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AIR FORCE HEADQUARTERS



CADETS BRANCH - AIR FORCE

STANDING INSTRUCTION OPERATIONS 04-04

WEARING PARACHUTES IN AAFC GLIDING ACTIVITIES

Version 1.0

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A handwritten signature in black ink, appearing to read 'TC DELAHUNTY', written over a horizontal line.

**TC DELAHUNTY
AIRCDRE
DGCADETS-AF**

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CADETS BRANCH – AIR FORCE STANDING INSTRUCTION (OPERATIONS) 04-04

WEARING PARACHUTES IN AAFC GLIDER ACTIVITIES

REFERENCE

- A. Airworthiness Board Report – Australian Air Force Cadets (AB26484074)
- B. CB-AF Risk Identification and Exception Report Sep 16 – Wearing Parachutes during Glider Activities (OBJ Ref required: L8873657)
- C. AAP 6734.001 – *Defence Aviation Safety Manual*, AL 5 dated 20 Sep 16
- D. CB-AF SI (OPS) 3-1 – *Operation of Gliders*, version 3.0, dated 28 Jul 16 (AB28174255)
- E. AAP 8000.011 – *Defence Aviation Safety Regulations*, AL0 dated 30 Sep 16
- F. AC SI(OPS) 04-04 – *Parachuting Operations*, Vol1 07/15, dated 26 Oct 15

INTRODUCTION

1. RAAF gliders are safe and reliable aircraft. However, under certain circumstances, it may be necessary for the crew to abandon the aircraft in flight. Such instances may include: aircraft fire, collision, loss of control or structural damage.
2. Reference A identified that there is inconsistent use of parachutes during Australian Air Force Cadets (AAFC) gliding activities. The Board recommended a formal risk evaluation to determine and promulgate the circumstances in which emergency parachutes must be worn. Reference B is the approved Aviation Risk Management (AVRM) Risk Identification and Exception Report (RIDER) developed IAW reference C.

AIM

3. The aim of this Standing Instruction (SI) is to promulgate requirements for the wearing of emergency parachutes during AAFC gliding activities.

AUTHORITY

4. This Instruction is issued under the authority of DGCADETS-AF.

APPLICABILITY

5. This SI applies to all AAFC Wings and Squadrons conducting Glider Operations with Air Force gliders or gliders provided by third parties, including approved AAFC gliding activities utilising external service providers.
6. This SI supersedes all parachute requirements documented in reference D.

COMMAND AND MANAGEMENT

7. Cadet Branch–Air Force (CB-AF) has a requirement to satisfy reference E requirements. That is, Defence aviation must be conducted in such a way that risks are either eliminated or minimised so far as is reasonably practicable (SFARP).
8. Given that each Air Force glider is designed for the crew to wear emergency parachutes, the risk assessment at reference B showed that SFARP was not achieved if it was optional for AAFC pilots and passengers to wear the emergency parachute.

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9. To reduce the risk to SFARP, it is mandatory for all pilots and passengers flying in all Air Force gliders to wear emergency parachutes on all flights. Serviceable, in-date parachutes shall be available for all pilots and passengers flying in Air Force gliders.

10. **Emergency parachutes for AAFC activities using privately owned gliders.** Privately owned gliders may be cross-hired, or provided by third party service providers, to support AAFC gliding activities provided the requirements of reference D are met. In order to provide an equivalent level of safety afforded by the use of Air Force gliders, it is mandatory for all pilots and passengers conducting AAFC gliding activities in third party gliders to wear emergency parachutes on all flights, if the glider is capable of operations with a parachute.

11. In all circumstances where the third-party glider is incapable of operations with a parachute, the AAFC Risk Assessment Management Plan (RAMP) is to include an assessment of the circumstances. Chief Flying Instructors (CFI) are to advise the CB-AF Director Cadet Operations - Air Force (DCDTOPS-AF) and AAFC Director of Aviation Operations (DAO) of the circumstances.

CATEGORISATION AND TRAINING

12. **Training.** AAFC DAO is to ensure that all personnel flying in AAFC gliding activities are to be appropriately trained, prior to the sortie, on egress from the glider and the use of the parachute.

13. This requirement applies to all AAFC glider activities, including: operations in Air Force gliders, operations in cross-hired gliders, and operations with external service providers.

FLYING AND AIRCRAFT OPERATIONS

14. **Emergency parachute briefing requirements.** All personnel flying in AAFC gliding activities are to receive a thorough brief on: the cockpit features, emergency procedures, premeditated and emergency abandonment actions/boldface, minimum glider abandonment heights, use of the emergency parachute and the parachute operating limits, as applicable to the glider being flown. The pre-flight procedure is to include a demonstration of the abandonment / egress technique. Particular attention should be paid to canopy opening mechanisms.

15. This requirement applies to all AAFC glider activities, including: operations in Air Force gliders, operations in cross-hired gliders, and operations with external service providers.

16. **Occupant Mass.** The Thinback emergency parachute used in Air Force gliders has an operating limit for an occupant's body mass of 50kg to 113.5 kg. Consideration of occupant body mass shall also consider the front and/or rear seat load limits in the flight manuals for each glider type.

