

## **Voss SOP parachuting rev21**

**Revision date** N/A



# SKYDÎVE VOSS

## Voss Fallskjermklubb (VFSK).

## Part-NCO

### Skydiving / Parachuting Standard Operating Procedures (SOP)

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#### **Record of Amendment**

Amendment No	Section Affected	Brief detail of change	Date Issued	Incorporated By (signature)	Date

#### **Proposal for Amendment**

Amendment proposed (section affected)	Reason for Amendment	Proposed by (Name & Initials)	Date
Page 37	124.700 Polaris Control	GT	May 21
Page 26	Oxygen Requirements Clarified by (F/NLF)	GT	May 21

IMPORTANT: No amendments shall be made to this manual in the form of manuscript changes with the exception of the Proposal for Amendment form. Only the Chief Instructor (HI) or Chief Pilot may authorize amendments to this manual. All amendments must be made by reissuing the relevant page(s), the Record of Amendments page and the List of Effective Pages (and, if necessary, the Contents Page) all of which shall be dated to reflect the changes. Changes will have a vertical side bar on the left of all amended text.

Any changes to this manual pertaining to ORA.GEN.200(a)(1), (a)(2), ORA.GEN.130, and associated AMCs, must be approved by the Authority before they may be incorporated, issued to those listed in the Distribution list, and used.

#### **Distribution List**

COPY NUMBER	HOLDER
1 Hard copy/Word version	Chief Instructor (HI) Office
2 Hard copy/Word version	Aircraft
3 PDF version	Daily Manager
4 PDF version	Pilots



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#### List of Effective Pages

Page	Date	Initials
1	03/01/18	GT
2	03/01/18	GT GT
2 3	03/01/18	GT
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9	03/01/18	GT
10	03/01/18	GT
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35	03/01/18	GT
36	03/01/18	GT
37	09/05/21	GT
38	03/01/18	GT



#### **Glossary of Terms and Definitions**

#### **Glossary of Terms**

A AAIB A/C ACAS ADF AFM AGL AIC AIC AIP AMC ANO AOM AIRPROX ATC ATC ATC ATC ATC ATC ATC ATP ATPL ATS ATSU AUM	Aeroplane Aeronautical Accident Investigation Board Aircraft Airborne Collision Avoidance System Automatic Direction Finding Aircraft Flight Manual Above Ground Level Aeronautical Information Circular Aeronautical Information Publication Acceptable Means of Compliance Air Navigation Order Aircraft Operating Manual Air Proximity Air Traffic Control Air Traffic Control Centre Automatic Terminal Information Service Approved Training Organisation Airline Transport Pilot Airtine Transport Pilot Licence Air Traffic Service Air Traffic Service Unit All Up Mass
BEM	Basic Empty Mass
CAS	Calibrated Air Speed
CAT	Clear Air Turbulence
CDI	Course Deviation Indicator
CDFA	Constant Descent Final Approach Technique
CFI	Chief Flying Instructor
CG	Centre of Gravity
CGI	Chief Ground Instructor
CTKI	Chief Theoretical Knowledge Instructor
CoT	Certificate of Test
CPL	Commercial Pilot Licence
CRE	Class Rating Examiner
CRI	Class Rating Instructor
DME	Distance Measuring Equipment
DDR	Deferred Defect Record
EASA	European Aviation Safety Agency
EFATO	Engine Failure After Take-Off
EFIS	Electronic Flight Instrument System
ETA	Estimated Time of Arrival
FAF	Final Approach Fix
FCL	Flight Crew Licensing

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FFS FI FIE FIS FMC FMS FNPT FS FSTD ft FTD	ight Examiner III Flight Simulator ight Instructor ight Instructor Examiner ight Information Service ight Management Computer ight Management System ight Anagement System ight Anagement System ight Simulator ight Simulator ight Simulation Training Device et ight Training Device ight Time Limitations	
GLONASS GM GNSS	ravity forces lobal Orbiting Navigation Satellite System uidance Material lobal Navigation Satellite Systems lobal Positioning System	
HPA hrs	ligh Frequency ligh Performance Aeroplane lours lead of Training	
ICAO IFR ILS IMC	Indicated Air Speed International Civil Aviation Organisation Instrument Flight Rules Instrument Landing System Instrument Meteorological Conditions International Standard Atmosphere	
-	Kilogram Knots	
	_earning Objectives _ine Orientated Flight Training	
MCC MCCI ME MEL MEP MET METAR MMEL MP MPA MPL	Metre Multi-Crew Cooperation Multi-Crew Cooperation Instructo Multi-engine Minimum Equipment List Multi-engine Piston Multi-engine Turboprop Meteorological Aerodrome Repo Master Minimum Equipment List Multi-pilot Multi-pilot Aeroplane Multi-crew Pilot Licence Minimum Safe Altitude	rt

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МТОМ	Ma	ximum Take-off Mass	
NDB NM NOTAM	Nau	n-directional Beacon utical Miles tice to Airmen	
OAT OBS OEM OML OSL OTD	Outside Air Temperature Omni Bearing Selector Original Equipment Manufacture Operational Multi-pilot Limitation Operational Safety Pilot Limitation Other Training Devices		
PAPI PC PF PIC PICUS PFL PLB PM POH PPL PT	Pro Pilc Pilc Pilc Pra Pilc Pilc Pilc	ecision Approach Path Indicate ogress Check of Flying ot-In-Command ot-In-Command under Supervi octice Forced Landing resonal Locator Beacon of Monitoring ots Operating Handbook vate Pilot Licence ogress Test	
QDM QFE QNH	Magnetic heading Atmospheric pressure at aerodrome elevation Altimeter sub-scale setting to obtain elevation when on the ground		
RNAV RPM R/T RTF	Rev Rad	dio Navigation volutions Per Minute diotelephony diotelephony	
SE SEP SET SFE SFI SID SIGMET SLPC SOP SP SPA SPIC SSR STI	Sin Syr Syr Sta Sig Sin Sta Sin Stu Sec	gle-engine gle-engine Piston gle-engine Turboprop nthetic Flight Examiner nthetic Flight Instructor ndard Instrument Departure nificant Meteorological Weath gle Lever Power Control ndard Operating Procedure gle-pilot gle-pilot Aeroplane dent Pilot-in-Command condary Surveillance Radar nthetic Training Instructor	er
TAF	(Te	rminal Area Forecasts) Aerod	rome Forecast



