

PILOT'S OPERATING HANDBOOK AND AIRPLANE FLIGHT MANUAL

for

DOVA AIRCRAFT® DV-1 SKYLARK (MTOW 600 KG)

Aircraft Serials 09/227 & Subsequent with Rotax® 912 ULS Engine
and Kaspar™ KP-4/3-PA propeller



This document must be carried in the airplane at all times and be kept within the reach of the pilot during all flight operations.

Serial Num.: _____ **Registration:** _____

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DOVA Aircraft® DV-1 Skylark - Pilot Operating Handbook



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DOVA Aircraft® DV-1 Skylark - Pilot Operating Handbook

Foreword

This Pilot's Operating Handbook (POH) has been prepared by Dova Aircraft s.r.o. to familiarize operators with the aircraft. Read this POH carefully. It provides operational procedures that will assure the operator obtains the performance published in the manual, data designed to allow the most efficient use of the airplane, and basic information for maintaining the airplane in a "like new" condition.

- Note •

All limitations, procedures, maintenance & servicing requirements, and performance data contained in this POH are mandatory for compliance with flying operating rules and for continued airworthiness of the airplane.

Ownership Records

Owner of aircraft:

| | |
|---------------------------|--|
| Name: | |
| Address: | |
| Registration: | |
| Registration Date: | |

Change of owner:

| | |
|---------------------------|--|
| Name: | |
| Address: | |
| Registration: | |
| Registration Date: | |

Change of owner:

| | |
|---------------------------|--|
| Name: | |
| Address: | |
| Registration: | |
| Registration Date: | |

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| PART | DESCRIPTION |
|----------------------------------|---|
| Part 1.0 General | Information about your aircraft and its components. |
| Part 2.0 Limits | Applicable limitations to the safe operation of the aircraft. |
| Part 3.0 Emergency Procedures | Emergency procedures checklists. |
| Part 4.0 Normal Procedures | Normal procedures checklist |
| Part 5.0 Performance | Performance limitations and calculations. |
| Part 6.0 Good Practices | Good operating practices to enjoy your ownership. |

1.0 General

1.1 Introduction

Validity: This flight manual is valid only for the aircraft with the registration mark mentioned above on the first page.

Warning: The crew must familiarize themselves with the contents of this manual before flight!

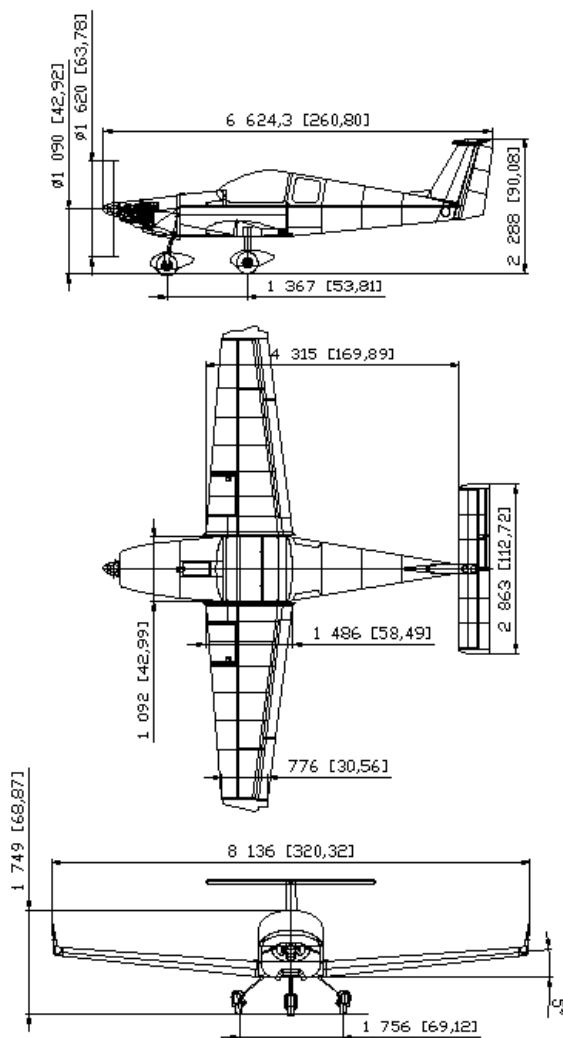
1.2 Abbreviations and Definitions

| | |
|-----------------------|--|
| CAS | Calibrated airspeed (CAS = TAS at sea level) |
| IAS | Indicated airspeed |
| TAS | True airspeed |
| MSA | Mean sea level (standard atmospheric pressure) |
| MAC | Mean aerodynamic chord |
| SOP | Vertical tail surfaces |
| VOP | Horizontal tail surfaces |
| V_A | Maneuvering speed |
| V_{SO} | Stall speed in landing configuration |
| V_{S1} | Stall speed in clean configuration |
| V_{NE} | Never-exceed or maximum speed |
| V_{FE} | Maximum speed with flaps extended |
| V_{RA} | Maximum speed in turbulence |
| VPD | Runway |

Note:

Indicated airspeed is used, unless otherwise noted.

