VORTEX

SC

PILOT'S OPERATING HANDBOOK

Based on the Vortex SC information manual, document EA-0C701, edition/revision dated 16th July 2026.

This edition updates layout, navigation, typography and wording for readability. It is not EASA-approved, is not kept current, and must not replace the approved aircraft-specific POH/AFM.

DISCLAIMER	This manual is intended solely for use with Microsoft Flight Simulator and has been prepared using information derived from real-world aviation sources. Such information is included to provide an authentic and immersive simulation experience. Due to differences between real-world aircraft, simulator functionality, and individual aircraft add-ons, some content may not be applicable or accurately represented within the simulation. This manual must not be used for real-world flight operations, training, or navigation.

DOCUMENT EA-0C701 I REVISION 7 I 16TH JULY 2026

SIMULATIONS

Introduction

Vortex SC is a single-seat aerobatic monoplane designed for advanced and unlimited-category aerobatic flight. Its steel-tube fuselage, composite wings and high-authority control surfaces provide high structural strength, low mass and precise control response.

Power is provided by a Lycoming AEIO-580 engine driving an MT propeller. The aircraft is configured for rapid roll performance and sustained positive and negative manoeuvring within the limitations specified in Section 2.

This handbook contains operating information for the Vortex SC, including aircraft description, limitations, emergency procedures, normal procedures, performance, weight and balance, systems, servicing and supplements.

The pilot is responsible for operating the aircraft within all stated limitations and for applying the procedures contained in this handbook. Aerobatic flight requires appropriate training, current proficiency and sound operational judgement.

Aerobatics.Redefined

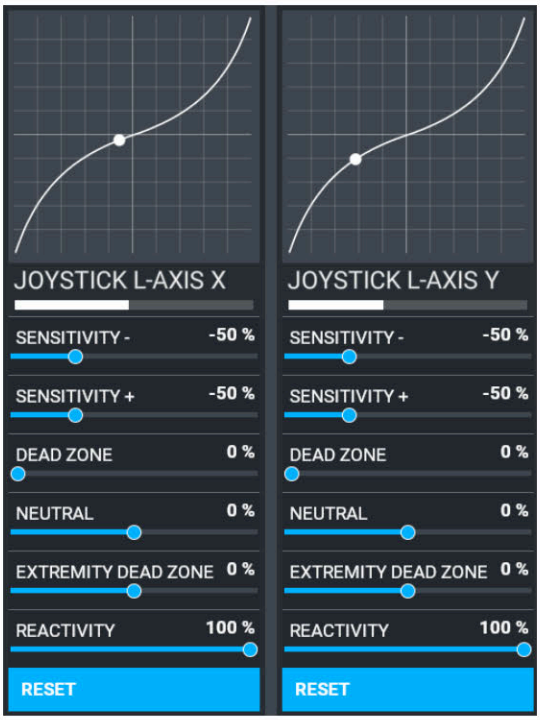
Contents

MSFS Control Surface Sensitivity

Simulator control setup

Recommended settings

For the Vortex SC, apply the following sensitivity value only to the primary flight-control surface axes in Microsoft Flight Simulator.



Apply the setting

1. Open MSFS Controls Options and select the connected flight-control device.
2. Open the Sensitivity panel for the Aileron Axis, Elevator Axis and Rudder Axis assignments.
3. Set each control-surface sensitivity value to -0.5. Where separate positive and negative sensitivity controls are shown, set both to -0.5.
4. Save the configuration as a dedicated Vortex SC control profile.
5. Verify smooth, full control movement in the cockpit before flight.

NOTE	This recommendation applies only to the Aileron, Elevator and Rudder control-surface axes. Leave all non-control-surface axes at their calibrated or preferred values.

MSFS Smoke / Pyrotechnic System control

Smoke System

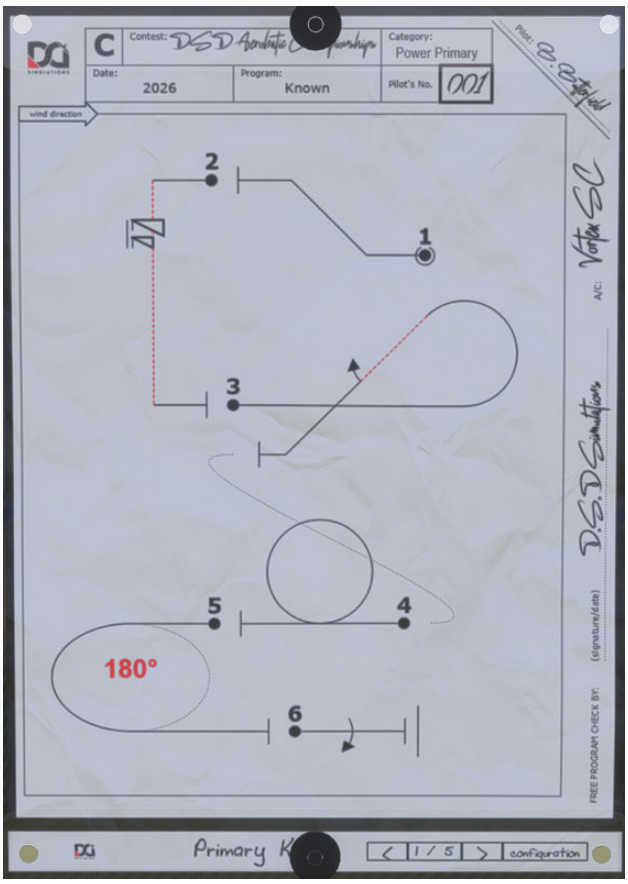
Settings > Controls > Bind Toggle Logo Lights

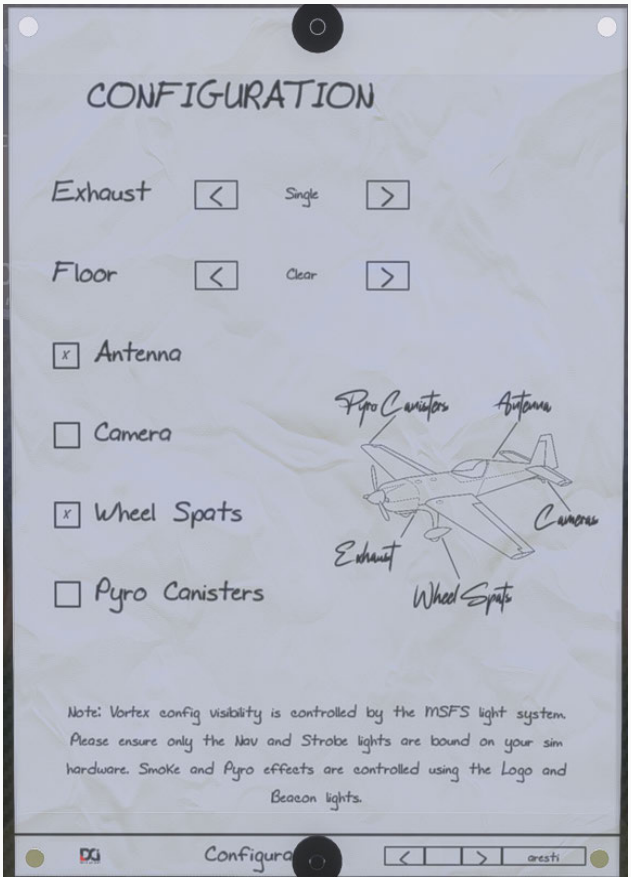
Pyro System

Settings > Controls > Bind Toggle Beacon Lights

Install Pyro Canisters through the number ten breaker 'Aresti'. Click on the Configuration tab at the bottom right and toggle Pyro Canisters.

NOTE	The Pyro System will not function unless the Pyro Canisters are installed.