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TAS TAWS TEM TKI TMG TORA TODA	True Air Speed Terrain Awareness Warning System Threat and Error Management Theoretical Knowledge Instructor Touring Motor Glider Take-off Run Available Take-off Distance Available
UTC	Coordinated Universal Time
V VASI VDF VFR VHF VMC VOR VOR Vy	Velocity Visual Approach Slope Indicator Very High Frequency Direction Finding Visual Flight Rules Very High Frequency Visual Meteorological Conditions VHF Omni-directional Radio Range Best rate of climb speed
ZFM	Zero Fuel Mass

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### Part 1 General

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#### 1. General

#### 1.1. Introduction

#### 1.1.1. Applicability

This manual details the operation of aircraft operated by Voss Fallskjermklubb. In the event that there is any conflict between this manual and the current EU requirements for flight crew licensing, air operations and SERA then these Orders are subordinate to the above except when this manual is more limiting, in which case this manual shall apply.

#### 1.1.2. Compliance

No employee or trainee of Voss Fallskjermklubb shall be absolved from compliance with this manual or any other relevant notices or regulations because of ignorance of their existence content or effect. This manual is issued in accordance with the applicable elements of the BSL D-42 and the F/NLF safety and operational regulations at the time of writing. It complies with national regulations, EASA Part-FCL and Part-NCO

#### 1.1.3. Continued Validity

The NCO declaration remains valid subject to the Organization remaining in compliance with the relevant requirements and the certificate not being revoked or surrendered.

In the event of revocation or surrender of the approval, it is the responsibility of the Accountable Manager to return the original certificate to the competent authority without delay.

#### 1.1.4. Access by the Competent Authority

Representatives of the CAA are to be given access to all of the Organization's facilities, aircraft, documentation, records, data, procedures or any other material relevant to its approved activities.

#### 1.1.5. Phraseology

Throughout this manual where the male pronouns he, him, and his are used they should be read as he/she, him/her, and his/hers. The use of the male pronouns is intended to make the text less cumbersome. Where the use of the term student or students is used this is interchangeable with trainee or trainees.

#### 1.1.6. Endorsement by Accountable Manager

Endorsed by Captain Gareth Thomas, Chief Pilot. 03/01/2018



#### 2. List & Description of the Operations Manual

This manual is made up of the following parts:

**Part 1 General** – Description and administration of the operations manual. Policies, and procedures to enable all Voss Fallskjermklubb's staff and trainees to safely and correctly operate the aircraft.

**Part 2 Technical** – Contains information specific to the planning and execution of Specialized Operations (Parachuting) flights. Including Mass & Balance, Aircraft Loading and Fueling Procedures.

**Part 3 Aircraft Procedures** – Contains information regarding the operating of aircraft in the Specialized Operation (Parachuting). Quick Reference Checklists and Emergency Procedures specific to the type of operation.

**Part 4 Approved Operating Sites** – Contains information relating to the Approved Operating Sites, including localized and noise abatement procedures, as well as local contacts and other pertinent information.

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# Part 2 Technical

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#### 1. Daily Flight Sheets

The following is an example of a Daily Flight Sheet for each aircraft. Once completed, Daily Flight Sheets should be given to the Chief Pilot.

No.       Image: constraint of the state o	Type         P           1	PIC         From:           To:         To:           To:         To:	C208 0030	Time AIR : : :	F Time BLOCK : :	LDGS Engine	e Fuel Fuel O	ff Fuel	Tel: +44 1949 4 info@foxy.a Oil 4ARA /	480960 aero
Image: No.       PIC       From:       OFB       ATO       Time       BLOCK       LDGS       Engine       Fuel       Fuel       OII       ARA / PAX / CARCO         1       To:	No.         I           1	To:           To:           To:           To:           To:           To:           To:           To:           To:		- : : :	Time BLOCK : :					
NO.         Image: constraint of the signature of the signate signature of the signature of the sig	No.         I           1	To:           To:           To:           To:           To:           To:           To:           To:           To:		AIR	BLOCK : :					
1       -       -       :       :       -       -       :       .	2	To:           To:           To:           To:           To:           To:		- :	:					
2       Image: Constraint of the Flight Manual and Operations Manual has been complied with.       Image: Constraint of the Flight Manual and Operations Manual has been complied with.	3	To: To: To: To:		- :	:					
3	4 / / / / / / / / / / / / / / / / / / /	To: To: To:		- :				_		
4       Image: Sector of the signature above confirms that the instruction of the Flight Manual and Operations Manual has been complied with.       Image: Sector of the Sector	5 6 7 2	To: To:			:					
5     Image: Second secon	6 7	To:						-		
6	7			•	:					
7		To:		- :	:					
8     Image: Daily Totals     Image:	8			:	:					
he pilot's signature above confirms that the instruction of the Flight Manual and Operations Manual has been complied with.		To:		:	:					
			Daily Totals	:	:				Total Para	
OAT FL IAS TQ PROP ITT NG OIL TEMP OIL PRESS FF	'he pilot's signature ab	e above confirms that th	ne instruction of the Flight Ma	nual and Ope	rations Manual	has been complied wit	th.			
	OAT	FL	IAS T	Q	PROP	ITT	NG	OIL TEMP	OIL PRESS	FF

 
 Number of loads of fuel on-board
 14
 15
 13
 14
 10

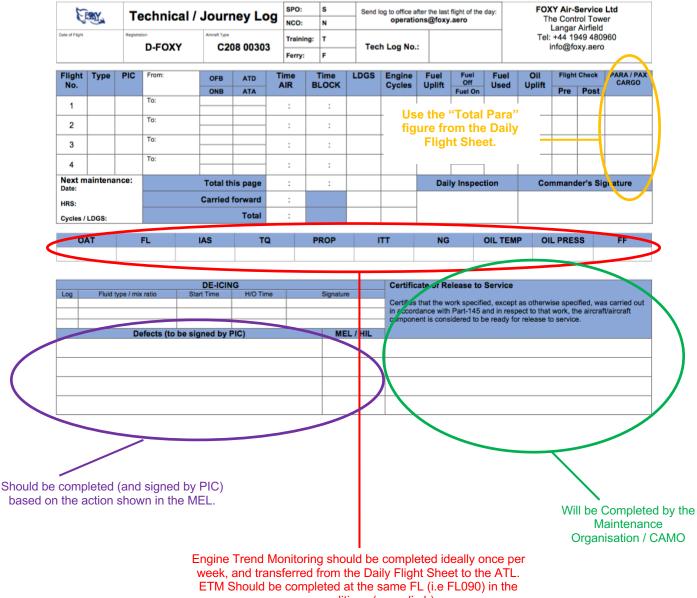
 Number of task specialists onboard.
 14
 14
 13
 12
 9

