



# TRAINING MANUAL

## JUMP - PILOT



### **For new JUMP pilot**

- Min 200 hours to start the training
- Min 8 hours training and at least 20 loads with instructor if together with check-out on new aircraft version / class / type, all items in this syllabus must be covered.
- Min 5 hours training/20 loads with instructor if already checked out on aircraft type, all items high lighted in YELLOW must be covered and sign for.

### **For “experienced” JUMP pilot, see syllabus: “Jump – Pilot, New Aircraft”**

- New aircraft version / class / type, after skill test: **Min 10 loads with instructor.**
- The PARA FI may decide which items to cover from within this syllabus, both regarding ground school and flight training, however; all items highlighted in YELLOW must be covered and signed for.



Notes:

- This Training Manual is written for, and covers most airplanes used for dropping of parachutists/skydivers. Certain versions of a type may differ from standard which requires the flight instructor to modify or alter the syllabus to cover the differences accordingly.
- When an applicant already has an adequate experience in the airplane used for training, only items deemed applicable by the instructor needs to be covered or checked. These items must however cover the \*) items or more.
- *All items regarding sea-planes should be disregarded unless using such airplane is used for the training.*

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## **1. Organization**

### **1.1 Name and address**

Svenska Fallskärmsförbundet  
Sjöhagsvägen 2  
721 32 Västerås  
SWEDEN  
+46(0)21 41 41 10

### **1.2 Type of operations**

PARA

### **1.3 Head of Training (HT)**

FLYK Chief Instructor

### **1.4 Approved Para-pilot Instructors**

Pelle Scherdin  
Hans Lundberg  
Magnus Tegnhagen  
Sus  
Pär Svensson

### **1.5 Premises for Flight operations**

Appropriate airspace, sites and runways.

### **1.6 Premises for theory education**

Appropriate facilities.

### **1.7 Aircraft used for training**

Aircraft type/class, A/C version, engine type/version

Any aircraft used for training should have appropriate equipment for this, e.g. flight controls, seating, seatbelts, intercom etc. Those aircraft lacking some of these items may be used after approval from HT.

### **1.8 Aircraft Maintenance**

Name, location and contact

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## **2. Training plan**

### **2.1 Aim of the training**

The aim is that the pilot after the training, (and a skill test when so required), can act as PIC, (or co-pilot), during PARA operation and has shown adequate knowledge, skill and attitude, in normal and non-normal situations during flying and decision making including, but not limited to, a/c systems and operation, weather conditions, special operation, (including but not limited to), formation flying, big way formation, PARA at night and overall co-operation with all other staff.

### **2.2 Prerequisites for training**

The student must hold at least a valid PPL with the appropriate medical certificate and completed at least 200 flight hours as a pilot of airplanes.

The student must be able to read, speak and understand English.

The student shall have completed a theoretical course regarding PARA operation.

### **2.3 Required experience qualifications**

When in doubt; To be obtained from SFF or Transportstyrelsen before training begins.

### **2.4 Training program**

#### 2.4.1 Duty periods

A duty period starts 1 hour before EOBT and ends 30 minutes after on block.

Minimum rest between duty periods is 8 hours.

Maximum duty period for a student is 10 hours.

### **2.5 Training records**

#### 2.5.1 Documentation

All flights will be recorded, and the training records will be retained by the organization for a period of at least five years.

#### 2.5.2 Security

The persons who have access to the training records are HT, TRI, CRI, the student concerned and Transportstyrelsen representative.

### **2.6 Tests and Examinations**

#### 2.6.1 Documentation

All theoretical tests will be retained by the organization for a period of at least five years.

### **2.7 Standards**

The student must obtain the required standards during flight training, (before the skill test.)

#### **2.7.1 Theoretical standards**

The pass mark is 75 %.

#### **2.7.2 Flight training standards**

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### 2.7.2.1 General requirements

- (a) Operate the aeroplane within its limitations.
- (b) Complete all maneuvers with smoothness and accuracy.
- (c) Exercise good judgement and airmanship.
- (d) Apply aeronautical knowledge.
- (e) Maintain control of the aeroplane at all times in such manner that the successful outcome of a procedure or maneuver is never in doubt.

### 2.7.2.2 Flight standards

<b>Altitude</b>	Level flight	±50 ft
	Traffic pattern	±50 ft
	Normal Turns	±100 ft
	Steep Turns	±100 ft
	Slow flight	±100 ft
<b>Heading</b>	General	±5° , (slow flight; ±10°)
<b>Speed</b>	General	±5 kt, (slow flight; +5/-0 kt)
	Climb at V <sub>x</sub> and V <sub>y</sub>	±2 kt
	Approach	+5/-0 kt
<b>Tracking</b>	On radio aids, GPS	±5°/+ 0,1Nm, (eq 600 ft or 200 meter)

## 2.8 Safety training

### 2.8.1 Individual responsibilities

Each individual performing flight training is responsible that he or she possesses the appropriate skill of safety training.