Aresti Card / Configuration

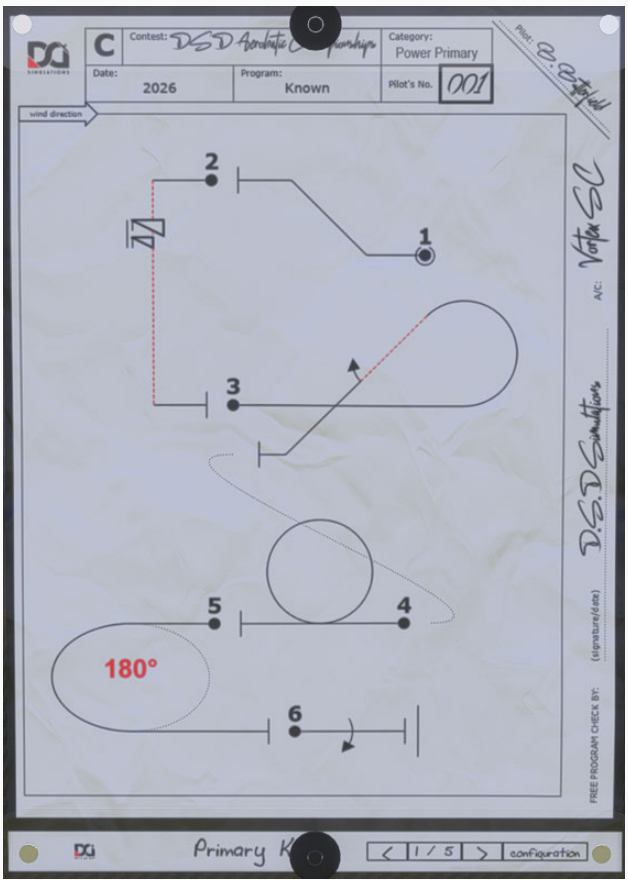
Aresti Card

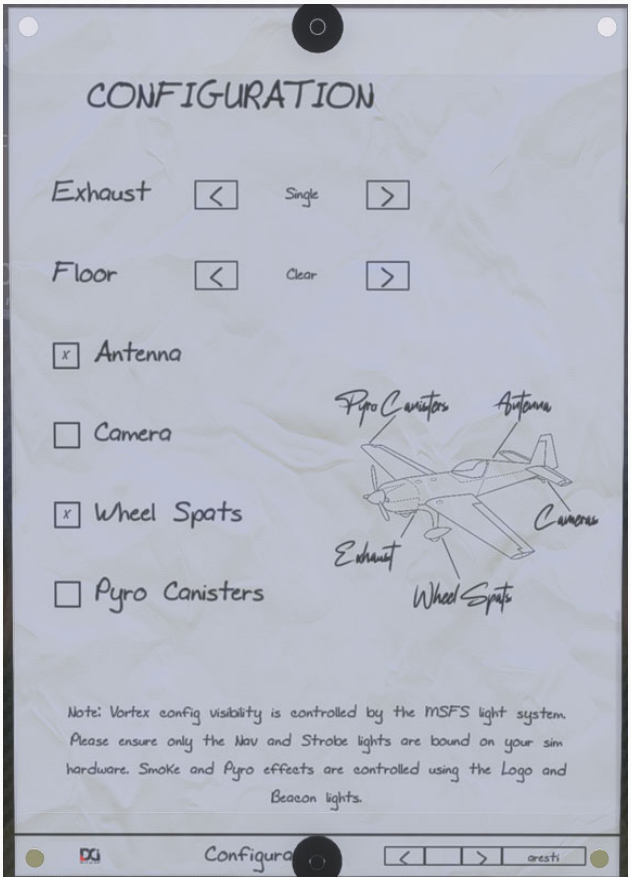
Access the Aresti Card by clicking the number ten breaker marked 'Aresti' where you will find five different Aresti sequences.

Configuration Panel

The Configuration panel allows users to customize the aircraft's visual equipment and effects.

Use the left and right arrow buttons to change the Exhaust and Floor options. Additional equipment can be enabled or disabled using the checkboxes for Antenna, Camera, Wheel Spots, and Pyro Canisters.





SECTION 1

General

Aircraft definition and principal data

1.0 Description

The Vortex SC is a single-seat, low-wing aerobatic airplane. The fuselage is a TIG-welded steel-tube structure; the wing, empennage and landing gear use composite construction. The aircraft is certified in Normal and Acrobatic categories.

1.1 Manufacturer and approval

Item	Details
Manufacturer	DSD Simulations
Type	Vortex SC
Approval reference	EASA approval reference: EASA.A.C.08679
POH/AFM document	EA-00701

1.2 Principal dimensions

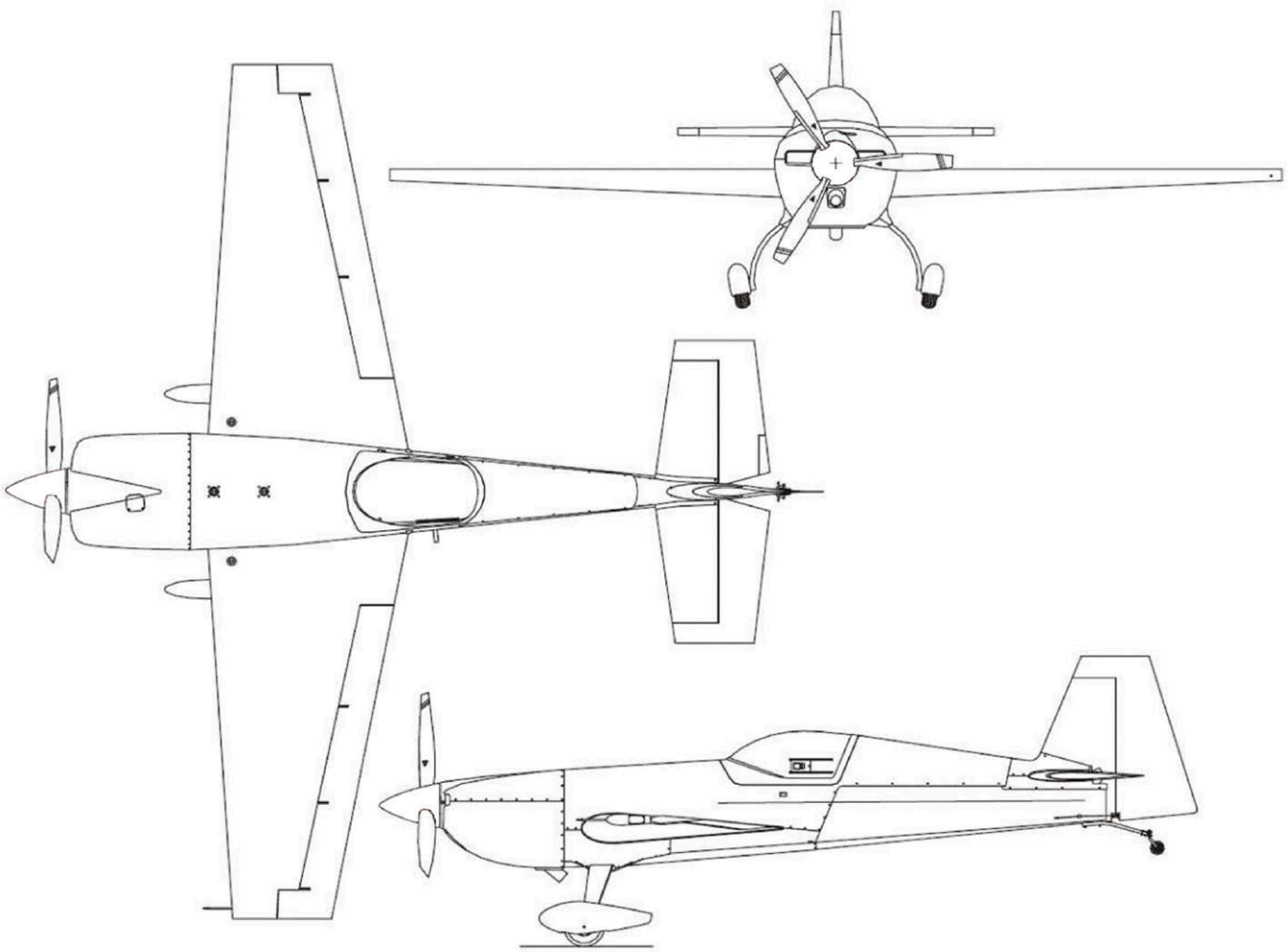
Parameter	Metric	Imperial
Length	6.88 m	22.57 ft
Height	2.55 m	8.36 ft
Wing span	7.50 m	24.61 ft
Wheelbase	4.87 m	15.98 ft
Wheel track	1.80 m	5.91 ft
Wing area	9.81 m²	105.6 ft²
Mean aerodynamic chord	1.366 m	4.48 ft
Horizontal tail span	2.66 m	8.73 ft
Horizontal tail area	2.13 m²	22.92 ft²