N.B. The combination of Number of loads of fuel on-board and Number of task specialists on-board should match a Standard Mass & Balance Computation. For operations, outside of the standard profile, specific Mass & Balance and Performance Calculations for the load carried and ambient conditions must be made.

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#### 2. Airplane Technical Log

The following is an example of an Airplane Technical Log (ATL) for each aircraft. Once completed, ATL Sheets should be emailed to the aircraft owners office (<u>atl@foxyplane.com</u>). The ATL should remain with the aircraft in the documents folder during all normal operations.

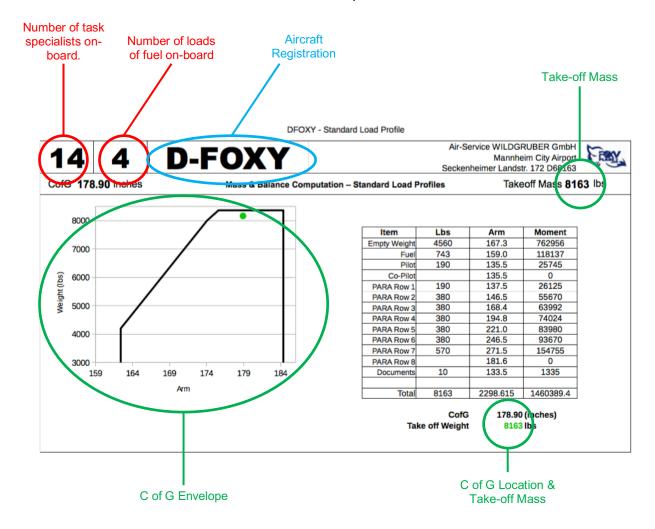


same conditions (max climb)

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#### 3. Mass & Balance Computation

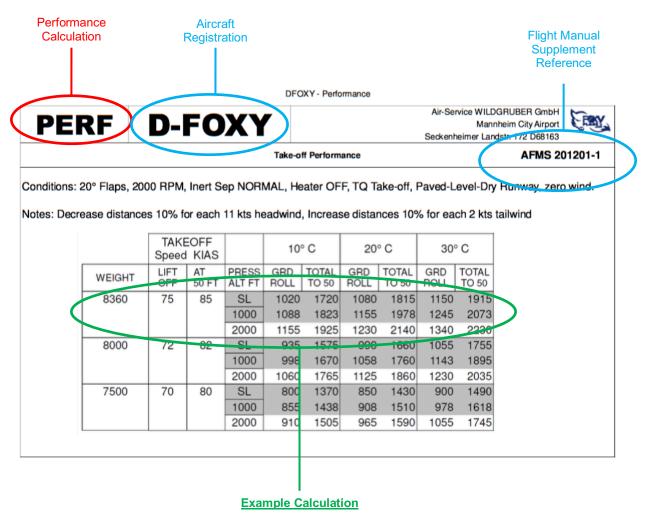
The following is an example of a standardized load profile Mass & Balance Computation for each aircraft. A laminated copy of each standardized load profile is carried on-board. For operations, outside of the standard profile, a specific Mass & Balance Computation for the load carried and ambient conditions must be completed.



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#### 4. Aircraft Performance

The following is an example of a standardized Take-off Performance Calculation for each aircraft. A laminated copy of the Take-off Performance Calculation specific to each aircraft is carried on-board. For operations, outside of the standard Take-off Performance Calculation, a specific Calculation for the load carried and ambient conditions must be completed.



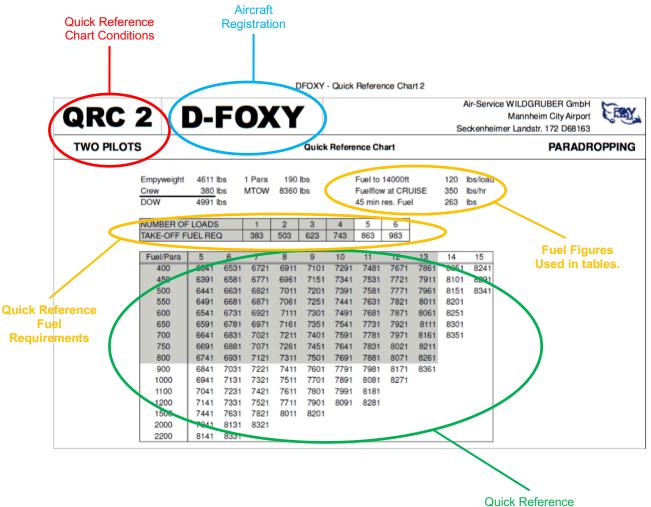
Take-off Mass = 8350lbs Pressure Altitude = SL Outside Air Temperature = 20 Headwind = 11Kts

**<u>GRN ROLL = 972 ft</u> <u>TOTAL TO 50' = 1634 ft.</u>** 

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#### 5. Quick Reference Charts

The following is an example of a standardized Quick Reference Chart for each aircraft. A laminated copy of the Quick Reference Chart specific to each aircraft is carried on-board. For operations, outside of the standard Quick Reference Chart, a specific Calculation for the load carried and ambient conditions must be completed.