1.3 Three view



Technical data

1.5. Basic

1.4 Description

The aircraft DV-1 Skylark is a light sport, two-seater, all metal low-wing aircraft, with a tricycle gear undercarriage and steerable nose wheel.

1.4.1 Dimensions

| | | |
|----------------------------------|---------------------|-----------|
| Span | 8.14 m | 26 feet |
| Length | 6.62 m | 21.7 feet |
| Height | 2.28 m | 7.5 feet |
| Wing Area | 9.44 m ² | 102 feet |
| Mean aerodynamic chord | 1.19 m | 3.9 feet |
| Dihedral | 5 ° | |
| Tires size | 4.00" x 6 | |
| Wheel spacing | 1.76 m | 5.8 feet |
| Wheel base | 1.36 m | 4.5 feet |
| Tire Pressure front wheel | 160 ± 10 kPa | |
| Tire Pressure main wheels | 180 ± 10 kPa | |

1.4.2 Control Deflections

| | | |
|-----------------|-------------|-----------|
| AILERONS | Up | 15° ± 1° |
| | Down | 10° ± 1° |
| FLAPS | Position -1 | -10° ± 2° |
| | Position 0 | 0 |
| | Position 1 | +10° ± 2° |
| | Position 2 | +21° ± 2° |
| | Position 3 | +40° ± 2° |
| ELEVATOR | Up | 30° ± 2° |
| | Down | 20° ± 2° |

| | | |
|---------------|-------|----------------------------|
| RUDDER | Right | $30^{\circ} \pm 2^{\circ}$ |
| | Left | $30^{\circ} \pm 2^{\circ}$ |

1.4.3 Weights

| | |
|---------------------|--------|
| Empty weight | 315 Kg |
| MTOW | 600 Kg |
| Baggage | 20 Kg |

1.5 Propulsion system

1.5.1 Engine

| | |
|--------------------------|-----------------------|
| Type | Rotax 912 ULS |
| RPM for take-off | 5800 /min (for 5 min) |
| Max continued RPM | 5500 / min |
| Idling RPM | 1400 / min |

Warning:

THE PILOT OF THE AIRCRAFT IS RESPONSIBLE FOR THE CONSEQUENCES OF ENGINE FAILURE. IT IS RECOMENDED THAT THE AIRCRAFT BE OPERATED AT A HEIGHT AND SPEED THAT ENSURE THE HIGHEST SAFETY IN AN EMERGENCY LANDING FOLLOWING AN ENGINE FAILURE.

1.5.2 Propeller

| | |
|---------------------------|---|
| Type, manufacturer | Kašpar KA 1/3, Kalmar, s.r.o. |
| Diameter | 1620 mm |
| Rotation direction | Right (when seen from inside the cockpit) |

1.5.3 Liquids

The recommendations of the engine manufacturer should be followed.

| | |
|--------------------------------------|---|
| Fuel | Premium unleaded 95 Octanes Premium unleaded 100 Octanes AVGAS 100 LL |
| Max. volume of fuel | 90 liters |
| Oil type | Castrol GTX 5 10W-40 Liqui Moly 10W-40 MOS2 LEICHTLAUF |
| Max Volume of oil | 2.5 liters |
| Coolant liquid | ARAL Antifreeze |
| Max. volume of coolant liquid | 2.7 liters |

1.5.4 Fuel tanks

There are two metal fuel tanks placed in the root of both wings.

| | |
|-------------------------|----------------|
| Max. volume | 2 x 45 liters |
| Usable volume | 2 x 1,5 liters |
| Expansion volume | 2% |

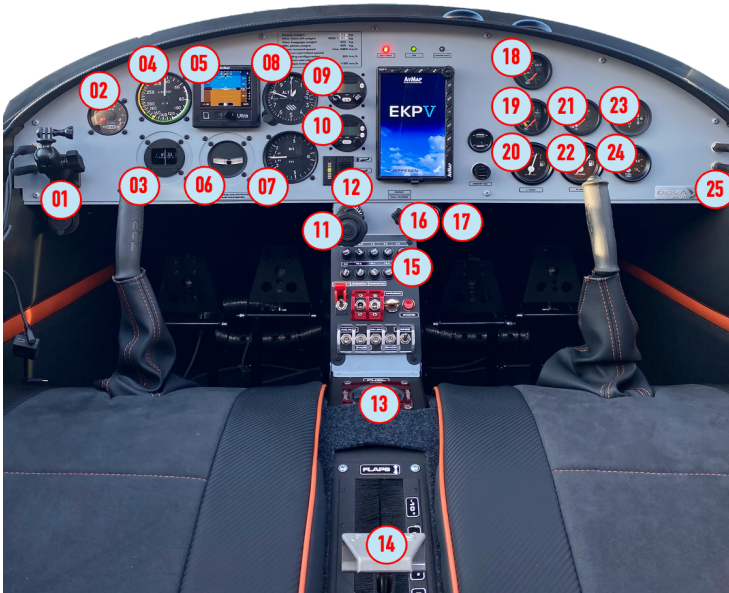
1.6 Instruments

Instrument configuration may vary, depending on customer's requirements and aircraft mission. Every aircraft owner is responsible to ensure the POH correctly matches the current configuration of their aircraft.