1.3 Control surfaces

Surface	Area / deflection
Ailerons	2 × 0.876 m²; 30° up/down, tolerance ±2°
Elevator	1.04 m²; 25° up/down, tolerance ±1°
Elevator trim tab	32° up/down, tolerance ±2°
Rudder	0.75 m²; 30° left/right, tolerance +0°/-2°

Technical Drawing

General arrangement views - not to scale



1.4 Engine and propeller

Item	Specification
Engine	Lycoming AEIO-580-B1A
Rated power	234.9 kW / 315 hp at 2700 RPM
Standard propeller	MTV-9-B-C/C190-25, three-blade constant-speed
Alternative propeller	MTV-14-B-C/C190-130, four-blade constant-speed
Standard exhaust	Gomolzig EA300-606000, six-into-one with integrated silencer
Alternative exhausts	Sky Dynamics six-into-one without silencer; Chabord six-into-two without silencer

1.5 Fuel

Tank	Total volume	Usable / operational note
Left wing	60 L / 15.85 US gal	60 L / 15.85 US gal usable
Right wing	60 L / 15.85 US gal	60 L / 15.85 US gal usable
Centre	104 L / 27.5 US gal	101 L / 26.7 US gal usable
Total	224 L / 59.2 US gal	221 L / 58.4 US gal usable
Aerobatic system	104 L / 27.5 US gal total	101 L / 26.7 US gal usable

NOTE	Fuel grade: AVGAS 100/100LL. Consult the latest applicable Lycoming service instruction for alternate fuel grades.

1.6 Oil

Condition	Recommended aviation oil grade
All temperatures	SAE 15W-50 or 20W-50 ashless dispersant
Above 27°C / 80°F	SAE 60
Above 16°C / 60°F	SAE 50 mineral; SAE 40 or 50 ashless dispersant
-1°C to 32°C / 30°F to 90°F	SAE 40
-18°C to 21°C / 0°F to 70°F	SAE 30 mineral; SAE 30, 40 or 20W-40 ashless dispersant
-18°C to 32°C / 0°F to 90°F	SAE 20W-50
Below -12°C / 10°F	SAE 20 mineral; SAE 30 or 20W-30 ashless dispersant

Maximum sump capacity: 16 US quarts. Minimum sump capacity: 9 US quarts. Refer to the current Lycoming engine documentation for approved products and break-in requirements.

1.7 Loading

Category	Wing loading	Power loading
Acrobatic	79.50 kg/m² / 16.29 lb/ft²	3.32 kg/kW / 5.46 lb/hp
Normal	88.68 kg/m² / 18.17 lb/ft²	3.70 kg/kW / 6.09 lb/hp

SECTION 2

Limitations

Approved operating boundaries and markings

WARNING	Any exceedance of an operating limitation must be recorded and evaluated using the applicable Vortex SC maintenance or inspection procedure.

2.1 Airspeed limitations

Symbol	Limitation	Acrobatic category	Normal category
VNE	Never-exceed speed	219 KIAS / 406 km/h	219 KIAS / 406 km/h
VNO	Maximum structural cruising speed	154 KIAS / 285 km/h	154 KIAS / 285 km/h
VA	Manoeuvring speed	154 KIAS / 285 km/h	138 KIAS / 256 km/h

CAUTION	Large or abrupt control inputs above VA may impose loads beyond the structural capability of the airplane.

2.2 Crosswind

Maximum demonstrated crosswind component for takeoff and landing: 15 kt / 27 km/h.

2.3 Engine limitations

Parameter	Limit
Maximum takeoff RPM	2700 RPM
Maximum continuous RPM	2700 RPM
Maximum oil temperature	118°C / 245°F
Oil quantity	9 to 16 US qt
Minimum idling oil pressure	25 psi / 172 kPa
Normal oil pressure	55-95 psi / 379-655 kPa
Starting, warm-up, taxi and takeoff oil pressure	Maximum 115 psi / 793 kPa
Fuel pressure at injector inlet	12 psi minimum idle; 29 psi minimum; 65 psi maximum
Maximum cylinder-head temperature	241°C / 465°F

CAUTION	Oil pressure may flicker during transitions between upright and inverted flight. Knife-edge and zero-g flight may interrupt scavenging; operating limit is 10 seconds maximum.
WARNING	If oil pressure falls to zero, the propeller may move toward coarse pitch with a corresponding RPM reduction. Apply positive g to avoid engine stoppage.

2.4 Propeller limitations

Standard and alternative propellers are listed in Section 1. Maximum takeoff and continuous rotational speed is normally limited to 2600 RPM for noise compliance. The manual notes that 2700 RPM may be permissible for some non-US aircraft registered only in the Acrobatic category; aircraft-specific approval controls.

2.5 Weight and centre-of-gravity limits

Category	Maximum takeoff weight	Load-factor limit
Acrobatic	780 kg / 1720 lb	+10 g / -10 g
Normal	870 kg / 1918 lb	+6 g / -3 g

Centre-of-gravity limits must be taken from the approved aircraft-specific loading envelope and current weight-and-balance record. Section 6 provides the calculation method and loading arms.

2.6 Approved operation

- Only day VFR operation is approved.
- Approved outside-air-temperature range: -20°C to +38°C (-4°F to +100°F).
- Flight in known icing conditions is prohibited.
- Flight close to thunderstorms is prohibited.
- Maximum certified operating altitude: 10,000 ft MSL / 3048 m.
- Smoking is prohibited.
- Composite structure temperature must not exceed 72°C / 161.6°F; approved colour specifications must be observed.
- Main-tire pressure: 2.62 bar / 38 psi.

2.7 Normal-category manoeuvres

Aerobatic manoeuvres are prohibited in the Normal category except stalls, chandelles, lazy eights and turns with bank angles up to 60 degrees.

2.8 Acrobatic operation

The airplane is designed for aerobatics. Continuous inverted flight is limited to four minutes. Recommended entry speeds are operating guidance; they do not override VNE, VA, load-factor or engine limits.

Manoeuvre / segment	Minimum	Maximum / note
Horizontal line	VS	VNE
45° climbing line	80 KIAS	VNE
90° up line	VA	VNE
45° or 90° down line	VS	VNE; reduce throttle
Quarter-loop climb	100 KIAS	190 KIAS
Loop	100 KIAS	190 KIAS
Stall turn	100 KIAS	190 KIAS
Aileron roll	80 KIAS	VA for full deflection
Snap roll	80 KIAS	140 KIAS
Tail slide	100 KIAS	190 KIAS
Spin / inverted spin	VS	No maximum stated
Knife-edge	Above 150 KIAS	Maximum 10 seconds
Inverted flight	Above VS	190 KIAS; maximum 4 minutes