### 2.8.2 Emergency drills

The emergency exercises shall be performed before first flight (E1)

Emergency exercise no.	Contents	Time
E 1	Actions in the event of fire/failure in the air and on the ground - engines, cabin and electrical. Systems failures. Escape drills- location and use of emergency equipment and exits. Decision making and co-operation with "Lift-chef"	0:30

## 2.9 Theoretical Knowledge Instruction

The theoretical knowledge instruction comprises

- (a) Ground school syllabus
- (b) Long briefings
- (c) The safety training syllabus

*Note:*

The ground school written examination comprises questions distributed appropriately across the main subjects of the syllabus. The pass mark is 75%.

A tuition hour consists of 60 minutes followed by a 15-minute break.

### 2.9.1 Ground school syllabus



Item no.	Tuition hours	Contents
1	4.00	<b>AEROPLANE STRUCTURE AND EQUIPMENT, NORMAL OPERATION OF SYSTEMS AND MALFUNCTIONS</b>
1.1		Dimensions 1.1 dimensions
1.2		Engines 1.2.1 type of engines 1.2.2 in general, function of the following systems or component -engine -oil system -fuel system -ignition system -starting system -fire warning and extinguishing system -generator and generator drives -power indication -reverse thrust -propeller system -feathering system 1.2.3 engine controls (including starter), engine instruments and indications in the cockpit, their function, interrelation and interpretation. 1.2.4 engine operation during engine starts, start and engine malfunctions, procedures for normal operation in the correct sequence.
<b>1.3</b>		<b>*)Fuel system</b> 1.3.1 location of the fuel tanks, fuel pumps, fuel lines to the engines, tank capacities, valves and measuring. 1.3.2 location of the following systems: -filtering -heating -fuelling and defuelling -venting 1.3.3 in the cockpit the monitors and indications of the fuel system, quantity and flow indication, interpretation 1.3.4 fuel distribution into the various tanks, fuel supply and temperature control
1.4		Heat & Air Conditioning system 1.4.1 components of the system and protection devices 1.4.2 cockpit switches, levers, monitors and indicators, interpretation in regard to the operational condition. 1.4.3 normal operation of the heating system and temperature control.
Item no.	Tuition hours	Contents



**1.5**

**\*)Ice protection**

1.5.1 Ice-protected components of the airplane including engine controls, de-icing of leading edges, sources, controls and indications

1.5.2 operation of the anti-icing/de-icing system during take-off, climb, cruise and descent, conditions requiring the use of the protection systems.

1.6

Hydraulic systems

1.6.1 components of the hydraulic system, quantities and system pressure, hydraulically actuated components associated with the respective hydraulic systems.

1.6.2 controls, monitors and indicators in the cockpit, function and interrelation and interpretation of indicators.

1.7

Landing gear

1.7.1 main components of the

-main landing gear

-nose wheel

-nose wheel steering

-wheel brake system

1.7.2 required tyre pressure

1.8

*Floats*

*1.8.1 main components of the*

*-struts and spreaders*

*-water rudders*

*-wires*

*-hatches, inspection and water draining*

*1.8.2 limitations*

1.9

*Amphibious Floats*

*1.9.1 main components of the*

*-struts and spreaders*

*-water rudders*

*-wires*

*-hatches, inspection and waterdraining*

*1.9.2 retractable landing gear*

*- normal operation*

*- alternate operation*

*1.9.3 required tyre pressure*

*1.9.4 result of landing gear in wrong position during landing*

*1.9.5 limitations*

**2.0**

**Flight controls and high lift devices**

**2.0.1**



- aileron system
- elevator system
- rudder system
- trim systems
- flaps
- \*)-stall warning system**
- 2.0.2 flight control system from the cockpit controls to the flight control/surfaces
- 2.0.3 controls and indicators of the systems mentioned under 2.0.2, interrelation and dependencies

- 2.1 Electrical power supply
  - 2.1.1 number, power, voltage, frequency and location of the main power system (AC and DC)
  - 2.1.2 location of the controls monitors and indicators in the cockpit
  - 2.1.3 flight instruments, communication and navigation systems
  - 2.1.4 location of vital circuit breakers
  - 2.1.5 generator operation and monitoring procedures of the electrical power supply
- 1.10 Flight instruments, communications and navigation equipment
  - 1.10.1 visible antennas
- 1.11 Cockpit, cabin and cargo compartment
  - 1.11.1 operation of the exterior, cockpit and cabin lighting
  - 1.11.2 operation of the cabin doors and windows
- 1.12 **\*)Emergency equipment operation and correct application of the following emergency equipment in the aeroplane:**
  - portable fire extinguisher**
  - first aid kit**
  - ELT/PLB/(ELBA)**
- 1.13 Vacuum system

(Intentionally blank)





