected and pit valve dust cover and hydrant pit lid are replaced. This is done in accordance with workplace procedures, regulatory requirements and local instructions
	5.5 Reel hoses are rewound
6 Complete documentation	6.1 In case of hard copy documentation, all required paperwork is completed and the airline representative's signature is obtained in accordance with workplace procedures
	6.2 In case of computerised systems, touch PC functions are completed, the airline representative's signature is obtained and fuel delivery docket is printed in accordance with workplace procedures and local instructions
	6.3 Fueller/dispenser vehicle is driven either to the depot or to the next aircraft in accordance with workplace procedures, regulatory requirements and local instructions

Required Skills and Knowledge

REQUIRED KNOWLEDGE AND SKILLS

This describes the essential knowledge and skills and their level required for this unit.

Required knowledge:

- Relevant sections of Civil Aviation Safety Regulations and Civil Aviation Orders and other regulations pertaining to the refuelling of aircraft
- Relevant OH&S and environmental procedures and regulations
- Principles and processes of aircraft refuelling
- Differences in refuelling procedures for various types of aircraft
- Workplace procedures for loading a fueller and refuelling aircraft
- Manufacturers instructions for fueller vehicle and auxiliary equipment
- Risks that exist when refuelling an aircraft and related risk control procedures and precautions
- Problems that may occur when refuelling an aircraft and appropriate action that should be taken in each case

Required skills:

- Communicate effectively with others when refuelling aircraft
- Read and interpret instructions, regulations, procedures and other information relevant to refuelling aircraft
- Interpret and follow operational instructions and prioritise work
- Complete documentation related to refuelling aircraft
- Operate electronic communication equipment to required protocol
- Work collaboratively with others when refuelling aircraft
- Adapt appropriately to cultural differences in the workplace, including modes of behaviour and interactions with others
- Promptly report and/or rectify any identified problems that may occur when refuelling aircraft in accordance with regulatory requirements and workplace procedures and local instructions
- Implement contingency plans for unexpected events that may arise when refuelling aircraft
- Apply precautions and required action to minimise, control or eliminate hazards that may exist when refuelling aircraft
- Monitor and anticipate operational problems and hazards and take appropriate action
- Monitor work activities in terms of planned schedule
- Modify activities dependent on differing workplace contingencies, situations and environments
- Work systematically with required attention to detail without injury to self or others, or damage to goods or equipment
- Adapt to differences in equipment and operating environment in accordance with standard operating procedures

REQUIRED KNOWLEDGE AND SKILLS

- Select and use required personal protective equipment conforming to industry and OH&S standards
- Implement OH&S procedures and relevant regulations
- Identify and correctly use equipment required when refuelling aircraft

Evidence Guide

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 competency in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria of this unit and include demonstration of applying: • the underpinning 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 a period of time and in a suitable range of contexts • Resources for assessment include: • 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
Method of assessment	• Assessment of this unit must be undertaken by a registered training organisation • As a minimum, assessment of knowledge must be conducted through appropriate written/oral tests • Practical assessment must occur: • through activities in an appropriately simulated environment at the registered training organisation, and/or • in an appropriate range of situations in the workplace

Range Statement

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.

Refuelling operations may be carried out:	• for any aircraft types • at major or minor airports • in any allowable operating and weather conditions • in accordance with regulatory and operational requirements and local instructions
Performance may be demonstrated:	• in an approved simulated refuelling situation • during refuelling operations at an airport
Pre-operational checks may include:	• serviceability of ladder or portable steps (cracks or damage that would render them unsafe) • fire extinguishers (correctly stowed and fully charged) • personal protection equipment (PPE) • sampling equipment and water detection capsules • visual inspection for leaks, defects and obstructions • sufficient fuel in fueller for planned refuelling job (fueller must be manually dipped prior to shift and measured volume recorded and reported) • radio check with base • required documentation (printer paper, log sheet forms, etc.) • air-pressure after start-up prior to moving • check that brake interlock override switch seal is intact • auxiliary equipment is functional • vehicle parked correctly in designated area • brake test (after moving but before leaving depot)
Personal protection equipment may include:	• gloves • safety headwear and footwear • hearing protection • safety glasses • mask or respirator • high visibility clothing • approved uniform
Persons consulted during refuelling operations may include:	• aircrew • airline engineers or representatives • other refuelling staff • supervisors and managers • ground support staff

RANGE STATEMENT

	• technical staff
Hazards may include:	• hot engines, static electricity, sparks and other forms of ignition • contamination of, or from, materials being handled • spill, leakages, ruptures • fuel vapours • other vehicles on tarmac • jet blast • rotating propellers • hazardous or dangerous materials • noise • dust • other additives (e.g. water, methanol, icing inhibitors)
Hazard management is:	• consistent with the principle of hierarchy of control with elimination, substitution, isolation and engineering control measures being selected before safe working practices and personal protective equipment
Dependent on the type of organisation concerned and the local terminology used, workplace procedures may include:	• company procedures • enterprise procedures • organisational procedures • established procedures • local instructions • standard operating procedures
Information/documents may include:	• sections of Civil Aviation Safety Regulations and Civil Aviation Orders relevant to refuelling operations • IATA Guidelines for Aviation Fuel Quality Control, and Operating Procedures for Joint Inter Plane Fuelling Services (JIG Guidelines) • OH&S and environmental protection regulations • workplace procedures and instructions and job specification • airport airside drivers handbook • loading and fuelling operational checklists • emergency procedures • flight schedules • manufacturers specifications and instructions for the fueller/dispenser vehicle and auxiliary equipment • induction and training materials • conditions of service, legislation and industrial agreements including workplace agreements and awards
Applicable regulations and	• relevant Civil Aviation Safety Regulations and Civil

RANGE STATEMENT

legislation may include:

Aviation Orders

- IATA Guidelines for Aviation Fuel Quality Control, and Operating Procedures for Joint Inter Plane Fuelling Services (JIG Guidelines)
- Australian Dangerous Goods Code (ADG Code)
- relevant OH&S legislation
- environmental protection legislation
- relevant Australian Standards
- industrial relations and workplace compensation legislation

Unit Sector(s)

Not applicable.

Competency field

Competency Field W - Equipment and Systems Operations