Aerobatic Flight

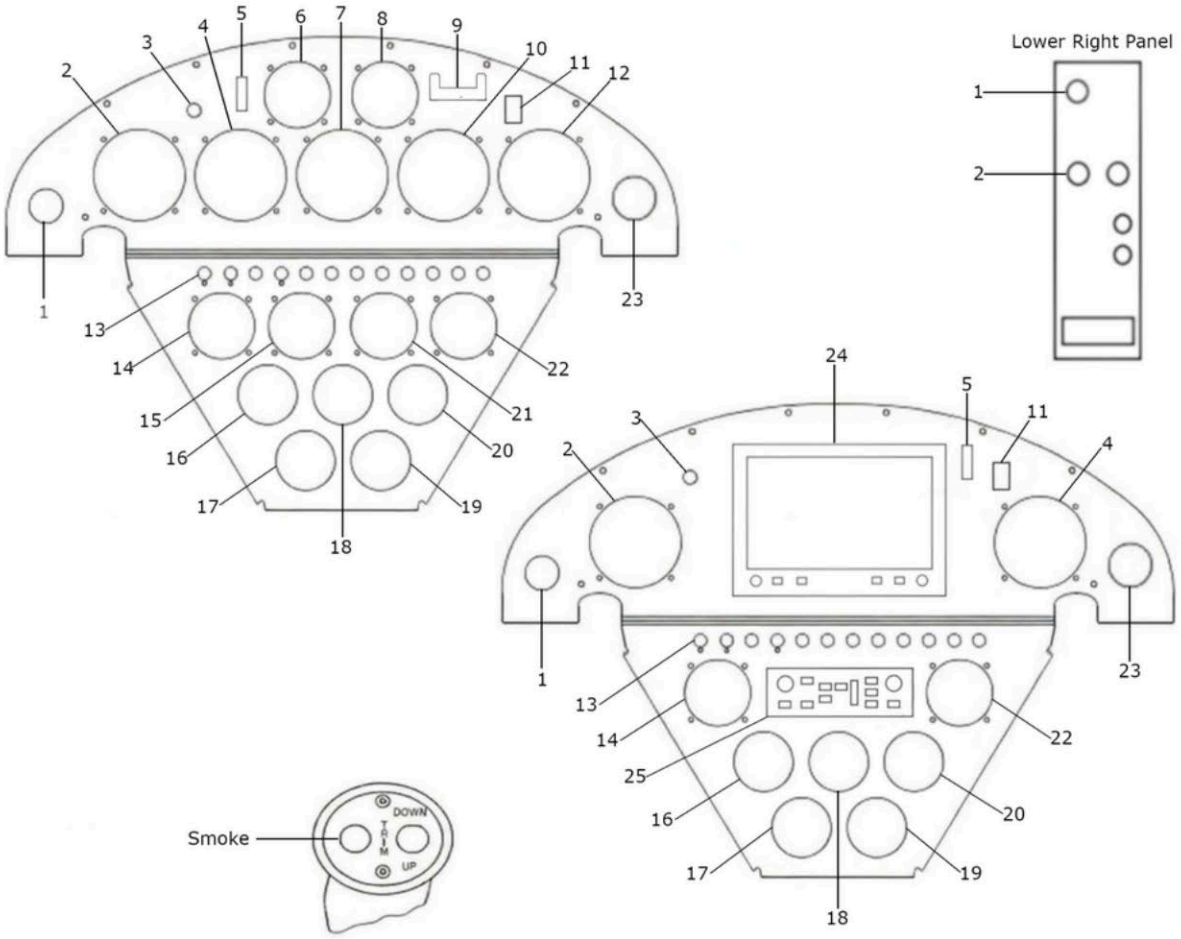
The plane is designed for acrobatics. Inverted flight maneuvers are limited to max 4 min.
Recommended basic maneuver entry speeds are listed in the following list:

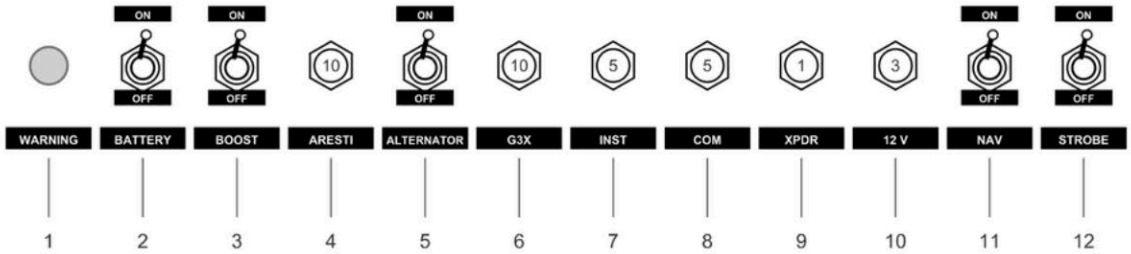
Maneuvers	Recommended entry speeds (IAS) min knots (km/h)	max knots (km/h)	Symbol	Remarks
Segment: Horizontal Line	V_S	V_{NE}		
45° climbing	80 (148)	V_{NE}		
90° up	V_A	V_{NE}		
45° diving	V_S	V_{NE}		reduce throttle
90° diving	V_S	V_{NE}		reduce throttle
1/4 Loop climb.	100 (185)	190 (352)		
Looping	100 (185)	190 (352)		
Stall turn	100 (185)	190 (352)		
Aileron roll	80 (148)	V_A		full deflection
Snap roll	80 (148)	140 (259)		
"Tail slide"	100 (185)	190 (352)		
Spin	V_S			
Inverted spin	V_S			
Knife edge	>150 (278)			< 10 s
Inverted Flight	$>V_S$	190 (352)		< 4 min

CAUTION	Particular caution must be exercised when performing manoeuvres at speeds above VA [154 KIAS (285 km/h)]. Large or abrupt control inputs above this speed may impose unacceptably high loads which exceed the structural capability of the aircraft.

NOTE	For Aerobatic Manoeuvres see Section 4. All manoeuvres can be performed in positive and negative flight attitude.

Instrument Panel





Representative layouts - installed instruments and equipment may vary.

Instrument Panel Identification

Main Instrument Panel

Position	Item
1	Magneto Selector Switch & Starter
2	Airspeed Indicator
3	G-Warning Light
4	Analog Altimeter
5	Elev. Trim Position Indicator
6	Accelerometer
7	Electronic Flight Instrument System
8	Magn. Direction Indicator
9	Yaw / Slip Indicator
10	Manifold Pressure / Fuel Flow
11	Emergency Location Transmitter
12	Tachometer
13	Circuit Breaker Panel
14	Fuel Quantity (Right Wing)
15	COM
16	Fuel Quantity (Left Wing)
17	Fuel Quantity (Acro Tank)
18	Clock
19	Ammeter
20	Flight Hours / Fatigue Meter
21	Transponder
22	CHT / EGT Indicator
23	12v Socket
24	Garmin G3X
25	Autopilot

Switches, Circuit Breaker and Light

Position	Item
1	Alternator warning light incl. press-to-test feature
2	Battery master switch
3	Boost pump switch
4	Aresti (Loads Aresti card)
5	Alternator switch
6	G3X (Installs G3X)
7	Instrument circuit breaker
8	COM circuit breaker
9	XPDR circuit breaker
10	12v circuit breaker
11	Navigation light switch
12	Strobe light switch

Lower Right Panel

Position	Item
1	Cowling (Removes cowling/covers)
2	Pyro Ignition

NOTE

These lists may be modified by the minimum equipment requirements of individual certifying authorities.

2.9 Instrument markings

Instrument	Marking	Range
Airspeed	Green arc	64-154 KIAS / 119-285 km/h
Airspeed	Yellow arc	154-219 KIAS / 285-406 km/h
Airspeed	Red line	219 KIAS / 406 km/h
Oil pressure	Green arc	55-95 psi, or 55-90 psi depending on instrument
Oil pressure	Red lines	25 psi and 115 psi, or 100 psi depending on instrument
Oil temperature	Green arc	140-210°F
Oil temperature	Red line	245°F
Cylinder-head temperature	Green arc	150-435°F
Cylinder-head temperature	Red line	465°F
Digital RPM	Green LEDs	700-2400 RPM
Digital RPM	Yellow LEDs	2400-2600 or 2700 RPM
Digital RPM	Red LEDs	Above 2600 or 2700 RPM

2.10 Fuel selector positions

Handle position	Selection
Down	Closed
Left	Acro and centre tanks
Up	Wing tank

SECTION 3

Emergency procedures

Immediate actions and abnormal operation

3.0 Priorities

1	Maintain aircraft control
2	Analyse the situation
3	Take the appropriate action
4	Land as soon as conditions require

AS SOON AS POSSIBLE means an urgent landing at the nearest suitable location. AS SOON AS PRACTICAL means continued flight may be acceptable to an airfield with more suitable facilities, using pilot judgement.