- 2.1 General limitations  
2.1.1 certification of the airplane, category of operation, noise certification and maximum and minimum performance data for all flight profiles, conditions and a/c systems  
-maximum crosswind components at take-off and landing  
-maximum speed for flap extension  $V_{fo}$   
2.1.2  
-stall speed  $V_s$   
2.1.3  
-maximum take-off mass  
-maximum landing mass  
-maximum load factor during operation  
-certified range of centre of gravity
- 2.2 Engine limitations  
2.2.1 operating data of the engines  
-time limits and maximum temperatures  
-minimum RPM and temperatures  
-torque  
-maximum power for take-off and go-around  
-minimum and maximum oil temperature and pressure  
-maximum starter time and required cooling  
-maximum propeller RPM  
2.2.2 certified oil grades
- 2.3 System limitations  
2.3.1 Fuel system  
certified fuel specifications, minimum and maximum pressures

- 3 2.00 **\*)PERFORMANCE, FLIGHT PLANNING AND MONITORING**
- 3.1 Performance  
Performance calculation concerning:  
-stalling speed and airspeed calibration  
-take-off distances to 50 ft  
-enroute climb: time, distance and fuel  
-take-off rate of climb  
-service ceiling vs gross mass  
-normal descent: time, distance and fuel  
-landing distances from 50 ft
- 3.2 Flight planning  
Flight planning for normal conditions  
-power setting of the engine during climb and cruise  
-calculation of a flight plan



4	1.00	<b>*) LOAD AND BALANCE AND SERVICING</b>
4.1		Load and balance -load sheet with respect to the maximum masses for take-off and landing -centre of gravity limits 4.1.1 influence of fuel consumption on the centre of gravity
4.2		Servicing Servicing connections for: -fuel -oil -hydraulic -electric power
5	1.00	<b>EMERGENCY PROCEDURES</b>
5.1		Recognition of the situation as well as immediate memory actions in correct sequence and for those conditions recognized as emergencies by the manufacturer and certification authority -engine failure during take-off -engine failure inflight -malfunctions of the propeller system -engine overheat, engine fire on ground and inflight -electrical smoke and/or fire -fuel pump failure -fuel freezing/overheat -electric power failure -flight instrument failure
5.2		*)Actions according to the approved abnormal and emergency checklist -engine restart inflight
<b>Item no.</b>	<b>Tuition hours</b>	<b>Contents</b>
6	1.00	<b>EXAMINATION</b>

### 3. Flight training

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The flight training comprises of 3 hours of dual flight instruction and a total of at least 20 T/O and landings during PARA operation. This requirement may be reduced after evaluation of the experience and skill showed by the individual student to minimum 10 T/O and landings during PARA operation.

### **3.1 Briefing and air exercises**

#### **3.1.1 Long briefings**

*Note: When an applicant already has a adequate experience in the airplane used for training, only items deemed applicable by the instructor needs to be covered or checked. These items must however cover the \*) items or more*

<b>Exercise no</b>	<b>Contents</b>
B 1	Introduction to the aeroplane Explanation of the cockpit layout Aeroplane and engine systems Checklists External checks Internal checks Starting procedure Actions in the invent of malfunctions during start-up Engine run-up Power settings-limitations
*)B 2	Flight profiles Effect of flaps Aeroplane handling characteristics during slow flight Effect of power Effect of trimming Operation of cabin heat/ventilation systems
*)B 3	Flight profiles short field Take Off and Landing Performance Mass & Balance Engine limitations Stall speeds Characteristics of the stall Stall recognition and recovery Stalling and recovery: Without power With power on With flaps down Spin avoidance and recovery



Exercise No	Contents
B 4	Flight planning Performance Use of radio navigation aids Use of GPS Cross wind take-off and landing technique
*)B 5	Emergency procedures: Engine failure during takeoff, and aborted T/O Engine failure after takeoff, engine out procedures and checklists Engine failure at "safe" altitude; restarting procedures Characteristics during instrument flight Precautionary landing
*)B 6	B 6.1 Flying at max gross mass Limitations Mass & Balance Change of C/G during flight Flying characteristics at max gross mass  <b>When applicable:</b> B 6.2 Flying with parachute jumpers Regulations Jumpmaster/Lift-chef coordination Planning Radio traffic Local regulations Final flying, ("running-in") spotting technique
B 7	Class/type PC requirements Procedures for the skill test

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### 3.1.2 Syllabus Air exercises