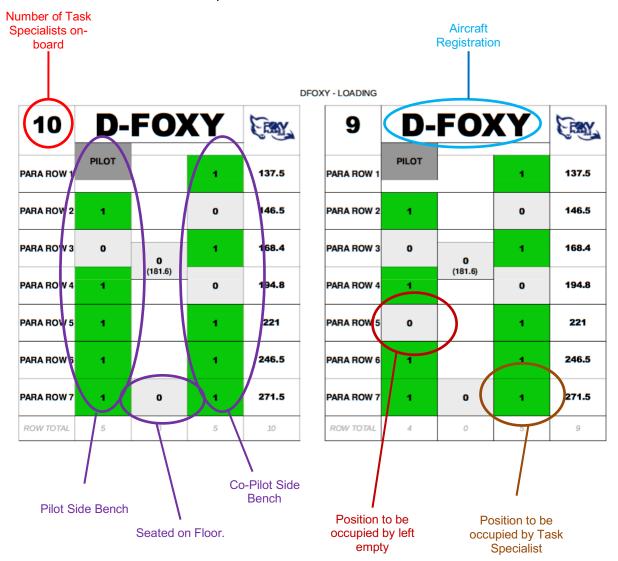


Take-off Masses

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#### 6. Aircraft Loading

The following is an example of a standardized Loading Chart for each aircraft. A laminated copy of the Loading Charts specific to each aircraft is carried on-board. For operations, outside of the standard Loading Chart, a specific Calculation for the load carried and ambient conditions must be completed.



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#### 7. Aircraft Fueling & Parking

- 1.1 When fueling the aircraft, steps or ladders should be used which are freestanding and do not cause damage to the leading edge of the wings.
- 1.2 If fueling using the Caravan's in-board fuel points, care should be taken if more than 120 liters of fuel is added to either wing, as fuel may splash out of the fuel points.
- 1.3 Refueling of aircraft is not permitted with parachutists on board.
- 1.4 Control locks should be fitted at all times when the aircraft is parked.
- 1.5 When parking the aircraft outside overnight, all bungs, ties, covers, locks, chocks and the windshield cover should be installed. If windy conditions are forecast, the aircraft should be parked nose into wind and tied down with the blue ratchet straps where possible.

#### 8. Hot Fueling Procedures

Fueling with an engine running is extremely hazardous and should not normally be conducted. However specific procedures for conducting Hot Refueling under unforeseen and exceptional circumstances have been developed. Hot refueling should only be conducted under the specific conditions and limitations hereunder, as specified in EASA Safety Information Bulletin 2014-16. Hot fueling should only be conducted:

- a. In unforeseen and exceptional circumstances;
- b. In accordance with the specific procedures for hot refueling detailed below.
- c. With no passengers on-board, nor embarking or disembarking
- d. Under permission by the aerodrome operator; and
- e. In the presence of appropriate aerodrome Rescue and Fire Fighting Service.

Appropriate training must be given to all personnel involved in the Hot Fueling Procedure. The Pilot has sole discretion to decide if it is safe and appropriate to action Hot Refueling of the aircraft.

Before allowing the hot refueling of an airplane to commence, the pilot in command must ensure that the refueling can be carried out safely in accordance with this appendix and the guidance from EASA SIB 2014-16.

#### 8.1. Responsibilities of the Pilot

The pilot in command must ensure no passengers are on board during hot refueling.

1. A pilot with a license that is valid for the airplane must, at all times, be at the controls of the airplane while hot fueling is carried out.

- 2. While the pilot is at the controls of an airplane, communication between the pilot and the person on the ground in charge of the refueling system must be maintained by means of an electronic intercommunication system, or ideally by visual contact and an agreed system of signals
- 3. While hot refueling is taking place, the pilot in command must ensure that:
  - a) The area outside the aircraft that would be used in event of evacuation is kept clear of obstacles; and
  - b) If the presence of fuel vapor is detected inside the aircraft, or any other hazard arises during refueling, refueling is stopped immediately and the aircraft's engine shutdown.

#### 8.2. Equipment and Procedures

All persons engaged in hot refueling must be trained in, and familiar with, the procedures to be followed during hot refueling or any emergency that may occur in relation to the refueling:

- 1. The area inboard of the Pitot Tubes and forwards of the Wings is Sterile and is to remain clear of all hazards, obstacles and persons during the refueling process.
- 2. The aircraft must be appropriately bonded to the fuel delivery vessel.
- 3. The aircraft must be chocked to prevent any unintentional movement during the refueling process.
- 4. Suitable and properly maintained firefighting equipment must be readily available for use if an emergency occurs during the refueling.

#### 8.3. Fuel Loading

- 1. The quantity of fuel to be loaded must be decided before hot refueling is commenced.
- 2. If an open system of refueling is used, there must be a means of quickly cutting off the fuel supply at the point of entry into the fuel tank of the airplane
- 3. Before the airplane's fuel filler cap is removed, the refueling equipment and the airplane must be earthed and connected so as to ensure they are of the same electrical potential.

While hot refueling is taking place, radio transmissions from the airplane must be restricted to the greatest extent practicable.

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## Part 3 Aircraft Procedures

#### 1. Documentation

- 1. The pilot must verify that all necessary documentation is on board the aircraft and is current and in-date.
- 2. All pilots are responsible for the validity of their licenses, qualifications, ratings and medical certificates.
- 3. Pilots must carry their license and appropriate photographic identification on all flights.

#### 2. Functions Duties and Responsibilities

- 1. The pilot is responsible for all aspects of aircraft operation, including, but not limited to the following:
- Aircraft pre- and post-flight checks
- All flying activities
- s Fueling
- Upkeep of relevant aircraft technical logs and documentation
- Movement of the aircraft in and out of hangars and on the airfield apron
- Security of the aircraft when unattended
- Reporting of any maintenance or serviceability issues
- Cleaning of the aircraft
- 2. The pilot is expected to observe all relevant duty, flying and rest time regulations and limitations as published by the Company, relevant NAA or local SOPs.
- 3. The pilot shall function as an advisor to the parachute operation for which they are flying. For example, this may be in the context of providing weather information or advice concerning the safe operation of the aircraft for parachuting purposes.
- 4. The pilot is expected to behave in a professional manner at all times and must recognize that they represent the reputation of the company and aircraft fleet at all times. Should an issue arise, the pilot is expected to deal with it professionally and to approach a resolution only via the appropriate authority or personnel.
- 5. The pilot will conduct all pre-flight planning and flying operations in accordance with procedures and limitations specified in the Aircraft Flight Manual. Exceptions to this are any stricter or more stringent Company Procedures or local Standard Operating Procedures, where the most limiting procedure or limitation shall apply.
  - Company Procedures impose a limiting Vfe speed of 125kts IAS

#### 3. Daily Aircraft Inspection

1. Before the first flight of each day the pilot must perform the daily pre-flight inspection as described in the AFM and manufacturer's checklist.