WARNING	Make only one attempt to reset an automatically disconnected power supply or circuit-protection device affecting flight safety. Repeated resets may progressively worsen the failure.

3.1 Emergency reference speeds

Condition	Speed
Stall speed at maximum normal-category weight	64 KIAS / 119 km/h
Engine failure after takeoff	90 KIAS / 167 km/h
Recommended glide, approximately 1:6.2	90 KIAS / 167 km/h
Precautionary landing with power	90 KIAS / 167 km/h
Landing without power	90 KIAS / 167 km/h
Maximum demonstrated crosswind	15 kt / 27 km/h

3.2 Engine failure during takeoff roll

1	Throttle	**IDLE**
2	Brakes	**APPLY**
3	Mixture	**IDLE CUT-OFF**
4	Ignition switch	**OFF**
5	Master switch	**OFF**

3.3 Engine failure immediately after takeoff

1	Airspeed	**90 KIAS / 167 km/h**
2	Mixture	**IDLE CUT-OFF**
3	Fuel selector	**OFF - pull and turn**
4	Ignition switch	**OFF**
5	Master switch	**OFF**
6	Forced landing	**PERFORM AS PRACTICABLE**

3.4 Engine failure in flight - restart

1	Aircraft attitude	**UPRIGHT**
2	Airspeed	**90 KIAS / 167 km/h**
3	Fuel quantities	**CHECK**
4	Fuel selector	**SELECT TANK WITH HIGHEST LEVEL**
5	Mixture	**RICH**
6	Boost pump	**ON**
7	Ignition	**BOTH; START if propeller stopped**

3.5 Oil-system malfunction

If oil pressure is low, first apply positive g. If pressure is not restored:

1	Airspeed	**90 KIAS / 167 km/h**
2	Throttle	**REDUCE TO IDLE**
3	Oil temperature	**MONITOR**
4	Landing	**AS SOON AS POSSIBLE**

3.6 Alternator failure

If the red alternator warning light illuminates, check the ammeter. A negative indication means the battery is the sole electrical supply: land as soon as possible. If the ammeter remains positive, the warning light may be defective: monitor and land as soon as practical.

If the ammeter is negative, increase RPM or reduce electrical load. If the indication remains negative, land as soon as possible. The ALT OUTPUT circuit breaker may be reset once; if it trips again, leave it open and land as soon as possible.

3.7 Forced Landing without engine power

1	Seat belts and shoulder harness	**SECURE**
2	Airspeed	**90 KIAS / 167 km/h**
3	Mixture	**IDLE CUT-OFF**
4	Fuel selector	**OFF**
5	Ignition	**OFF**
6	Master	**OFF**
7	Touchdown	**SLIGHTLY TAIL LOW**
8	Brakes	**OPTIMUM BRAKING**

3.8 Precautionary Landing with power

1	Seat belts and shoulder harness	**SECURE**
2	Airspeed	**90 KIAS / 167 km/h**
3	Selected field	**FLY OVER; assess terrain and obstructions**
4	Master	**OFF before touchdown**
5	Touchdown	**SLIGHTLY TAIL LOW**
6	Ignition	**OFF**
7	Mixture	**IDLE CUT-OFF**
8	Fuel selector	**OFF**
9	Brakes	**APPLY HEAVILY**

3.9 Fire during start

1	Cranking	**CONTINUE TO OBTAIN A START**
2	Fuel selector	**OFF**
3	If engine starts	**1700 RPM FOR ONE MINUTE; THEN SHUT DOWN**
4	Aircraft / fire	**ABANDON, EXTINGUISH IF POSSIBLE, AND INSPECT**

WARNING	Do not open engine-compartment access doors while the engine is on fire.

3.10 Engine fire in flight

1	Mixture	**IDLE CUT-OFF**
2	Fuel selector	**OFF**
3	Master	**OFF**
4	Airspeed	**90 KIAS; select an attitude that keeps fire away from cockpit**
5	Landing	**AS SOON AS POSSIBLE**

3.11 Inadvertent icing

1	Course or altitude	**CHANGE TO LEAVE ICING**
2	Landing	**PLAN AT NEAREST AIRFIELD**
3	Rapid accumulation	**SELECT SUITABLE OFF-AIRPORT FIELD**

3.12 Manual bailout

1	Airspeed	**REDUCE TO 90 KT IF POSSIBLE**
2	Mixture	**LEAN / IDLE CUT-OFF**
3	Canopy / headset	**OPEN / REMOVE**
4	Seat belt	**OPEN**
5	Exit / parachute	**EXIT LEFT; AVOID WING AND TAIL; DEPLOY**

3.13 Emergency exit after overturn

1	Master / fuel selector	**OFF**
2	Seat belt / parachute harness	**OPEN**
3	Canopy handle	**PULL TO OPEN**
4	Aircraft	**EVACUATE AS SOON AS POSSIBLE**

WARNING	If the canopy does not open, break the canopy.

3.14 Elevator-control failure

Elevator trim may be used to control pitch, with power controlling level flight or descent. Establish a shallow powered approach and increase power gently for the flare. Aircraft-specific training and judgement are essential.

SECTION 4

Normal procedures

Operating checklists and aerobatic guidance

4.0 Operating speeds

Phase	870 kg / 1918 lb	780 kg / 1720 lb
Rotation	70 KIAS / 130 km/h	67 KIAS / 124 km/h
VX	91 KIAS / 169 km/h	86 KIAS / 159 km/h
VY	100 KIAS / 185 km/h	95 KIAS / 176 km/h
Recommended climb	106 KIAS / 196 km/h	101 KIAS / 187 km/h
Maximum cruise	183 KIAS / 339 km/h	187 KIAS / 346 km/h
Approach / final	85 KIAS / 157 km/h	81 KIAS / 150 km/h
Go-around	95 KIAS / 176 km/h	91 KIAS / 169 km/h
Rough-air maximum	154 KIAS / 285 km/h	146 KIAS / 270 km/h

4.1 Preflight - cockpit

1	Approved POH/AFM	**AVAILABLE**
2	Weight and balance	**CHECKED**
3	Ignition	**OFF**
4	Master	**ON**
5	Front centre fuel quantity	**CHECK**
6	Rear centre fuel quantity	**CHECK**
7	Wing fuel quantity	**CHECK**
8	Master	**OFF**
9	Fuel selector	**ACRO & CENTRE TANKS**

NOTE	Ensure at least one centre tank contains enough fuel for takeoff, landing and go-around.

4.2 Preflight - exterior

1	Empennage, canopy, surfaces and tailwheel	**GENERAL CONDITION / SECURITY**
2	Horizontal stabilizer attachment	**CHECK FOR FREE PLAY**
3	Right aileron and trailing edge	**CHECK**
4	Right landing gear, wheel and brake	**CHECK**
5	Tank vents, fuel quantity and caps	**CHECK**
6	Engine oil quantity	**CHECK**
7	Propeller, spinner and air inlet	**CHECK**

8	Centre/acro and wing drains	DRAIN AT LEAST 4 SECONDS; CHECK CLOSED
9	Gascolator / filter drain	DRAIN AT LEAST 4 SECONDS; CHECK CLOSED
10	Left landing gear, wheel and brake	CHECK
11	Pitot cover	REMOVE
12	Left aileron and trailing edge	CHECK

4.3 Before engine start

1	Preflight inspection	COMPLETE
2	Parachute	SECURED
3	Seat and harnesses	ADJUST AND LOCK
4	Canopy	CLOSE AND LOCK
5	Brakes	CHECK
6	Master	ON
7	Electrical equipment	OFF

CAUTION	Canopy-lock handles must reach their indicated fully locked positions. Check the gap between canopy frame and fuselage fairing.