Training No	Content	Time (block hrs)
1	A/C familiarization, Mass & Balance calculation, Normal engine start procedures, Taxi, ( <i>Slow taxi on water – with and without water-rudder</i> ), Before T/O procedures, T/O and climb, Straight and level flight, Coordination maneuvers, Normal approach and landing, after landing and parking, ( <i>mooring</i> ) procedure.	1:15
2	Prestart checklist and normal engine start, Taxi, ( <i>Taxi on the step</i> ), step-turns, and before T/O procedures, T/O and climb, Flying with different flap settings, Slow flight, Steep turns, Normal approach with low altitude Go Around, Full stop landing, ( <i>mooring</i> ).	1:15
3	Prestart checklist and normal engine start, Taxi and before T/O procedures, Short field T/O, Practice of climb, Stall and stall recovery, Idle power/high/low speed descend, T/O and landings, Demo eng fail procedures, After landing and parking procedure.	1:15
4	Prestart checklist and normal engine start, Taxi and before T/O procedures, Normal T/O and climb, En Route procedures, Short field, ( <i>small lake</i> ) T/O and landings, 0-flap landings, ( <i>Glassy water landings</i> ), Full stop landing.	1:30
5	Prestart checklist and normal engine start, T/O with engine failure, Engine failure at "safe" altitude, Abnormal procedures, T/O with engine fire before liftoff, T/O and landings without basic instruments, Instrument flight, Precautionary landing, Engine out approach and go-around, Eng out landing	1:15
6	Prestart checklist and normal engine start, Pax. briefing ( <i>and "dock-boy" coordination</i> ), Normal T/O and climb, flying at gross mass, Maneuvers at max gross, T/O and landings at max gross mass, Eng fail in initial climb After landing and parking procedure	1:30
7	Normal and non-normal PARA operation, spotting technique, use of nav equipment, cooperation with lift-chef, simulated emergencies, aborting dropping, descending with jumpers onboard, landing with full load.	1:30
Total time		8:00
8	Additional training if so required	
9	Additional training if so required	
10	Additional training if so required	
	Skill test	2:00

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### 3.3 Comprehension of sessions

X= Mainly trained in this session    /= Part of session

Item \ Training No	1	2	3	4	5	6	7	8	9
<b>1 External and cockpit checks</b>	X	/	/	/	/	/	/		
<b>2 Starting of engine</b>									
2.1 Normal starting procedure	X	/	/	/	/	/	/		
2.2 Malfunctions	X					/	/		
<b>3 Taxiing</b>	X	/	/	/	/	/	/		
<b>4 Preflight check (including engine run-up and checks)</b>	X		/		/		/		
<b>5 Takeoffs</b>									
5.1 Normal with different flaps settings	/	X	/	/	/	/			
5.2 Crosswind takeoff (if conditions available)				X	/	/			
5.3 Simulated Engine failure during takeoff and/or initial climb.					X	/	/		
<b>6 Climb</b>									
6.1 Best rate of climb/best angle of climb	/	/	X	/	/	/	/		
6.2 Power setting during climb	X	/	/	/	/	/	/		
6.3 Climbing turns (Vx/Vy) onto given headings	X			/		/	/		
6.4 Transition to level flight	X	/	/	/	/	/			
<b>7 Flight exercises</b>									
<b>7.1 Horizontal flight at various speeds</b>	/	X		/		/			
7.1.1 Slow-flight		X				/			
7.2 Steep turns 360° to the left and right at 45° bank angle		X				/			
7.3 Approach to stall speed or initiation of stall warning in: (c) Full stall straight and level flight, approach configuration, engine at idle and (d) Approach to stall - climbing turns at bank angles of 10° to 30°, takeoff flap, climb power.			X			/			
			X			/			
7.5 Simulated engine failure					X	/	/		
7.5.1 Optimum glide speed					X	/	/		
7.5.2 Pattern to a selected emergency landing area					X	/	/		
7.6 Simulated emergencies					X		/		
7.6.1 Fire or smoke in flight					X		/		
7.6.2 Loss of power					X		/		
7.6.3 Systems malfunction					X		/		
7.6.4 Static jump Hang-Up							/		
<b>8 Go-around / Engine out go-around</b>		X			X	/	/		
<b>9 Landings</b>									
9.1 Normal landings	/	X	/	/	/	/			
9.2 Crosswind landings				X	/	/			
9.3 Landings without flaps				X					
9.4 Glassy water landings	/	/	/	/	X				
9.5 Landing with engine out					X				
<b>10 Instrument flight</b>									
10.1 Level flight, straight ahead and turns					X				
10.2 Climb and descent					X				
10.3 Turns in climb and descent					X				
10.4 Steep turns					X				
10.5 Slow flight					X				
10.6 Recovery from unusual attitudes, up-set recovery					X				
<b>11 Flight by night (only if applicable)</b>									
11.1 Normal traffic circuit									
11.2 Go-around									
11.3 Landing with landing lights off									
<b>12 En Route Procedures</b>									
12.1 Flight plan, dead reckoning and map reading				X					
12.2 Maintenance of altitude, heading and speed.				X					
12.3 Orientation, timing and revision of ETA:s				X					
12.4 Use of radio navigation aids				X					
12.5 Flight management (flight log, routine checks including fuel, systems and icing.)				X					



# STUDENT RECORD FLIGHT TRAINING EXERCISES PARA PILOT



Student.....