2. The pilot must satisfy themselves that the aircraft is in a fit condition and suitably prepared to operate at the start of each operational day.

#### 4. Pre-flight Responsibilities

- 1. The pilot is responsible for ensuring that weather and meteorological conditions and forecasts have been checked and that prevailing and forecast weather conditions meet appropriate weather minima for safe operation, in accordance with the Company SPO Operations Manual, NAA regulations and local aerodrome SOP.
- 2. The pilot is responsible for checking for any NOTAMs that may affect the intended flight or operations.
- 3. The pilot is responsible for ensuring safe aircraft performance criteria can be complied with at all times throughout the intended flight and aircraft operations.
- 4. The pilot is responsible for ensuring adequate weight and balance calculations are performed, or, in the case of parachuting operations, that each flight conforms to a Standardized Load Profile as shown in Section 2 of this manual.

#### 5. Task Specific Pre-Flight Checks

In addition to the pre-flight checks detailed in the AFM and manufacturer checklist, the following pre-flight checks must also be completed before parachute operations:

- 1. A suitable knife should be carried in the aircraft for use in an emergency by parachutists. This should be easily accessible and is usually to be mounted near the rear door.
- 2. A thorough check should be performed for loose articles, rubbish and debris in the cabin of the aircraft (including under the seat benches and in the "boot" of the cabin).
- 3. If the aircraft is fitted with a static line strong point, the security of the strong point and the stowage of static line strops should be checked. Further, when a static line strong point is fitted, the aircraft should also carry a double-carabiner which should be located securely with the parachutist's knife.
- 4. A check should be made of the on-board pilot oxygen supply, regulator and delivery mask/nasal cannula (if fitted) to ensure serviceability.
- 5. Serviceability of the pilot and parachutist red and green parachute lights should be checked.
- 6. The number, placement and condition of all restraints should be checked. The aircraft should have at least 15 restraints. Each should be appropriately placed to allow parachutists to sit according to the loading diagram. No restraints should be placed in a position which would allow the parachutist to exit the aircraft whilst still wearing a restraint.



#### 6. Task Specific Fuel / Mass & Balance

- 1. The pilot must ensure that aircraft Weight and Balance will remain within the limits defined in the AFM at all times.
- 2. When conducting parachuting operations, the pilot must satisfy themselves that the fuel and parachutist status of each aircraft lift is adequately defined by a pre-calculated Standardized Load Profile as shown in Section 2 Above.
- 3. The pre-calculated Standardized Load Profiles specify a minimum fuel reserve to be carried for parachuting operations. However, the pilot must also consider local diversion possibilities and may choose to carry extra reserve fuel. In this case, a full weight and balance calculation should be completed to calculate the maximum number of parachutists that may be carried given the new fuel load.

#### 7. Aircraft Starting Procedures (General)

#### 7.1. Normal Operations

- 1. When starting with the assistance of a marshal / starter, the pilot must ensure that they are suitably briefed regarding the sequence of the starting process and appropriate hand signals to be given.
- During parachuting operations, the rear cabin door should be left open until engine start is completed. This is in case of fire during an engine start – if the cabin door is left open then occupants may easily exit the aircraft to safety in the event of an engine fire during start.

#### 7.2. Warm / Hot Engine Starting Procedures

- 1. After a shutdown, the engine should normally be left to cool for a minimum of 15 minutes before being re-started.
- 2. If an engine start is required while the ITT continues to indicate a higher-than-normal temperature (above 150°C), the indicated temperature can be reduced by delaying the introduction of fuel into the engine after the start sequence begins (as the NG stabilizes, it will pull cooler air through the engine and the ITT indication will reduce, at which point fuel may be introduced). However, it should be noted that it is always better to allow the engine to cool naturally, if possible. In addition, the pilot must make a judgement call regarding the maximum length of time to delay the addition of fuel to the engine, observing the starter time limitations in the AFM.
- 3. An engine start may not be commenced if the initial engine ITT continues to show a temperature in excess of 250°C.

#### 7.3. Cold Weather Starts

1. Once started, the pilot must ensure the engine oil temperature is indicated in an acceptable (green arc) range before attempting to use beta range, taxi or taking off.

2. If the oil temperature is low, the power may be advanced to set 60% Ng (with the propeller unfeather and set fully fine) to aid warming the engine.

#### 7.4. Post-Start Systems Checks

- 1. An IPS function check must be performed after the first start of each day. 400Lbs Torque should be set and the IPS moved to the bypass position, a drop-in engine Torque should be indicated, which recovers when the IPS is stowed in the normal position.
- 2. A Propeller Over-Speed Governor check should be performed at least once per week.
- 3. A Standby Power Check should be performed before flights in accordance with IFR or any ferry flight. The details of all Post-Start Systems Checks can be found in the Aircraft Checklist.

#### 8. Parachute Operations

- 1. Task Specialists are to remain seated and restrained until a minimum of 1000ft AAL.
- 2. Normally, the initial climb out will be at Vy speed. However due to terrain and obstacle clearance constraints a climb out at Vx may sometimes be required.
- 3. "Climbing passes" (allowing a parachutist to exit while power is applied and/or the aircraft is in a climbing attitude) are forbidden in order to minimize the risk of parachutist tail strikes. Parachutists may only be allowed to exit when the aircraft is correctly configured (power, flaps and aircraft attitude).
- 4. Ordinary parachuting should not be performed from heights greater than 15000ft. For jumps between 13000ft and 15000ft the maximum allowed exposure time over 10000ft is 30 minutes and 13000ft is 6 minutes. <u>At jumps over 13000ft the pilot must have oxygen available in the aircraft.</u> (*Ref F/NLF handbook 103.4.5 May 2021*) NCO.SPEC.PAR.115

#### 8.1. Dropping Procedures

1. The parachute run-in should be performed in accordance with the speeds and figures in Table 12.4 Below. Exit Separation shall be given over the PA.