| Flight Instruments | Type |
|---------------------------------|---|
| Radio | Trig TY91 VHF Radio 2205,00 6 watt, compact radio |
| Transponder | Trig TT21 Transponder |
| MFD | AVMAP EKP V |
| EFIS | AVMAP ULTRA EFIS |
| Compass | Horizontal analog compass |
| Slip indicator | Analog backup slip indicator |
| Altimeter | Analog altimeter (QNH) |
| Airspeed indicator | KPH airspeed indicator |
| VSI | Analog vertical speed indicator |
| Trim indicator | Electrical trim position |
| Engine Instruments | Type |
| Fuel Quantity Analog Gauge (2x) | Analog, with fuel reserve light |
| Fuel Pressure Analog Gauge | DOVA Fuel Pressure indicator |
| CHT Analog Gauge | Cylinder head temperature |
| RPM Analog Gauge | RPM Counter (Rotax) |
| Hour meter | Hobbs counter (Quartz) |
| Others | Type |
| AMP Meter | Battery voltage indicator |
| USB PD Socket | 4x USB A Power Delivery |

1.6.1 Instrument Panel

Configurations may vary. The aircraft owner is responsible for ensuring the content of the POH is aligned to the current configuration of the aircraft.



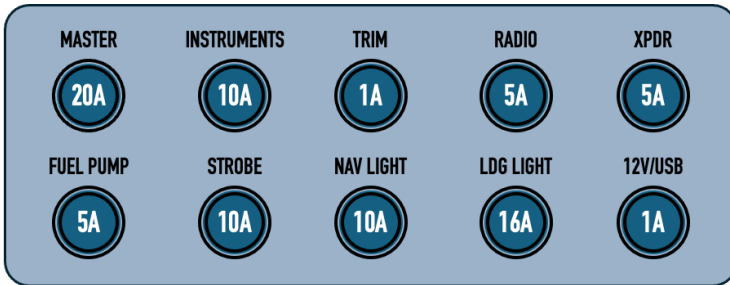
| Item | Description |
|------|--------------------|
| 01 | RAM Mount |
| 02 | RPM Gauge |
| 03 | Horizontal Compass |
| 04 | Airspeed indicator |
| 05 | AVMAP Ultra EFIS |
| 06 | Slip indicator |
| 07 | VSI |
| 08 | Altitude (hPa) |
| 09 | Trig Radio |

| Item | Description |
|------|---------------------|
| 14 | Flaps actuator |
| 15 | Fuse panel |
| 16 | Choke control |
| 17 | Hot cabin control |
| 18 | CHT Gauge |
| 19 | Oil Temperature |
| 20 | Left fuel quantity |
| 21 | Oil Pressure |
| 22 | Right fuel quantity |

| | | | |
|----|-------------------------|----|------------------|
| 10 | Trig Transponder | 23 | Hobbs meter |
| 11 | Throttle | 24 | Fuel pressure |
| 12 | Elevator Trim Indicator | 25 | Audio jack plugs |
| 13 | Fuel valve selector | | |

1.6.2 Fuse Box

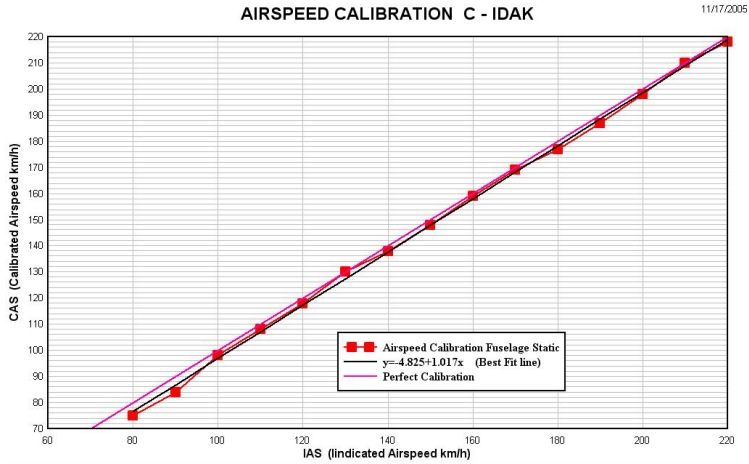
In case of electrical malfunction of on-board instrumentation, remove the relevant fuse by turning it counter-clockwise. This will disable the current flow from/to the selected system.



2. Limits

Aircraft DV-1 Skylark passed UI-2 requirements for construction, material, and performance.