Student name			
License No		Training for (rating)	
Address	_____		
	_____		
	_____		
Phone	Home	Work	Mobile
Total hrs/rating			
Turbine/jet		Class/Type/-s	
Instrument			





## Comprehension of performed sessions

Date	Training No	Time	Total time	Landings	Remarks (not performed items etc.)

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<b>Training no:</b> 1	Performed date
<b>Objectives:</b> Introduction of the aeroplane. Normal procedures Engine start malfunctions.	Off block _____ Off ground _____ On ground _____ On block _____ Flight time _____
<b>Planning:</b> Practice area for airwork 2500-5000 ft. Total 2:30 hrs whereof 1:15 airborne.	Landings
<b>Preflight:</b> POH: A/C limitations, Mass & Balance, Performance, Fuel & oil capacity, Expanded checklist, Flight profiles, Power settings, Familiarization-time in A/C.	

<b>Content:</b>	<b>Comments:</b>
<b>1: A/C FAMILIARIZATION.</b> Preflight inspection; location of each items and purpose of inspection. Mass & Balance, Cockpit familiarization. Checklist.	
<b>2: NORMAL ENGINE START PROCEDURES.</b> Check of engine instruments. Actions in case of HOT or HUNG start. After engine-start checklist.	
<b>3: TAXI.</b> Power and taxi-speed. Use of controls. Turning in confined spaces. Demo A/C influence of wind ( <i>water rudder</i> ).	
<b>4: BEFORE TAKEOFF PROCEDURES.</b> Checklist. Engine run-up. Before takeoff by-hart items: Trims - Flaps - Fueltransfer - Switches set. Takeoff briefing; Engine failure procedure.	
<b>5: TAKEOFF AND CLIMB.</b> Track during takeoff. Setting of MTOP. Acceleration and lift-off. Heading-track. Attitude-speed. Clean up and reading of checklist. Ball centered. Leveling off - power selection.	
<b>6: STRAIGHT AND LEVEL FLIGHT.</b> Power setting, speed and trimming. Instrument apparition. Rate one turns, 30° bank turns. Coordinated flight, bank angle, rollout heading. Operation of flaps, effect on attitude and airspeed. Demonstration of engine failure by hart items. Use of cabin ventilation and heating systems.	
<b>7: COORDINATION MANEUVERS.</b> 80 Kt. Wingrocking. Turns to specific headings. Climbing and descending turns, 500'/min. Power settings, altitude, coordinated flight.	
<b>8: NORMAL APPROACH AND LANDING.</b> Speed, power setting. Demonstration of landing attitude. If time permits: practice "full" takeoff and landings to taxi speed.	
<b>9: AFTER LANDING AND PARKING PROCEDURE.</b> Checklist. Parking. Engine cool-down. Securing of A/C. ( <i>Mooring</i> ). Entries in logbook.	
<b>Advisory notes:</b>	

<b>Postflight:</b> Power and steering during taxi. Reading of checklist. Order in cockpit. Power management. Nose attitude during takeoff and landings.
<b>Req. Standard:</b> Student must know expanded checklist and how to use it. Be able to fly the A/C within +/- 5 Kt, +/- 50' level flight and +/- 100' during turns. No "jerky" flying allowed!

Instructor \_\_\_\_\_

Student \_\_\_\_\_

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<b>Training no:</b> 2	Performed date
<b>Objectives:</b> Continued introduction of the aeroplane. Practice of flying skills and precision. Slow flight and recognition of imminent stall.	Off block _____ Off ground _____ On ground _____ On block _____ Flight time _____
<b>Planning:</b> Practice area for airwork 2500-5000 ft. Total 2:00 hrs whereof 1.15 airborne.	Landings
<b>Preflight:</b> POH: A/C limitations. Expanded checklist. Flight profiles. Power settings.	

<b>Content:</b>	<b>Comments:</b>
<b>1: PRESTART CHECKLIST AND NORMAL ENGINE START.</b> Checklist. Starting procedures. Check of engine instruments.	
<b>2: TAXI AND BEFORE TAKE-OFF PROCEDURES.</b> Power and taxi-speed. ( <i>Taxi on the step</i> ). Use of controls. Checklist. Before take-off by-hart items. Take-off briefing	
<b>3: TAKE-OFF AND CLIMB.</b> Track during take-off, setting of take-off power, acceleration and lift-off, heading-track, attitude-speed, clean - up and reading of checklist. Coordinated flight?	
<b>4: FLYING WITH DIFFERENT FLAP SETTINGS.</b> Configuration changes. Ballooning effect, attitude, speed, aileron effectiveness.	
<b>5: SLOW FLIGHT.</b> Different flap settings, minimum speeds (stall warning or buffeting). Recognition of stall, precision in altitude, speed and heading.	
<b>6: STEEP TURNS.</b> 125 Kt. Speed, altitude, bank angle, roll out heading and power management. Coordinated flight.	
<b>7: NORMAL APPROACH WITH LOW ALTITUDE GO-AROUND.</b> Power management, attitude, speed, clean-up procedure. Coordinated flight.	
<b>8: NORMAL TAKE-OFF AND LANDINGS.</b> Checklist, by hart items, take off and landing technique.	
<b>9: FULL STOP LANDING.</b> Short final. By hart items. Speed over threshold, touchdown point. Landing and stopping technique, reverse. After landing and parking procedures.	
<b>Advisory notes:</b>	