<u> </u>
Average Separation (Seconds)
9
8
7
6

**Note: Flap limiting speed, Vfe, is 125kts.** This is a company limitation and is stricter than the value to be found in the AFM!

- 2. During the drop, an initial Power setting is used to ensure the aircraft is in stabilized flight and descending. As the load begins to exit, the power setting can be reduced to keep the airspeed below 80kts and the aircraft in a stabilized descent.
- 3. Parachutists may only be allowed to exit when the aircraft is in the correct stable configuration with an appropriate power setting and when all necessary ATC (and, normally, DZ) clearances have been obtained.
- 4. Pilots must be aware of any altitude decrease during the run-in and must ensure that parachutists are not allowed to exit the aircraft below a safe altitude. This is particularly important for static line and low-experience solo freefall students.
- 5. Pilots must be aware of the aircraft distance from the DZ/PLA during the run-in and must ensure that parachutists are not dropped too far away to safely make a return to the PLA. If necessary, the run-in may be aborted and another pass flown to allow all remaining parachutists to exit at an appropriate and safe distance.
- 6. The pilot and jumpmaster may, at their discretion, abort the drop and stop the dropping of further parachutists at any time should they determine there to be a safety issue. The abort will normally be communicated by using the aircraft's parachuting lights and/or appropriate verbal communications.
- 7. Exceptions to the standard aircraft dropping configuration and power settings may be applicable when flying in formation. Typically, formations with other aircraft are usually flown at 100kts IAS with flaps as required. As formations with dissimilar aircraft may require different speeds and flap settings, thorough pre-flight briefing is required.
- 8. If dropping while flapless, or with higher power settings than normal, every effort must be made to ensure the tail plane of the aircraft is kept as high as possible relative to the rear door and parachutist's exit position in order to minimize the risk of a parachutist tail strike.

#### 8.2. Descent Procedures

- 1. Before descending, the rear door should be pulled closed. (The limiting speed with door open is 100kts IAS). Simultaneously the aircraft should be pitched nose down, the flaps should be raised and the power lever retarded. Maximum speed in descent is 160kts IAS.
- 2. No extreme maneuvers should be performed as the descent phase is started, which includes "wing overs" and other abnormal aircraft attitudes. Flights at speeds close to VNE should only be done with caution, noting air conditions and turbulence.
- 3. A Continuous Descending Approach (CDA) should be flown from the end of the parachute drop to the runway. This minimizes fuel usage and reduces the noise impact of the operation.
- 4. If it is necessary to descend with parachutists on board, the in-flight door must be closed to prevent any premature deployments exiting the aircraft.

- 5. If static line students have been dropped, all deployed static line bags must be disconnected from strong point strops and safely stowed before the descent, as per normal static line procedures. Any static line students descending with the aircraft must remain attached to the static line strong point.
- When descending with parachutists on board, care should be taken below 2000ft AGL to limit the rate of descent to below 2000fpm – this is especially important if student AADs are on board.
- 7. All persons on board will remain seated and restrained below 1000ft AAL.

#### 8.3. Approach, Landing and Taxi Procedures

1. The final approach and landing can be made with up to 30° flap, however landings with 10° or 20° flap may only be used provided the runway dimensions and prevailing wind conditions allow.

**Note: Flap limiting speed, Vfe, is 125kts.** This is a company limitation and is stricter than the value to be found in the AFM!

- 2. Airfield "low passes" and runway "beat-ups" are not advised. The 500ft-rule should be observed at all times by all pilots.
- 3. Turns whilst taxiing should be performed at a reasonably slow pace with minimal application of brake. Avoid tight turns, especially spinning the aircraft on one wheel. When using BETA consideration must be given to the condition of the runway surface to ensure no FOD damage to the propeller and compressor blades occurs.

#### 8.4. Shutdown Procedures

- 1. All unnecessary internal electrical systems must be switched off prior to engine shutdown.
- 2. The engine must be cooled (Power lever IDLE) for a minimum of 2 minutes before shutdown (taxiing may be included in this time). If power is used during taxi, the "2 minutes" timer must be restarted.
- 3. The Fuel Boost switch should remain in the NORM position until the amber FUEL PRESS LOW annunciator flashes, then it should be moved to the ON position briefly before selecting OFF.
- 4. The Aircraft battery must remain ON until the NG indication reaches 0%, then it can be turned OFF. (To avoid damaging the NG indication system).

#### 9. Task Specific Emergency Procedures

Aircraft emergency procedures are described in the Aircraft Flight Manual (AFM) which should be read in conjunction with this Skydiving Procedures Manual (SPM) and the

Operations Manual (OM)

#### 9.1. Open Container or Loose Pilot chute / Drogue during flight.

- If a parachutist's container opens inside the aircraft during flight, or if a pilot-chute or drogue becomes loose, the aircraft's door should be closed (unless the pilot authorizes the door to be opened) until all parts of the affected equipment are securely stowed.
- 2. If the parachutist concerned cannot make a safe parachute descent, they will remain in the aircraft and descend with it to land.
- 3. If the loose items cannot be safely secured, the aircraft door must remain closed and all on board will descend with the aircraft and land.

#### 9.2. Parachute or Parachutists Entanglement with the Aircraft

- 1. If any part of the parachutist's equipment becomes entangled with the aircraft the action to be taken is at the discretion of the pilot and jumpmaster in order to ensure the safety of the parachutists, pilot and aircraft.
- 2. If practical and safe to do so, the task specialists may use the on-board knife to cut free any entangled equipment or parachutist from the aircraft.
- 3. If necessary, the pilot or jumpmaster may initiate an In-Air Emergency Evacuation of the aircraft.

#### 9.3. In-air Emergency Evacuation Procedures

- 1. In case of an in-air emergency evacuation, the altitude and location of the aircraft must be taken into consideration. Either the aircraft's location or the parachutist's experience may not be appropriate for a safe exit, even in an emergency situation.
- 2. Either the pilot or the jumpmaster may abort an in-air emergency evacuation if they believe the aircraft location or altitude to be unacceptable or if they believe that the plane may be landed.
- 3. Some suggested guidelines are detailed below, however the severity of the aircraft emergency must be considered:
- Below 500m (1650ft) tandems should not leave the aircraft
- It is not recommended for students to exit the aircraft below 300m (1000ft)
  - For all parachutists, it is highly recommended that they do not exit the aircraft below 225m (800ft).