2.0 Airspeed Calibration



2.1 Airspeed Limitations

Described speeds are for MTOW and Sea Level conditions. All speeds are Indicated Airspeeds (IAS). Calibrated Airspeeds can be found from the above calibration.

| V-Speed Symbol | Speed Value | Description |
|----------------|-------------|--|
| Vs0 | 59 Km/h | Stall speed or minimum steady flight speed in the landing configuration (full flaps). |
| Vs1 | 64 Km/h | Stall speed or minimum steady flight speed in the clean configuration (flaps neutral). |

| | | |
|---------------------|--------------|---|
| Vr | 60 Km/h | Rotation speed. The speed at which the nose wheel is lifted from the runway during takeoff. |
| Vy | 110 Km/h | Best Rate speed. In a climb it provides the maximum gain in altitude per unit of <i>time</i> traveled. |
| Vra | 180 Km/h | Maximum allowed speed in strong turbulence. |
| V best glide | 95 Km/h | In a glide it provides the maximum distance traveled forward with the minimum altitude lost. |
| Vfe | 120 Km/h | Full Flaps Extended speed. Maximum speed at which flaps may be fully extended. |
| Va | 158 Km/h | Design Maneuvering speed. Maximum speed at which full, abrupt deflection of the controls can be made without causing structural damage. Reduce speed to this value when in rough air. |
| Vh | 225 Km/h | Maximum level flight indicated speed, the maximum using continuous engine power. |
| Vne | 254 Km/h | Never Exceed speed. Do not exceed this speed under any circumstances. |
| Max x-wind | 5 m/s (10kt) | Maximum permitted crosswind component for take-offs and landings. |

2.2 Colored markings on the Airspeed indicator

| | | |
|------------|----------------|---------------------------------|
| White arc | 72 – 130 km/h | Flaps range |
| Green arc | 80 – 210 km/h | Normal speed |
| Yellow arc | 210 – 280 km/h | Smooth air and -10 degrees flap |
| First red | 72 km/h | Minimal maneuvering speed |
| Second red | 280 km/h | Maximum Speed |

2.3 Engine Operating Limitations

The recommendations in the Rotax engine manual are to be followed.

| | |
|--------------------------------|--|
| Oil pressure | max. 7 bar min. 0,8 bar normal 2-5bar |
| Oil temperature | min. 50°C, max. 130° normal 90-110°C |
| CHT | max. 135°C |
| Exhaust Gas Temperature | max. 880°C –start max. 850°C – flight normal 800°C |
| Fuel Pressure | max. 0,4 bar normal 0,15-0,4 bar |
| RPM | RPM idling 1650 rpm Maximum Continuous: 5500 rpm Maximum for 5 minutes: 5800 rpm |

Note:

take-off is prohibited if values indicated on the engine instruments are not within the allowed range or the engine is not working properly.

2.4 Wind limitations

| | | |
|--------------------------|--------|--------|
| Maximum headwind | 12 m/s | 24 kts |
| Maximum tailwind | 12 m/s | 24 kts |
| Maximum crosswind | 5 m/s | 10 kts |

2.5 Fuel volume

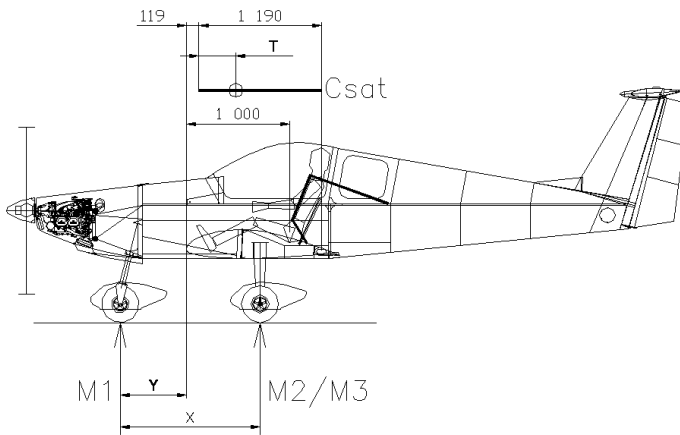
| | |
|---|-----------|
| Maximum volume in one tank | 45 liters |
| Total volume (both tanks) | 90 liters |
| Minimum takeoff volume in one tank | 10 liters |

2.6 Weights

| | |
|---------------------------|---------|
| Empty weight | 315 Kg |
| MTOW | 600 Kg |
| Baggage | 20 Kg |
| Min. pilot weight | 60 Kg |
| Max. pilot weight | 120 Kg |
| COG position Front | 21% SAT |
| COG position Rear | 36% SAT |

Weighing Procedure:

Aircraft is placed on three scales in a horizontal position (upper edge of front fuselage to be level). Note the values and the dimensions X and Y. Count as follows.