<b>Postflight:</b> Aircraft flying characteristics, configuration changes, flap ballooning effect, power - flap drag - speed, use of power in different situations i.e. steep turns.
<b>Req. Standard:</b> No jerky flying is allowed. Perform steep turns and slow flight +/- 100', slow flight speed +5/-0 Kt, coordinated flight at all times.

Instructor \_\_\_\_\_

Student \_\_\_\_\_

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<b>Training no:</b> 3	Performed date
<b>Objectives:</b> Practice maximum performance take off and climb. Learning the aircraft in stall and recovery. Practice idle power, low speed and high speed descend.	Off block _____ Off ground _____ On ground _____ On block _____ Flight time _____
<b>Planning:</b> Practice area for airwork 2500-10000 ft. Total 2:00 hrs whereof 1:15 airborne.	Landings
<b>Preflight:</b> POH: Take-off and landing performance, stall speeds, engine limitations	

<b>Content:</b>	<b>Comments:</b>
<b>1: PRESTART CHECKLIST AND NORMAL ENGINE START.</b> Checklist. Starting procedures. Check of engine instruments.	
<b>2: TAXI AND BEFORE TAKEOFF PROCEDURES.</b> Power and taxi-speed, use of controls, checklist, before take-off by-hart items. Take-off briefing.	
<b>3: SHORT FIELD TAKE-OFF.</b> Take-off technique, power setting, attitude, use of rudder. Transition to max climb.	
<b>4: PRACTICE OF CLIMB</b> Vx and Vy. Full power, attitude/speed, heading/use of rudder, transition to normal climb and climb power. Turns onto headings. Transition to cruise, cruise power setting.	
<b>5: STALL AND STALL RECOVERY.</b> Recognition of stall. Stall at different flap settings. Heading, altitude, power management. Full stall at straight and level flight, approach configuration. Stall with full power, climbing turns, takeoff flap. Recovery. Minimum loss of alt!	
<b>6: IDLE POWER, HIGH / LOW SPEED DESCEND.</b> High speed max ... Kt, R/D >3.000'/min. Low speed min 70 Kt, observe attitude normal and R/D 2.000'/min. Recover!	
<b>7: TAKEOFF AND LANDINGS.</b> Use of references. Landing technique: Speed, attitude and rate of descend.	
<b>8: PRECISION LANDINGS.</b> Checklist, by hart items, landing technique in different wind conditions.	
<b>9: AFTER LANDING AND PARKING PROCEDURE.</b> Checklist. Parking. Engine cool-down. Securing of A/C. Entries in logbook.	
<b>Advisory notes:</b>	

<b>Postflight:</b> Vy and Vx, compared to A/C individual, stall-spin situation and recovery. T/O performance on short field.
<b>Req. Standard:</b> Coordinated flight, speed at Vx and Vy +/- 2 Kt. (calm air), ability to recover from prestall and stall condition.

Instructor \_\_\_\_\_

Student \_\_\_\_\_

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<b>Training no:</b> 4	Performed date
<b>Objectives:</b> Practice Take-off and landings. Normal and abnormal procedures. Practice en route procedures.	Off block _____ Off ground _____ On ground _____ On block _____ Flight time _____
<b>Planning:</b> Airfield for practice of take-off and landings. Total 2:30 hrs of which 1:30 hrs airborne.	Landings
<b>Preflight:</b> POH: Take-off and landing performance. Limitations. Planning. Weather, notams, flight plans.	

<b>Content:</b>	<b>Comments:</b>
<b>1: PRESTART CHECKLIST AND NORMAL ENGINE START.</b> Checklist. Starting procedures. Check of engine instruments.	
<b>2: TAXI AND BEFORE TAKEOFF PROCEDURES</b> Power and taxi-speed, use of brakes and steering use of flight-controls, checklist. Engine run-up. Before take-off by-hart items. Take-off briefing.	
<b>3: NORMAL TAKE-OFF AND CLIMB.</b> Take-off technique, speed and attitude, use of rudder, heading, coordinated flight.	
<b>4: EN ROUTE PROCEDURES.</b> Flight plan, dead reckoning and map reading. Maintenance of altitude, heading and speed. Orientation, timing and revision of ETA:s. Use of radio navigation aids. Flight management; flight log, routine checks including fuel, systems and icing.	
<b>5: SHORT FIELD TAKE-OFF AND LANDINGS.</b> Speed after lift-off, speed and height over threshold. Take-off and landing technique, braking technique, use of reverse.	
<b>6: CROSSWIND TAKE-OFF AND LANDINGS.</b> Checklist, by hart items, landing and braking technique.	
<b>7. GLASSY WATER LANDINGS.</b> <i>Technique, flap setting, attitude, R/D and speed</i>	
<b>8: 0-FLAP LANDINGS.</b> Demo: Take-off without flaps. Landing attitude, speed, landing technique.	
<b>9: FULL STOP LANDING.</b> Short final by hart items speed over "threshold", touchdown point, landing and stopping technique, reverse. After landing and parking procedures.	
<b>Advisory notes:</b>   	