4.4 Cold or hot start

1	Propeller control	HIGH RPM
2	Throttle	OPEN APPROXIMATELY 1/4 TRAVEL
3	Boost pump	ON
4	Mixture	FULL RICH UNTIL STEADY FLOW, APPROX. 3-5 SEC; THEN IDLE CUT-OFF
5	Boost pump	OFF
6	Starter	ENGAGE
7	When engine fires	RELEASE IGNITION TO BOTH
8	Mixture	MOVE SLOWLY TO FULL RICH
9	Oil pressure	VERIFY WITHIN 30 SECONDS

CAUTION	Shut down immediately if minimum oil pressure is not indicated within 30 seconds.

4.5 Taxi and warm-up

1	Canopy	**CLOSED AND LOCKED**
2	Brakes	**CHECK**
3	Altimeter	**SET QFE OR QNH**
4	Electrical equipment	**ON AS REQUIRED**
5	Radio	**SET AND TEST**
6	Mixture	**FULL RICH**
7	Propeller	**HIGH RPM / MINIMUM BLADE ANGLE**
8	Warm-up	**1000-1200 RPM**

The engine is ready for takeoff when the throttle can be opened without faltering.

4.6 Before takeoff

1	Oil pressure and temperature	**CHECK**
2	Engine speed	**1800 RPM FOR MAGNETO CHECK**
3	Magnetos	**CHECK LEFT, RIGHT, BOTH**
4	Maximum single-mag RPM drop	**175 RPM**
5	Maximum difference between magnetos	**50 RPM**
6	Alternator output	**POSITIVE AMMETER INDICATION**
7	Propeller control	**CYCLE THROUGH RANGE; RETURN HIGH RPM**
8	Boost pump	**ON; VERIFY FUEL-FLOW RESPONSE**

4.7 Takeoff and climb

1	Throttle	**ADVANCE SMOOTHLY TO TAKEOFF POWER**
2	Tail	**LIFT AT 65-70 KIAS**
3	Rotation	**70 KIAS / 130 km/h**
4	Climb	**USE RECOMMENDED SPEED FOR WEIGHT**
5	Boost pump	**OFF WHEN SAFE**

4.8 Cruise

1	Altitude	AS SELECTED
2	Throttle and RPM	SET FOR DESIRED CRUISE
3	Mixture	LEAN FOR REQUIRED POWER / ECONOMY
4	Trim	AS REQUIRED
5	Fuel	CHECK PERIODICALLY

NOTE	Retain sufficient centre-tank fuel for landing and go-around.

4.9 Descent and approach

1	Throttle	REDUCE
2	Mixture	FULL RICH
3	RPM	2400
4	Trim	ADJUST
5	Fuel selector	ACRO & CENTRE TANKS
6	Boost pump	ON
7	Airspeed	REDUCE TO APPROACH SPEED
8	Propeller	HIGH RPM / LOW BLADE ANGLE

NOTE	Use 2400 RPM during approach and landing for noise reduction. Move the RPM control to maximum before applying go-around power.

4.10 Landing

1	Approach	85 KIAS / 157 km/h at maximum normal-category weight
2	Final	MAINTAIN 85 KIAS / 157 km/h
3	Trim	AS REQUIRED
4	Touchdown	THREE-POINT LANDING
5	Throttle	IDLE
6	Braking	MINIMUM REQUIRED

Rudder effectiveness continues to approximately 30 KIAS / 56 km/h.

4.11 Go-around

1	Decision	MAKE EARLY
2	RPM control	HIGH RPM / FULL FORWARD
3	Throttle	TAKEOFF POWER
4	Airspeed	MINIMUM 90 KIAS / 167 km/h
5	Climb	ESTABLISH SAFE GO-AROUND PROFILE

4.12 Shutdown and securing

1	Boost pump	OFF
2	Engine	RUN 1 MINUTE AT 1000 RPM
3	Dead-cut check	PERFORM
4	Electrical equipment	OFF
5	Mixture	IDLE CUT-OFF
6	Ignition	OFF
7	Master	OFF
8	Canopy	CLOSE AND LOCK
9	Aircraft	SECURE
10	Pitot cover	INSTALL
11	Logbook	COMPLETE

4.13 Aerobatic preparation

WARNING	The airplane's approved load factors may exceed the pilot's physiological limits. Aerobatic flight requires appropriate qualifications, training, airspace, altitude, equipment and physical readiness. Tighten the restraint system and secure all loose items.

- Tighten the restraint system and secure all loose items.
- Begin manoeuvres at a safe altitude.
- Use maximum continuous power unless the manoeuvre requires another setting.
- Observe the limitations in Section 2.
- Momentary oil-pressure and RPM indication changes may occur at high negative g or zero g; restore positive g if oil pressure decays.

4.14 Aerobatic segments

Segment	Flight guidance
Horizontal line	Any speed between VS and VNE.
45° climb	Maximum power; do not allow speed below 80 KIAS.
Vertical up	Entry speed as required. From approximately 200 KIAS, data indicate about 2500 ft vertical penetration.
45° down	Reduce throttle to avoid VNE.
Vertical down	Use idle power to avoid VNE.
Quarter-loop / loop	Minimum recommended entry 100 KIAS; higher speed for a longer vertical line.
Full-deflection aileron roll	Do not exceed VA.
Snap roll	Do not exceed 140 KIAS.
Gyroscopic manoeuvres	Reduce RPM to 2400 to reduce crankshaft and propeller gyroscopic loads.

4.15 Spin

WARNING	This text describes the listed procedure; it is not spin instruction. Conduct intentional spins only under an approved training programme with appropriate altitude and aircraft configuration.

Entry

1	Power	**IDLE**
2	At stall	**APPLY FULL RUDDER IN DESIRED DIRECTION**
3	Ailerons	**NEUTRAL**
4	Elevator	**AFT FOR POSITIVE SPIN; FORWARD FOR NEGATIVE SPIN**

Recovery

1	Rudder	**FULL OPPOSITE**
2	Power	**IDLE**
3	Ailerons	**NEUTRAL**
4	Elevator	**NEUTRAL**
5	After rotation stops	**RECOVER FROM DIVE WITHOUT EXCEEDING LIMITS**

NOTE	Approximately 1500 ft altitude loss for one turn including recovery and approximately 3300 ft for six turns. Actual loss depends on configuration and technique.

SECTION 5

Performance

Supplementary planning data for simulator use

NOTE	Performance figures are planning references. Aircraft condition, technique, runway surface, wind, temperature, altitude and installed equipment can materially affect results. Use the approved aircraft-specific performance section for real-world operation.

5.1 General

This section presents performance data in tables and charts to support detailed flight planning under varying conditions. Range and endurance values include the specified reserve allowance; engine and propeller condition, turbulence and other variables can produce differences of 10% or more. Select conservative values and account for the actual operating environment.