Center of gravity position:

$$T = (X * (M2+M3)/(M1+M2+M3) - Y - 119) / 11,9 \quad (\% \text{ mac})$$

Examples of C.G. position for Aircraft with BRS

1. Empty

| | |
|-----------------------------|-------|
| Fuel (liters) | 0 |
| Left Pilot (kg) | 0 |
| Right Pilot (kg) | 0 |
| C.G. position (%mac) | 13.5% |
| Weight (kg) | 315 |

2. With pilot 86 kg

| | |
|-------------------------|----|
| Fuel (liters) | 0 |
| Left Pilot (kg) | 86 |
| Right Pilot (kg) | 0 |

| | |
|-----------------------------|-----|
| C.G. position (%mac) | 25% |
| Weight (kg) | 401 |

3. With pilot 60 kg

| | |
|-----------------------------|-----|
| Fuel (liters) | 0 |
| Left Pilot (kg) | 60 |
| Right Pilot (kg) | 0 |
| C.G. position (%mac) | 22% |
| Weight (kg) | 375 |

4. With 2 pilots 86+47 kg + 20 kg baggage

| | |
|-----------------------------|-----|
| Fuel (liters) | 0 |
| Left Pilot (kg) | 86 |
| Right Pilot (kg) | 47 |
| Baggage (kg) | 20 |
| C.G. position (%mac) | 35% |
| Weight (kg) | 468 |

5. With two pilots of 86 kg

| | |
|-----------------------------|-----|
| Fuel (liters) | 0 |
| Left Pilot (kg) | 86 |
| Right Pilot (kg) | 86 |
| Baggage (kg) | 0 |
| C.G. position (%mac) | 32% |
| Weight (kg) | 487 |

2.7 Allowed turns

The aircraft has been certified for rolls up to 60° and pitch variation of up to 30° starting from levelled flight. Acrobatic turns and intended spins are prohibited.

| Turn | Max speed IAS (km/h) |
|-----------------------|----------------------|
| Steep turn 60 degrees | 160 |
| Slip | 100 |

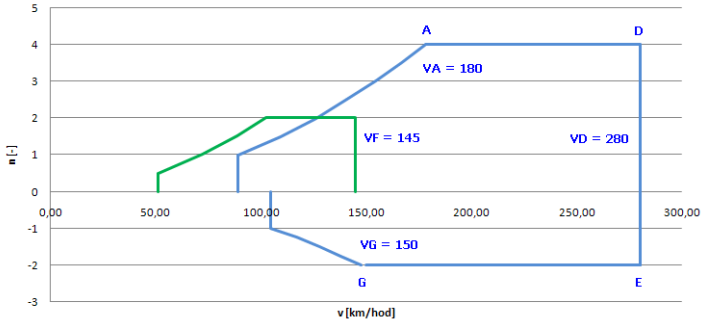
Acrobatic turns and intended spins are prohibited!

2.8 Loads

| | |
|------------------------------------|----|
| Maximum Positive G load | +4 |
| Maximum Negative G load | -2 |
| Maximum G Load with flaps extended | +2 |

2.8.1 Flight Envelope

The table below represents the full flight envelope at a max gross weight of 600 kg.



2.9 Other Limitations

VFR day only, and outside of freezing condition!

2.9.1 Temperature limitation

| | |
|---|--------------|
| Max. OAT on ground for normal operations | 40 degrees C |
| Min. OAT on ground for normal operations | -5 degrees C |

2.9.2 Others

- Do not push or pull on any laminated surfaces, control surfaces or the end of the propeller blades.
- When leaving the aircraft, always ensure the aircraft is secured by chocks or anchored to the ground via ropes.
- Always lock the canopy and fuel tank caps when leaving the aircraft for an extended period.
- Smoking in the aircraft or in its proximity is strictly prohibited.

Section 3.0 will now follow, with the aircraft Emergency Procedures

EMERGENCY PROCEDURES

ENGINE FAILURE DURING TAKE-OFF RUN

1. Power leverIDLE
2. BrakeAS REQUIRED
3. Ignition (MAGS)OFF
4. Fuel valveCLOSED
5. Master switchOFF

ENGINE FAILURE AFTER TAKE-OFF

1. IAS95 KM/H
2. Landing areaIN THE DIRECTION OF FLIGHT
3. Ignition (MAGS)OFF
4. Fuel valveCLOSED
5. Master switchOFF
6. Safety beltsFASTEN and TIGHTENED
7. FlapsAS REQUIRED

ENGINE FAILURE DURING FLIGHT (NO RESTART)

1. IAS95 KM/H
2. Landing areaSELECT
3. Ignition (MAGS)OFF
4. Fuel valveCLOSED
5. Master switchOFF
6. Safety beltsFASTEN and TIGHTENED
7. FlapsAS REQUIRED

EMERGENCY PROCEDURES

ENGINE FAILURE DURING FLIGHT (RESTART)

1. IAS95 KM/H
2. Landing areaSELECT
3. Ignition (MAGS)ON
4. Fuel valveFULLER TANK
5. Fuel pumpON
6. Master switchON
7. Power leverOPEN
8. StarterPUSH
9. RPMCHECK
10. Oil pressureCHECK
11. Oil temperatureCHECK