#### 9.4. Engine Failure During, or Immediately After Take-off

1. Follow all the instructions provided in the POH / AFM, additionally;

- 2. If possible ensure that all parachutists remain seated, restrained and assume the crash position until the aircraft has come to a complete stop.
- 3. Evacuate the aircraft through the nearest exit in the planned order of parachutists exit and abandon the danger-zone around the aircraft in the direction of the tail.

#### 10. Flight and Duty Limitations

In accordance with NCO.SPEC.115 Crew Responsibilities, the Crew member shall be responsible for the proper execution of his/her duties. This includes the responsibility not to undertake duties on an aircraft if he/she knows or suspects that he/she is suffering from fatigue as referred to in 7.f of Annex IV to Regulation (EC) No 216/2008 or feels otherwise unfit to perform his/her duties.

Additionally, the crew member who undertakes duties for more than one operator shall: maintain his/her individual records regarding flight and duty times and rest periods as referenced in Annex III (Part-ORO), subpart FTL to Regulation (EU) No 865/2012, if applicable; and provide each operator with the data needed to schedule activities.

#### 11. Crew Resource Management (CRM) and other responsibilities

Part of the role of the aircraft / pilot is to ensure that the aircraft fits seamlessly into the DZ operation, meeting and exceeding the expectations of the DZ. A good working relationship with the following key personnel is essential. The following gives an indication on what duties and responsibilities can be performed and expected from key personnel at the DZ.

#### 11.1. Daily Manager / Drop Zone Manager (DZO)

The DZO is responsible for managing and overseeing the DZ Operation, including both the Skydiving Activity and our supporting aircraft operation. Although our aircraft operation may be transient (contractual) with the DZ, the ultimate safety of the DZ and Parachutists resides with the DZO. Specific duties of the DZO (not all inclusive) are as follows:

- Supervise all skydiving / parachuting related activities.
- Ensure compliance with all National Skydiving Association regulations and requirements and other Federal, State and Local rules and regulations.
- Coordinate with the National Skydiving Association on matters pertaining to skydiving Safety and Training.
- Coordinate DZ activates with other aeronautical users, facility managers and Community Officials / Leaders as appropriate
- Establish and maintain a suitable Parachute Landing Area (PLA) with adequate separation and safety margin from the aircraft manoeuvring areas.
- Provide the relevant ATC facility with notification for the intended operation.
- Develop a training system and orientation points for all skydivers / parachutists to include aircraft standard and emergency procedures.

#### 11.2. Jumpmaster (JM)

Regardless of the experience level of the jumpers on board, one individual, usually the most



experienced should be designated as the JM. The pilot and the JM should work as a team for the safety of the skydivers / parachutists. Specific duties of the JM typically include:

- Identify him/herself as the JM to all aircraft occupants.
- Ensure a safe approach to, and loading of the aircraft. Especially if the engine is running. (There may be an additional Loading person to assist with this.)
- Ensure that all parachutists on-board have been properly trained and are adequately equipped for the planned jump.
- Ensure that all parachutists are secured and restrained and all loose articles secured prior to take-off.
- Spot each parachute drop, or designate a spotter for each separate pass.
- Assist the pilot in maintaining the aircraft within Mass & Balance limitations throughout all phases of flight.
- Ensure that all National Skydiving Association rules are followed.
- In coordination with, and at the direction of the pilot, determine and take appropriate action in case of an emergency.

#### 11.3. Briefing Drop Zone Operator (DZO), Jumpmasters (JM) and Staff.

The following points should be briefed to the DZO, JM and other staff prior to Operating at a new DZ, or as a refresher as appropriate.

- Aircraft Fueling Procedures & Requirements
- Aircraft Starting Procedures
- Correct loading and seating (As per Aircraft Loading Charts)
- Operation of the in-flight parachuting doors and lights
- Exit Separation & Timings
- The use and positon of the aircraft restraints.

#### 11.3.1. Additionally, the DZO and other staff should be briefed on:

- Aircraft block / flight times.
- Fuel / Mass and Balance Computations for each fuel / parachutist scenario.

#### 12. Type Specific Check Lists and Procedures

#### 12.1. Start-up Checklist

C208 D-FOX	Y	C06T	D-EGGO
START PROCEDURES (	START PROCEDURES (GPU)		JRES (GPU)
Fuel Selectors Battery Switch EXT Pwr Switch Prop Control	BOTH ON ON START FEATHER	Fuel Selector Battery Switch PAR / SER Prop Control	BOTH ON PAR FEATHER
Fuel Boost Switch Starter Switch Condition Lever Fuel Flow ITT Prop Control Lever Starter Switch	ON ON LOW IDLE ABOVE 50pph MONITOR FWD OFF at 50%	Starter Switch Condition Lever Fuel Flow ITT Starter Switch External Power	ON LOW IDLE @ 20% CHECK 100pph MONITOR 620°C OFF at 50% REMOVE
		START PROCEDU	JRES (INTERNAL)
AFTER STARTING Engine Instruments EXT Pwr Switch Generator OFF Ann Fuel Boost Switch Prop Control Lever Standby Pwr Avioncs 1&2 Radios / GPS Suction	CHECK OFF OUT NORM MAX As Reqd. ON SET Check.	Fuel Selector Battery Switch PAR / SER Prop Control Starter Switch Condition Lever Fuel Flow ITT Starter Switch PAR / SER	BOTH ON SER FEATHER ON LOW IDLE @ 23% CHECK ~ 100pph MONITOR 580 °C OFF at 50% PAR