17. Occupants with a body mass less than 50 kg or greater than 113.5 kg are prohibited from flying on AAFC gliding activities with Thinback emergency parachutes. Occupant mass may be further restricted due to operating limits set in the flight manuals for the glider being flown.

18. Should parachutes, other than the Thinback emergency parachute be supplied with privately owned gliders (external service provider or cross-hired), the CFI is responsible for determining and applying body mass limitations applicable to the parachute supplied IAW OEM operating limitations.

19. **Minimum Glider Abandonment Heights** A decision for abandonment must be made as early as possible, in order to minimise height loss and maximise time for parachute deployment. Any decision to abandon a glider at altitudes lower than those articulated below must be tempered with the likelihood of successful landing. The Minimum Glider Abandonment Heights, are the minimum heights at which a glider abandonment should be made. Glider abandonment following a decision at or above this height should result in pilot and passenger survival. If the glider captain elects to continue flying the aircraft below this height, he or she should be fully confident of carrying out a successful out-landing and be aware that the chances of successful glider abandonment after this point may be seriously degraded. The Minimum Glider Abandonment Heights for all AAFC glider activities are:

- a. 1000FT above obstacles (AO) when the glider is under control; and
- b. 1500FT AO when the glider is out-of-control. The decision to abandon the glider when out of control should be considered not below 2000FT AO in order to effect abandonment no lower than 1500FT AO.

20. In all circumstances when abandonment is necessary, the passenger is to abandon the glider first.

21. **Emergency landing versus abandonment.** The decision to conduct an emergency landing or abandon the aircraft rests with the pilot in command and is dependent on:

- a. The condition of the glider and the severity of the emergency,
- b. Length and surface of available forced landing areas,
- c. Environmental factors, and
- d. Pilot experience and ability.

22. **Environmental factors.** Before conducting AAFC glider operations, the CFI, or delegate, shall assess the environmental factors for the activity and include an assessment of the factors in the activity's RAMP – both prior to the activity and on-site. Environmental factors include, but are not limited to:

- a. Vegetation and terrain in the operating area,
- b. Bodies of water,
- c. Obstacles (e.g. powerlines, towers, buildings, etc), and
- d. Weather conditions, including surface winds.

OPERATIONS SUPPORT

23. **Parachute maintenance and storage.** CB-AF Operations manages the funding for the sustainment of the Air Force glider fleet, including acquisition of sufficient parachutes and sustainment for parachute maintenance and storage.

24. **Maintenance.** The Australian Parachute Federation (APF) recommends that all parachutes should be opened, aired and repacked every six months by a qualified packer, who will then

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authorise their use for the next six months. The APF has a list of approved parachute packers at various locations. Accordingly, AAFC DAO is to ensure that all parachutes are repacked every six months and CB-AF will ensure that sufficient funds are available for parachute maintenance requirements.

25. AAFC DAO is to maintain a schedule for, and details of, the repacking of parachutes.

26. Each 100-series SQN Chief Flying Instructor (CFI), or appropriate delegate, is to monitor the condition of emergency parachutes and notify AOD when condition warrants repacking before the standard 6 month interval.

27. **Storage.** Air Force supplied parachutes are to be stored in a dry and secure area, where they are to be hung on a rack to allow ventilation whenever possible.

28. **Third party supplied or privately owned parachutes.** When parachutes are supplied with privately owned gliders (cross hired or external service providers) for AAFC gliding activities, the external service provider's CFI, or appropriate delegate, is responsible for observing the parachute's general condition and confirming the validity of the parachute's pack / repacking date for the AAFC glider activity. Should AAFC instructors wear privately owned parachutes, the CFI, or appropriate delegate, is responsible for observing the parachute's general condition and confirming the validity of the parachute's pack / repacking date for the AAFC glider activity.

Annex:

A. Aircraft abandonment in flight

AIRCRAFT ABANDONMENT IN FLIGHT

1. The recommended configuration is 60 KIAS (or as specified in the glider flight manual), trimmed and in balance. If possible, ensure rate of descent is reduced to a minimum before abandoning glider.

To abandon the aircraft whilst airborne, proceed as follows:

1. EXECUTE CANOPY JETTISON CHECKLIST, OR PROCEDURE, IN ACCORDANCE GLIDER FLIGHT MANUAL
2. HARNESS – RELEASE
3. MIC/TEL LEADS – DISCONNECT (IF APPLICABLE FOR GLIDER TYPE)
4. ABANDON – HEAD FIRST OVER CANOPY SILL
5. PARACHUTE – PULL ‘D’ RING WHEN CLEAR OF AIRCRAFT

WARNING

The minimum recommended height for abandoning the aircraft is 1,000FT AO. Ideally the decision to abandon should be made by 1,500FT.

NOTE

To operate the parachute, look for and locate the metal ‘D’ ring under the left armpit. Pull the ‘D’ ring down and away to the full extent of its travel using one or two hands until the parachute opens.