5.1.1 Baseline conditions

Condition	Planning basis
Takeoff weight	870 kg (1918 lb)
Surface	Concrete for takeoff and landing
Wind	Calm unless a correction is applied
Atmosphere	ISA / standard atmosphere
Airspeeds	Indicated airspeed unless stated otherwise

5.1.2 Sample planning problem

Phase	Planning input
Takeoff	870 kg; pressure altitude 2000 ft; 15°C; 10 kt headwind; 3000 ft field
Cruise	400 NM; pressure altitude 8000 ft; ISA -1°C
Landing	750 kg; pressure altitude 2000 ft; 15°C; 5 kt headwind; 2000 ft field

Phase	Planning result
Takeoff	138 m ground roll and 298 m over 50 ft; after 10 kt headwind correction: 127 m and 274 m
Climb	At 6000 ft, +5°C and 840 kg: 1895 ft/min. From 2000 to 8000 ft: 2.6 min, 5.5 L, 4.7 NM
Cruise	At 8000 ft and 65% power: 166 KTAS, 3.3 h endurance and 544 NM range
Descent	8000 to 2000 ft: 6 min, 17.4 NM and 3 L
Landing	166 m ground roll and 511 m over 50 ft; after 5 kt headwind correction: 141 m and 434 m

Atmosphere and Airspeed

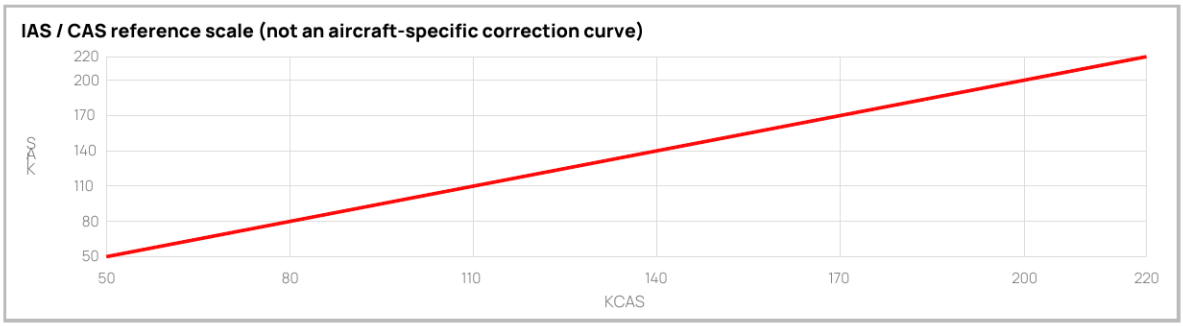
ISA conversion, calibration reference and stall data

5.2 ISA conversion

Pressure altitude	ISA temperature	Pressure altitude	ISA temperature
0 ft	15°C	2,000 ft	11°C
4,000 ft	7°C	6,000 ft	3°C
8,000 ft	-1°C	10,000 ft	-5°C
12,000 ft	-9°C		

5.3 Airspeed calibration

The calibration chart covers approximately 50-220 KIAS/KCAS (90-410 km/h) and assumes zero instrument error. The exact aircraft-specific correction must be taken from the approved calibration curve.



5.4 Stall speed - power idle, forward CG

Weight / category	0° bank 1.00 g	30° bank 1.15 g	45° bank 1.41 g	60° bank 2.00 g
870 kg / Normal	64 KIAS (119 km/h)	69 KIAS (128 km/h)	77 KIAS (143 km/h)	91 KIAS (169 km/h)
780 kg / Acrobatic	61 KIAS (113 km/h)	65 KIAS (120 km/h)	73 KIAS (135 km/h)	86 KIAS (159 km/h)

Maximum altitude loss during stall recovery is approximately 100 ft.

Takeoff Performance

Concrete runway - takeoff power

NOTE	For each 5 kt (9.3 km/h) of headwind, reduce takeoff distance by 4%. For each 3 kt (5.6 km/h) of tailwind, up to 10 kt, increase takeoff distance by 10%. Increase distances by 15% for a solid, dry and level grass runway.

Weight	Rotation	PA	0°C roll	0°C over 50 ft	15°C roll	15°C over 50 ft	30°C roll	30°C over 50 ft
870 kg (1918 lb)	70 KIAS	SL	96 m 315 ft	207 m 679 ft	115 m 377 ft	248 m 813 ft	133 m 436 ft	285 m 935 ft
870 kg	70 KIAS	2000 ft	115 m 377 ft	248 m 814 ft	138 m 453 ft	298 m 978 ft	160 m 525 ft	342 m 1122 ft
870 kg	70 KIAS	4000 ft	138 m 453 ft	298 m 978 ft	166 m 545 ft	357 m 1171 ft	192 m 630 ft	410 m 1345 ft
870 kg	70 KIAS	6000 ft	166 m 545 ft	358 m 1175 ft	199 m 653 ft	429 m 1407 ft	230 m 755 ft	492 m 1614 ft
800 kg (1764 lb)	68 KIAS	SL	78 m 256 ft	167 m 548 ft	93 m 305 ft	200 m 656 ft	107 m 351 ft	230 m 755 ft
800 kg	68 KIAS	2000 ft	94 m 308 ft	200 m 656 ft	112 m 367 ft	240 m 787 ft	128 m 420 ft	276 m 906 ft
800 kg	68 KIAS	4000 ft	112 m 367 ft	241 m 791 ft	134 m 440 ft	288 m 945 ft	154 m 505 ft	331 m 1086 ft
800 kg	68 KIAS	6000 ft	135 m 443 ft	289 m 948 ft	161 m 528 ft	346 m 1135 ft	185 m 607 ft	397 m 1302 ft
750 kg (1653 lb)	66 KIAS	SL	67 m 220 ft	114 m 374 ft	79 m 259 ft	170 m 558 ft	93 m 305 ft	200 m 656 ft
750 kg	66 KIAS	2000 ft	80 m 262 ft	173 m 568 ft	95 m 312 ft	204 m 669 ft	112 m 367 ft	240 m 787 ft
750 kg	66 KIAS	4000 ft	97 m 318 ft	207 m 679 ft	114 m 374 ft	248 m 814 ft	134 m 440 ft	288 m 945 ft
750 kg	66 KIAS	6000 ft	116 m 381 ft	249 m 817 ft	137 m 449 ft	294 m 965 ft	161 m 528 ft	347 m 1138 ft

Climb Performance

Rate of climb and cumulative climb planning

5.6 Rate of climb performance

The chart relates climb rate to pressure altitude, outside-air temperature and aircraft weight. Use conservative interpolation between chart values.

Example	Value
Weight	840 kg (1852 lb)
Pressure altitude	6000 ft
Outside-air temperature	+5°C
Rate of climb	1895 ft/min

5.7 Time, fuel and distance to climb

The chart is cumulative from sea level. For a climb between two altitudes, subtract the lower-altitude chart value from the upper-altitude chart value.

Cumulative value	At 2000 ft	At 8000 ft	Difference
Time	1.0 min	3.6 min	2.6 min
Fuel	2.0 L	7.5 L	5.5 L (1.45 US gal)
Distance	1.6 NM	6.3 NM	4.7 NM