#### 12.2. Systems Checks

C208	D-FOXY	C06T	D-EGG	<b>i</b> O	
SYSTEMS CHECK	(S	AFTER STARTING			
Inertial Particle Se	eparator (IPS)	Engine Inst PROP Control	CHE MAX	-	
POWER Lever Suction Inertial Separator Power Lever	400lbs 4.5 – 5.5 in Hg BYPASS NORMAL IDLE	PAR / SER Generator Voltage Avionics Fuel Quantity Radios / GPS	CHE ON	nt: @ 65%Ng) CK ~ 28.0V CK/SET MVP	
Overspeed Gover	Overspeed Governor Check		SYSTEMS CHECKS		
Overspeed Switch HOLD	PRESS &	Primary Governo	or Chec	k	
Power Lever	ADVANCE	Prop Control	Feath	ner/Unfeather	
(Prop should stabilise 1750 +/- 60 RPM) Power Lever IDLE Slowly		Overspeed Gove	rnor Ch	neck	
Overspeed Switch	RELEASE	Overspeed Test S Power Lever	witch	ON ADVANCE	
Standby Power Check		(Prop should stabi	ilize 200	00 +/- 60 RPM)	
Standby Pwr Switc VOLT/AMM Switch VOLT/AMM Switch Generator Switch	GEN	Power Lever Overspeed Test S		IDLE	
Generator OFF Ani Standby Power Ani					
VOLT/AMM Switch VOLT/AMM Switch Generator Switch					
Generator OFF And Standby Power And					

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#### 12.3. Before Take-off Checks

C208	C208 D-FOXY		D-EGGO
BEFORE TAKE-OF	F	BEFORE TAKE-OF	F
Fuel Tank Selector Flaps Condition Lever <i>Prop Control</i> Trims x 3 Lights Controls	BOTH ON 20 DEGREES AS DESIRED <i>1900 (White Line) *</i> SET ON FULL & FREE	Fuel Tank Selector Flaps Condition Lever Prop Control Trims x 2 Lights Controls	BOTH 0 DEGREES AS DESIRED 2000 (White Line) * SET (Rudder full R) ON FULL & FREE

#### \* Prop Control Reduction to White Line for Noise Abatement Procedures.

#### 12.4. Dropping Configurations

C208 D-FOXY		C06	T D-EGGO
DROPPING CONFIGURATION		DROPPING COI	NFIGURATION
Flaps Power Lever Prop Control Power Lever Pitch Attitude Lights	20 DEGREES 1000 lbs 1600 rpm 300 lbs 0 – 5 Nose Up OPEN / EXIT	Flaps Prop Control Power Lever Pitch Attitude Airspeed Lights	0 DEGREES 1800 rpm 150 – 220 lbs 0 – 5 Nose Up 70-60 Kts OPEN / EXIT

#### 12.5. Top of Descent

C208 D-FOXY	C06T D-EGGO
TOP OF DESCENT	TOP OF DESCENT
Door HandlePULL CLOSEDNose AttitudePITCH DOWNFLAPSUPPower LeverIDLE at 120ktsMax Speed160Kts	Door HandlePULL CLOSEDNose AttitudePITCH DOWNPower LeverIDLE at 100 KtsMax Speed150 Kts

#### 12.6. Before Landing / Approach

C208 D-FOXY		C06T [	D-EGGO
BEFORE LANDIN	G / APPROACH	BEFORE LANDING	G / APPROACH
Fuel Tank Selector Flaps	100Kts – 10deg 90Kts – 20deg	Fuel Tank Selector Flaps or if desired	BOTH ON 0 Degrees 100Kts – 10deg 80Kts – 20deg
Power Lever Prop Control Lever	APPR POWER MAX	Power Lever Prop Control Lever	APPR POWER

#### 12.7. Shut down.

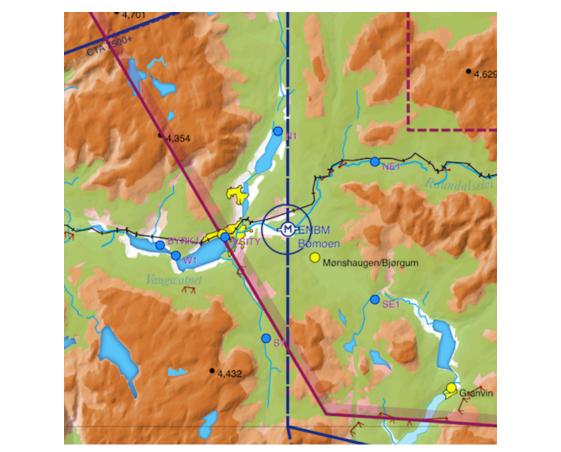
C208 D-FOXY		C06T D-EG	GO
SHUT DOWN		SHUT DOWN	
Power Lever Avionics 1&2 / Stby Pwr Fuel Condition Lever Prop Control Lever Fuel Boost Switch Battery (when NG 0%)	IDLE 2 MINS OFF CUTOFF FEATHER OFF OFF	Power Lever Avionics Fuel Condition Lever Prop Control Lever Battery (when NG 0%)	IDLE 2 MINS OFF CUTOFF FEATHER OFF

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# Part 4 Approved Operating Sites & Local Procedures

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ENBM		VOS	S / BØMOEN
Elevation 300' / 91m	Location 2 NM E Voss	Coordinates N60 38.3 E006 30.1	Airfield Category
A/D Frequency <b>123.500</b>	FIS Frequency 124.700 - Polaris	Transponder Code Given by FIS	Phone +47 56 51 1000



RWY	SFC	TORA	LDA	SOG	114.200	211 / 37nm
<b>09</b> (086)	Asphalt	<b>1000</b> (3281)	<b>1000</b> (3281)	<b>VOO</b>	114.850	082 / 41nm
<b>27</b> (266)	Asphalt	<b>1000</b> (3281)	<b>1000</b> (3281)	FLS	115.550	063 / 43nm

**Local Procedures:** Preferred take-off is RWY 27. After take-off turn left onto heading of 240 to avoid overflying Palmafossen School and Residential Areas. Noise Abatement procedures to be followed until clear of terrain.

**Dropping Procedures:** Climb North via N1 – NE1 or South via S1 – SE1 and call Polaris Control for clearance above FL115. Run-in from East to West (266) allowing a North or South offset for wind correction. Earliest green light is 1.3nm before the overhead, latest exit is 1.0nm after.

Continuous Descending Approach (CDA) initially over the Vangsvatnet Lake towards W1 with a left-hand turn to downwind 27 / base 09 following Noise Abatement procedures.

**HAZARDS:** Intense Paragliding activity over VCITY. Rotary operation with regular activity on the aerodrome. Microlight Pilot Training on the aerodrome. Terrain to 4701ft AGL within vicinity.

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Date	Name	Position	Signed