



Australian Government

AVIY0072 Operate a multi-engine aeroplane

Release: 1

AVIY0072 Operate a multi-engine aeroplane

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 operate a multi-engine aeroplane in compliance with relevant regulatory requirements of the Civil Aviation Safety Authority (CASA) and national operating standards.

It includes operating a multi-engine aeroplane in all phases of flight, managing an engine failure/malfunction in flight and managing an engine failure/malfunction after take-off. It also includes performing a rejected take-off, managing an engine failure/malfunction during approach/landing, and conducting a go-around or missed approach with an engine failure.

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

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

Work is performed independently or under limited supervision within a single-pilot or multi-crew environment.

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

Pre-requisite Unit

Not applicable.

Competency Field

Y – Aircraft Operation and Traffic Management

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.
1 Operate a multi-engine aeroplane in all phases of flight	<p>1.1 Normal operations of multi-engine aeroplane type on the ground and in flight are conducted in accordance with the aircraft flight manual (AFM), pilot's operating handbook (POH) and company operating procedures</p> <p>1.2 Asymmetric operations for all phases of flight are anticipated and contingencies are planned</p> <p>1.3 Plan of action is self-briefed or briefed to crew members to ensure safest outcome in asymmetric operations</p>
2 Manage engine failure/malfunction in flight	<p>2.1 Control of aeroplane is maintained and/or regained during implementation of emergency response procedures</p> <p>2.2 Failed/malfunctioning engine is identified and confirmed</p> <p>2.3 Power set on serviceable engine/s and aeroplane configuration is adjusted to achieve desired aeroplane performance</p> <p>2.4 Failed/malfunctioning engine is managed</p> <p>2.5 Indicated airspeed is maintained above minimum controllable airspeed (V_{mca})</p> <p>2.6 Air traffic control (ATC) or another agency capable of assistance is advised of situation and intentions</p> <p>2.7 Recovery or diversion to appropriate aerodrome is evaluated and conducted</p>
3 Manage engine failure/malfunction after take-off	<p>3.1 Engine failure/malfunction is managed after take-off while control of aircraft flight path is maintained</p> <p>3.2 Initial climb not less than best engine out angle of climb speed (V_X) or best engine out rate of climb speed (V_Y) until clear of obstacles, then V_Y is maintained</p> <p>3.3 Recovery or diversion to appropriate aerodrome is evaluated and conducted</p>
4 Perform rejected take-off	4.1 Take-off is aborted prior to speed beyond which take-off can no longer be safely aborted (V ₁) or at a decision point during take-off where abort procedure can be

- initiated and aeroplane stopped on remaining runway/stopway
- 4.2** Power is reduced smoothly and promptly
- 4.3** Spoilers, prop fine/reverse, thrust reverse, wheel brakes and other drag and braking devices are activated
- 4.4** Positive control is maintained to bring aeroplane to a safe stop
- 4.5** Engine failure procedures and/or checklists are initiated and completed
- 5 Manage engine failure/malfunction during approach/landing**
- 5.1** Control of aeroplane flight path is maintained during implementation of emergency response procedures
- 5.2** Engine inoperative approach is performed
- 5.3** Decision is made to continue or abort approach/landing
- 5.4** Decision height for landing is nominated
- 5.5** ATC or other agency capable of providing assistance is advised of situation and intentions
- 5.6** Smooth, positively-controlled flight profile is flown, from which a controlled landing could be achieved
- 5.7** Positive directional control is maintained and cross-wind corrections are applied during after-landing roll while maintaining centreline within tolerances
- 5.8** Spoilers, prop reverse, thrust reversers, wheel brakes, and other drag or braking devices are applied to bring airplane to a safe stop after landing
- 6 Conduct go-around or missed approach with engine failure**
- 6.1** Engine failure in a multi-engine aeroplane during a go-around or missed approach is identified and confirmed
- 6.2** Control of aeroplane flight path is maintained during implementation of emergency response procedures
- 6.3** Engine inoperative go-around is performed from decision height

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 AVIY5023 Operate a multi-engine aeroplane.

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>