<b>Postflight:</b> Landing technique. Crosswind landings - limitations, power-off landings, use of brakes and steering. Follow-up of planning.
<b>Req. Standard:</b> All flying with good precision, +/- 50' in the traffic pattern, speeds +/- 5 kts (-0 kts during approach) smooth corrections and coordinated flight.

Instructor \_\_\_\_\_

Student \_\_\_\_\_

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<b>Training no:</b> 5	<b>Performed date</b>
<b>Objectives:</b> Demonstration and practice of malfunctions and corrective actions. Recovery from unusual attitudes. Training of engine failure procedures. To train basic instrument flight	Off block _____ Off ground _____ On ground _____ On block _____ Flight time _____
<b>Planning:</b> Practice area, for airwork, 2.500-10.000 ft, take-off and landings. Total 2:00 hrs of which 1:15 hrs airborne.	<b>Landings</b>
<b>Preflight:</b> POH: Emergency procedures and repetition of previous training flights.	

<b>Content:</b>	<b>Comments:</b>
<b>1: PRESTART CHECKLIST AND NORMAL ENGINE START.</b> Checklist. Starting procedures. Check of engine instruments.	
<b>2: TAKE-OFF WITH ENGINE FAILURE.</b> Engine failure during initial climb, speed, by-hart items, handling of the aircraft, passenger briefing.	
<b>3: ENGINE FAILURE AT "SAFE" ALTITUDE.</b> By hart items, pax briefing, ATC com, Restart procedures. Heading and during restart.	
<b>4: ABNORMAL PROCEDURES</b> Use of emergency checklist. Fire or smoke in flight. Propeller feather.	
<b>5: TAKE-OFF WITH ENGINE FIRE BEFORE LIFT-OFF.</b> Heading, braking, fire-wind, by-hart items, pax briefing (After aircraft at standstill: "EMERGENCY-OPEN SEATBELT-GET OUT"!!!)	
<b>6: TAKE-OFF AND LANDINGS WITHOUT BASIC INSTRUMENTS.</b> Use of attitude and "back-of-the-pants" flying skill.	
<b>7: PRECAUTIONARY LANDING.</b> Different altitudes check of approach and departure area.	
<b>8: INSTRUMENT FLIGHT.</b> Level flight, ON HEADING AND ahead and turns. Climb and descent. Turns in climb and descent. Steep turns and slow flight.	
<b>9: ENGINE OUT APPROACH AND LANDING.</b> Approach and landing with simulated engine failure	
<b>10: AFTER LANDING AND PARKING PROCEDURE.</b> Checklist. Parking. Engine cool-down. Securing of A/C. Entries in logbook.	
<b>Advisory notes:</b>	

<b>Postflight:</b> Engine failure in critical phases of flight, abnormalities, emergency evacuation, recognition of wind direction
<b>Req. Standard:</b> Student must demonstrate a good ability in handling the A/C in any difficult flight situation connected to an engine failure and to cope with procedures in checklist.

Instructor \_\_\_\_\_

Student \_\_\_\_\_

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<b>Training no:</b> 6	Performed date
<b>Objectives:</b> To check if the student is ready to act as PIC under normal and abnormal situations. Flying at Max gross mass, with passengers. (Dropping of parachute jumpers - technique.)	Off block _____ Off ground _____ On ground _____ On block _____ Flight time _____
<b>Planning:</b> Practice area, for airwork, 2500-5000 ft, take off and landings. Total 1:15 hrs, of which 1:00 hrs airborne.	Landings
<b>Preflight:</b> Repetition of all previous training flights, Check of Mass & balance, knowledge of the POH, Normal and Emergency checklist, Standard Operating Procedures (SOP). Pax safety briefing. ( <i>Procedures for dropping of parachute jumpers</i> ).	