WARNING: UPON SUCCESSFUL RESTART, LAND AT THE NEAREST AIRPORT OR PERFORM A SAFETY LANDING IN THE NEAREST SUITABLE AREA

ABORTED LANDING

1. Power leverFULL POWER
2. TrimAS REQUIRED
3. IAS80KM/H
4. Flaps+10

EMERGENCY PROCEDURES

FIRE ON THE GROUND (ENGINE OFF)

1. Fuel valveCLOSED
2. HeatingOFF
3. EVACUATE & EXTINGUISH FIRE

FIRE ON THE GROUND (ENGINE RUNNING)

1. Fuel valveCLOSED
2. BrakesSET
3. Power leverFULL POWER
4. HeatingOFF
5. Master switchOFF
6. Ignition (MAGS)OFF
7. EVACUATE & EXTINGUISH FIRE

FIRE DURING FLIGHT

1. Fuel valveCLOSED
2. Power levelFULL POWER
3. HeatingOFF
4. Master switchOFF
5. Ignition (MAGS)OFF
6. IAS95 KM/H
7. PERFORM EMERGENCY LANDING

EMERGENCY PROCEDURES

CARBURETOR ICING

Carburetor icing shows itself with a decrease in power and rising engine temperatures, leading to possible engine failure. If possible, immediately descend to warmer temperatures.

1. IAS120 KM/H
2. Power leverIDLE
3. AltitudeDESCEND
4. Power leverGRADUALLY INCREASE

CAUTION: IF THE ENGINE DOES NOT RECOVER TO FULL PERFORMANCE, LAND AT THE NEAREST AIRPORT OR PERFORM A PRECAUTIONARY LANDING AS SOON AS PRACTICAL

ENGINE OR PROPELLER VIBRATIONS

5. Power leverSET VALUE WITH MIN VIBRATIONS
6. Vibration decreasingCHECK

CAUTION: IF VIBRATIONS DO NOT DECREASE, PERFORM ENGINE SHUTDOWN AND EMERGENCY LANDING.

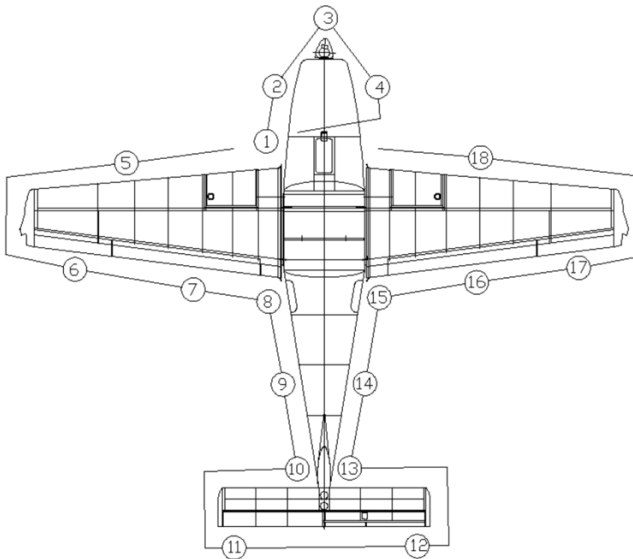
Section 4.0 will now follow, with the aircraft Standard Procedures

CABIN PREPARATION

1. ACFT coverREMOVE
2. Propeller coverREMOVE
3. Chocks.....REMOVE
4. Master and InstrumentsON
5. FUEL level.....CHECK
6. FUEL valve.....OFF
7. Battery voltage.....12V
8. All Lights.....ON, CHECK
9. Trim.....NEUTRAL
10. Master and instruments.....OFF
11. Seats position.....CHECK
12. ACFT Documents.....CHECK
13. Loose objects.....SECURE

Always ensure to REMOVE THE KEYS from the outside canopy locking mechanism!

Make your way around the aircraft, checking surfaces and systems as indicated in the diagram below.



AIRCRAFT WALK-AROUND

1. RAM-AIR intake.....FREE
2. OIL Level.....CHECK
3. PROPELLERSPIN (for OIL check)
4. OIL Level.....CHECK (after propeller spin)
5. Pitot coverREMOVE
6. L Aileron movement.....FREE
7. L FlapCHECK
8. L tire pressureCHECK
9. XPDR AntennaCHECK
10. Vertical stabilizerCHECK
11. Horizontal stabilizer.....CHECK
12. Trim Tab.....NEUTRAL
13. Rudder controls.....CHECK
14. Radio AntennaCHECK
15. R tire pressureCHECK
16. R Flap.....CHECK
17. R Aileron movement.....FREE
18. R Wing leading edge.....CHECK

FUEL CHECK

1. Fuel quantity R/L TANK.....CHECK
2. Fuel sample R/L TANKCHECK
3. Fuel cap R/L TANKLOCKED

ALSO CHECK THE INDICATED FUEL LEVEL IN THE COCKPIT MATCHES THE ACTUAL FUEL QUANTITY IN BOTH TANKS.

BEFORE ENGINE START

1. PreflightCOMPLETED
2. Passenger briefCOMPLETED
3. HOBBS MeterNOTE TIME
4. Seat positionSET and LOCKED
5. CanopyCLOSED and LOCKED
6. Safety beltsFASTEN and TIGHTEN
7. ControlsFREE MOVEMENT
8. FlapsCHECK
9. Brakes pressureCHECK
10. Master switchON
11. InstrumentsCHECK
12. TrimNEUTRAL
13. Fuel valveOPEN

ENGINE START

1. Fuel gaugesCHECK
2. Avionics masterOFF
3. Fuel valveFULLER TANK
4. Power LeverIDLE
5. Power Lever (warm engine)1/3 OPEN
6. ChokeACCORDING TO TEMPERATURE
7. Propeller surroundingsCLEAR
8. Ignition (MAGS)ON (BOTH)
9. Electric fuel pumpON
10. StarterPUSH
11. RPM2500
12. Oil pressureCHECK

- 13. Oil temperatureCHECK
- 14. Avionics master.....ON
- 15. RadioON
- 16. XPDRSTBY
- 17. Strobe lightsON

WARNING: KEEP THE ELECTRIC FUEL PUMP ON DURING ALL PHASES OF FLIGHT

ENGINE WARM-UP

- 1. BrakesON
- 2. ControlsNEUTRAL
- 3. RPM2000, FOR 2 MINUTES
- 4. RPM3000
- 5. Oil temperatureMIN 50°C
- 6. RPMMAX, FOR 5 SECs
- 7. RPMIDLE

CYCLE THE TWO STEPS ABOVE UP TO THREE TIMES, UNTIL OIL TEMPERATURE INDICATES 50°C

ENGINE CHECK

- 1. Brakes.....ON
- 2. RPM3850
- 3. Ignition (MAGS)CHECK BOTH
- 4. RPM.....IDLE

CAUTION: MAX RPM DROP WITH EACH CIRCUIT IS 300 RPM. MAX DIFFERENCE BETWEEN CIRCUITS IS 115 RPM

CAUTION: DO NOT CARRY OUT ENGINE WARM-UP CHECKLIST ON DIRT OR LOOSE TERRAIN. CARRY OUT ENGINE WARM-UP INTO THE WIND, WHENEVER POSSIBLE.

TAXI

1. Altimeters.....SET
2. ControlsFREE and CORRECT
3. CompassCHECK
4. EFIS HDG.....CHECK
5. FlapsNEUTRAL
6. BrakesCHECK

WARNING: MAXIMUM TAXI SPEED 15 KM/H

BEFORE TAKE-OFF

1. BrakesSET
2. ControlsFREE and CORRECT
3. RPMIDLE
4. TrimNEUTRAL
5. Flaps+10
6. Fuel valveCHECK BOTH
7. Fuel valve.....FULLER TANK
8. Fuel pumpON
9. Ignition (MAGS)ON (BOTH)
10. Master switchON
11. Fuel pressure.....CHECK
12. Oil temperature.....MIN 50°C
13. Oil pressure.....CHECK

- 14. Landing lightsON
- 15. Strobe lightsON
- 16. Safety beltsLOCK and TIGHTENED
- 17. CanopyCLOSED and LOCKED
- 18. Take-off briefCOMPLETE

TAKE-OFF

NOTE TIME ZULU ENTERING THE RWY

- 1. XPDRALT
- 2. RWYCHECK
- 3. Power leverFULL
- 4. AirspeedINCREASING
- 5. Engine instrumentsCHECK
- 6. Flaps (50m AGL)RETRACT
- 7. TrimSET

WARNING: MONITOR ENGINE AND OIL TEMPERATURES DURING CLIMB.

CRUISE FLIGHT

- 1. Power lever5000RPM (75%)
- 2. AltimetersCHECK
- 3. Engine instrumentsCHECK
- 4. Flaps-10
- 5. TrimCHECK
- 6. Fuel quantityCHECK
- 7. Landing lightsOFF
- 8. Fuel valveSWITCH EVERY 30 MINUTES

APPROACH

1. Altimeters.....CHECK
2. Fuel quantityCHECK
3. Fuel valveFULLER TANK
4. Engine instrumentsCHECK
5. Safety beltsFASTEN and TIGHTENED
6. Power lever3500RPM (52%)
7. IAS120 KM/H
8. Flaps+10
9. TrimCHECK
10. Landing lightsON

LANDING

1. Power leverAS REQUIRED
2. IAS110 KM/H
3. Flaps+40
4. TrimCHECK

SHUTDOWN

NOTE TIME ZULU EXITING THE RWY

1. Power leverIDLE
2. TrimNEUTRAL
3. FlapsNEUTRAL
4. RadioOFF
5. XPDROFF
6. Avionics masterOFF
7. Landing lightsOFF

- 8. Strobe lightsOFF
- 9. Fuel pumpOFF
- 10. Ignition (MAGS)OFF
- 11. Master switchOFF
- 12. Fuel valveOFF
- 13. HOBBS MeterNOTE TIME
- 14. CabinLOCK
- 15. ChocksSECURED