<b>Content:</b>	<b>Comments:</b>
<b>1: PRESTART CHECKLIST AND NORMAL ENGINE START.</b> Checklist. Starting procedures. Check of engine instruments.	
<b>2: PAX BRIEFING (AND LIFTCHEF COORDINATION).</b>	
<b>3: NORMAL TAKE-OFF AND CLIMB.</b> Take-off technique, speed and attitude, use of rudder, heading, coordinated flight.	
<b>4: FLYING AT MAX GROSS MASS.</b> Normal flying, Rate one turn, 30° bank turn, 500'/min rate of climb and descend, Precision in flying: altitude, speed, heading and coordination	
<b>5: MANEUVERS AT MAX GROSS MASS.</b> Configuration changes, Steep turns, Slow flight, Stalls and Stall recovery, Change of C/G during flight	
<b>6: TAKE-OFF AND LANDINGS AT MAX GROSS MASS.</b> Differences from a "light" aircraft, use of power and attitude/speed.	
<b>7: TAKE-OFF WITH SIMULATED ENGINE FAILURE, APPROACH AND GO-AROUND, ENGINE OUT APPROACH AND LANDING AT MAX GROSS MASS.</b> Accuracy, handling of the aircraft, simulated engine failure and associated memory items. Pax briefing	
<b>8: DROPPING OF PARACHUTE JUMPERS.</b> Maximum performance climb to FL 130, final flying, "spotting". High speed descent. Traffic circuit, normal landing.	
<b>9: AFTER LANDING AND PARKING PROCEDURE.</b> Checklist, engine cool-down, securing of a/c, entries in logbook.	
<b>Advisory notes:</b>	

<b>Postflight:</b> (Open)
<b>Req. Standard:</b> Student must show confidence and captaincy as well as good flying skill and make prompt and correct decisions.

Instructor \_\_\_\_\_

Student \_\_\_\_\_

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<b>Training no: 7</b> Objectives: Practice Normal and non-normal PARA operation, spotting technique, use of nav equipment, cooperation with lift-chef, simulated emergencies, aborting dropping, descending with jumpers onboard, landing with full load.	<b>Performed date</b> Off block _____ Off ground _____ On ground _____ On block _____ Flight time _____
<b>Planning:</b> Normal PARA operation, calculation of T/O and landing performance	<b>Landings</b>
<b>Preflight:</b> Check of mass & balance, required fuel, weather	

<b>Content:</b>	<b>Comments:</b>
<b>1:</b> Check of area for eng start, coordination with ground crew, normal and non-normal starting, radio check, initial taxi, consideration of a/c position for loading, report from lift-chef, check of mass and balance.	
<b>2:</b> Line-up and take-off, checklist items, mental review of eng fail procedure, go/stop, wind direction in case of fire, dep clearance, xpdr, nav settings, next com freq?	
<b>3:</b> Initial climb, mental review: where to go in case of eng fail, power setting, noise, clean-up, speed, coordinated flight, flying profile for first drop.	
<b>4:</b> Approaching altitude and final track, clearance to drop, distance, speed, configuration, power setting, at “green light” anticipate trim changes, steady flying; heading, speed/altitude and wings level, if climbing to new altitude: power, clean-up, speed and attitude, trimming.	
<b>5:</b> As 4: above, drop completed, prepare for descend, closing jump door, power setting, speed. Flight profile for descending, engine temp monitoring, look out for other traffic and wingsuits, high parachutes.	
<b>6:</b> Drop aborted, descending with a full load, tandem, students, cypress, cooperation with lift chef and jump leader, landing, taxi, engine shut down, de-embarkation.	
<b>7:</b> Practice with experienced jumpers only: Simulated emergency on ground, on pilot’s order only; EMERGENCY-OPEN SEATBELT-GET OUT!	
<b>8:</b> Practice with experienced jumpers only: Simulated engine failure after T/O, (safe altitude but below 1000 ft / 300 m), Pilot’s order: REMAIN SEATED-WE ARE LANDING!	
<b>9:</b> Practice with experienced jumpers only: Simulated engine failure at altitude, Pilot’s order: REMAIN SEATED! Memory items performed and heading to a landing area: WE WILL GLIDE TO...! Then: “green light” or order: OPEN SEAT BELT-GET OUT!	
<b>Advisory notes:</b>	

<b>Postflight:</b>
<b>Req. Standard:</b>

Instructor \_\_\_\_\_

Student \_\_\_\_\_



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<b>Training no:</b> 8	Performed date
<b>Objectives:</b> Additional training if so required.	Off block _____ Off ground _____ On ground _____ On block _____ Flight time _____
<b>Planning:</b>	Landings
<b>Preflight:</b>	

Content:	Comments:
1:	
2:	
3:	
4:	
5:	
6:	
7:	
8:	
9:	
<b>Advisory notes:</b>	

<b>Postflight:</b>
<b>Req. Standard:</b>

Instructor \_\_\_\_\_

Student \_\_\_\_\_

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<b>Training no:</b> 9	Performed date
<b>Objectives:</b> Additional training if so required.	Off block _____ Off ground _____ On ground _____ On block _____ Flight time _____
<b>Planning:</b>	Landings
<b>Preflight:</b>	

Content:	Comments:
1:	
2:	
3:	
4:	
5:	
6:	
7:	
8:	
9:	
<b>Advisory notes:</b>	

<b>Postflight:</b>
<b>Req. Standard:</b>

Instructor \_\_\_\_\_

Student \_\_\_\_\_