PUBLISHED V-SPEEDS

| V-Speed Symbol | Speed Value | Description |
|-----------------------|--------------------|---|
| Vs0 | 59 Km/h | Stall speed in the landing configuration (full flaps). |
| Vs1 | 64 Km/h | Stall speed in the clean configuration (flaps neutral). |
| Vr | 60 Km/h | Rotation speed. The speed at which the nose wheel is lifted from the runway during takeoff. |
| Vy | 110 Km/h | Best Rate speed. In a climb it provides the maximum gain in altitude per unit of <i>time</i> traveled. |
| Vra | 180 Km/h | Maximum allowed speed in strong turbulence. |
| V best glide | 95 Km/h | In a glide it provides the maximum distance traveled forward with the minimum altitude lost. |
| Vfe | 120 Km/h | Full Flaps Extended speed. Maximum speed at which flaps may be fully extended. |
| Va | 158 Km/h | Design Maneuvering speed. Maximum speed at which full, abrupt deflection of the controls can be made without causing structural damage. |
| Vh | 225 Km/h | Maximum level flight indicated speed, the maximum using continuous engine power. |
| Vne | 254 Km/h | Do not exceed this speed under any circumstances. |
| Max x-wind | 5 m/s | Maximum crosswind component for take-offs and landings. |

5.0. Performance

Valued only for R912 ULS with ground adjustable propeller.

Note:

Measured 0m MSA atmosphere. TAS = IAS \pm 8 km/h

5.1. Cruise speed and higher: use negative -10° deflection of the flaps

| | | |
|-------------------------|----------|----------|
| Mass | m=370 kg | m=600 kg |
| Cruise speed 75 % power | 210 km/h | 200 km/h |

5.2. Stall speeds

| | | |
|--------------------------------|----------|----------|
| Mass | m=370 kg | m=600 kg |
| Without flaps V_{s1} | 75 km/h | 80 km/h |
| Landing configuration V_{s0} | 65 km/h | 73 km/h |

5.3. Take-Off and landing distance

The following values have been measured on soft surface and while applying a gentle braking action.

Take-Off

| | | |
|-----------------------------|----------|----------|
| Mass | m=370 kg | m=600 kg |
| Distance to 15m of altitude | 150 m | 350 m |
| Ground distance | 75 m | 150 m |

Landing

| | | |
|------|----------|----------|
| Mass | m=370 kg | m=600 kg |
|------|----------|----------|

| | | |
|--|-------|-------|
| Landing distance from 15m of altitude | 200 m | 350 m |
| Ground distance | 95 m | 170 m |

5.4. Climb

Climbing speed with full power of ROTAX 912 ULS

| | | |
|----------------------------|----------|----------|
| Mass | M=370 kg | m=600 kg |
| Rate of climb (m/s) | 7 | 5 |
| IAS | 100 | 100 |

5.5. Glide performances

Idle power

| | | |
|-----------------------------------|-----------|-----------|
| Mass | m=370 kg | m=600 kg |
| Optimum glide speed [km/h] | 100 - 110 | 110 - 130 |
| Rate of decent [m/s] | 1,8 | 3,2 |

Engine off, flaps in take-off position

| | | |
|-----------------------------------|-----------|----------|
| Mass | m=370 kg | m=600 kg |
| Optimum glide speed [km/h] | 100 - 110 | 120- 130 |
| Rate of decent [m/s] | 2 | 3,4 |

5.6. Range

| | |
|-------------------------------|-------------|
| 75% power | 900 KM |
| Endurance (@75% power) | 4 h +30 min |

5.7. Ceiling

| | | |
|----------------------------|--------|-------------|
| Uncertified ceiling | 3650 m | 12 000 feet |
|----------------------------|--------|-------------|

5.8. Fuel consumption

Values for Rotax 912 ULS – please refer to the official Rotax operating and maintenance manual for additional information.

| | |
|--------------------------------------|---------------|
| 5500 rpm (performance cruise) | 22 liters / h |
| 5000 rpm (regular cruise) | 20 liters / h |
| 4300 rpm (economy cruise) | 16 liters / h |

6.0. Good Practices

6.1. After each flight

- wash the aircraft with water, do not use soaps.
- Clean the interior using a vacuum cleaner
- Check tire pressure
- Check airframe surfaces
- Check canopy glass
- Check volume of liquids
- Ensure the aircraft is secured in its parking position
- Apply covers (pitot, propeller blades, canopy, etc).

For regular and extra-ordinary maintenance, please refer to the Aircraft maintenance manual and the official maintenance manuals of its major components (engine, propeller, avionics).

After the first 100 hours of flight, it is recommended to perform a 100 hours inspection at the factory.