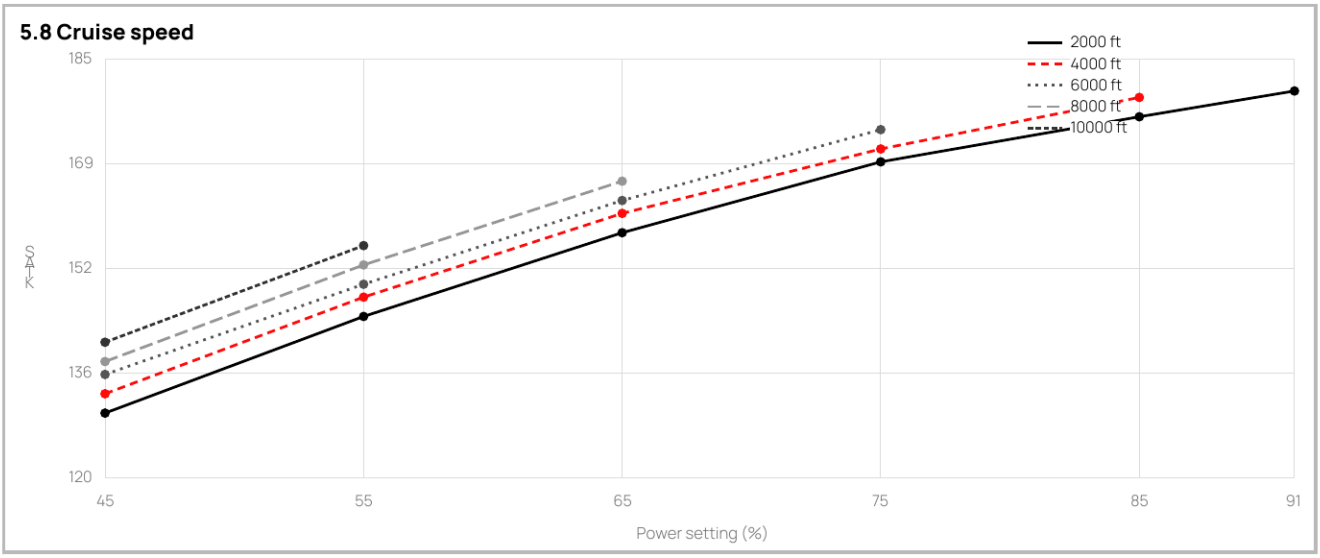
Climb planning sequence

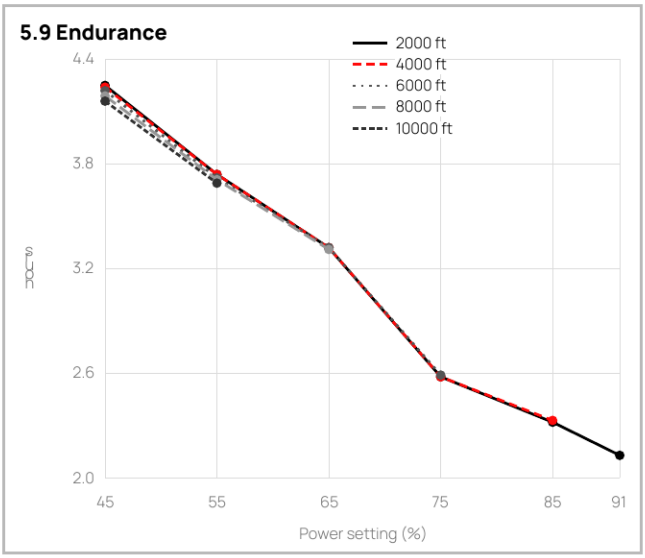
Step	Action
1	Determine departure and cruise pressure altitudes.
2	Use the applicable climb speed and power setting.
3	Read cumulative time, fuel and distance at each altitude.
4	Subtract the departure values from the cruise-altitude values.
5	Add allowances for routing, wind, temperature, technique and reserve policy.

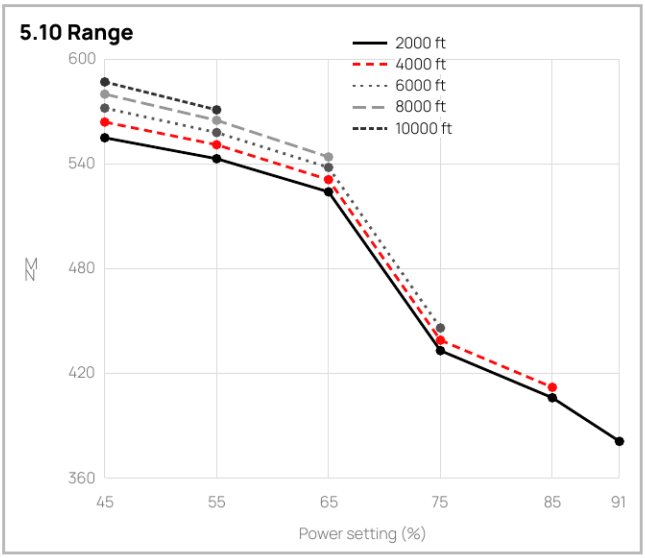
CAUTION	Climb performance is highly sensitive to density altitude, weight and engine condition. Do not extrapolate beyond the chart limits.

Cruise Speed, Endurance and Range

Reference values at 870 kg takeoff weight and ISA conditions







NOTE	Values include warm-up and takeoff from sea level, maximum-continuous-power climb, 33 L reserve for 45 minutes at 45% power and 3 L unusable fuel. See the detailed table on the following pages.

Cruise Performance

5.11 Detailed data - 2000 to 6000 ft

PA	RPM	MAP	Power	hp	Fuel	TAS	IAS	Endur.	Range	Mixture
2000 ft	2600	27.3	91%	288	86.7 L/h 22.9 gal/h	180	176	2.13 h	381 NM	Best power
	2500	26.5	85%	268	79.7 L/h 21.1 gal/h	176	172	2.32 h	406 NM	Best power
	2400	24.9	75%	236	71.5 L/h 18.9 gal/h	169	165	2.58 h	433 NM	Best power
	2200	23.9	65%	205	55.2 L/h 14.6 gal/h	158	154	3.32 h	524 NM	Economy
	2000	23.4	55%	173	48.9 L/h 12.9 gal/h	145	141	3.74 h	543 NM	Economy
	2000	20.1	45%	142	43.0 L/h 11.4 gal/h	130	126	4.25 h	555 NM	Economy
4000 ft	2600	25.3	85%	268	79.7 L/h 21.1 gal/h	179	169	2.33 h	412 NM	Best power
	2400	24.9	75%	236	71.5 L/h 18.9 gal/h	171	161	2.58 h	439 NM	Best power
	2200	23.9	65%	205	55.2 L/h 14.6 gal/h	161	151	3.32 h	531 NM	Economy
	2000	23.4	55%	173	48.9 L/h 12.9 gal/h	148	138	3.74 h	551 NM	Economy
	2000	20.1	45%	142	43.0 L/h 11.4 gal/h	133	123	4.24 h	564 NM	Economy
6000 ft	2600	22.6	75%	236	71.5 L/h 18.9 gal/h	174	161	2.59 h	446 NM	Best power
	2200	23.9	65%	205	55.2 L/h 14.6 gal/h	163	150	3.32 h	538 NM	Economy
	2000	23.4	55%	173	48.9 L/h 12.9 gal/h	150	137	3.72 h	558 NM	Economy
	2000	20.1	45%	142	43.0 L/h 11.4 gal/h	136	123	4.22 h	572 NM	Economy

Cruise and Descent

5.11 high-altitude cruise and 5.12 descent planning

PA	RPM	MAP	Power	hp	Fuel	TAS	IAS	Endur.	Range	Mixture
8000 ft	2600	20.1	65%	205	55.2 L/h 14.6 gal/h	166	151	3.31 h	544 NM	Economy
	2000	23.4	55%	173	48.9 L/h 12.9 gal/h	153	138	3.71 h	565 NM	Economy
	2000	20.1	45%	142	43.0 L/h 11.4 gal/h	138	123	4.19 h	580 NM	Economy
10000 ft	2600	17.3	55%	173	48.9 L/h 12.9 gal/h	156	135	3.69 h	571 NM	Economy
	2000	20.1	45%	142	43.0 L/h 11.4 gal/h	141	120	4.16 h	587 NM	Economy

NOTE	For each 10 C above or below ISA, change range by approximately 1.7% and endurance by approximately 1.1% in the same direction. Mixture selection must follow the applicable engine operating guidance.

5.12 Time, fuel and distance to descend

The descent chart provides cumulative values. Subtract the destination-altitude value from the cruise-altitude value.

Cumulative value	At 2000 ft	At 8000 ft	Descent difference
Time	2 min	8 min	6 min
Fuel	1 L	4 L	3 L (0.79 US gal)
Distance	5.0 NM	22.4 NM	17.4 NM

NOTE	Plan descent early enough to maintain engine temperatures within the normal operating range and to achieve the required approach configuration without excessive speed.

Landing Performance

5.13 Concrete runway - idle power - maximum braking

NOTE	For each knot of headwind, reduce landing distance by 3%. Increase distances by 15% for a solid, dry and level grass runway.

Weight	Approach	PA	0°C roll	0°C over 50 ft	15°C roll	15°C over 50 ft	30°C roll	30°C over 50 ft
870 kg (1918 lb)	85 KIAS	SL	171 m 561 ft	527 m 1729 ft	177 m 581 ft	548 m 1798 ft	185 m 607 ft	586 m 1923 ft
870 kg	85 KIAS	2000 ft	181 m 594 ft	558 m 1831 ft	188 m 617 ft	580 m 1903 ft	197 m 646 ft	602 m 1975 ft
870 kg	85 KIAS	4000 ft	192 m 630 ft	592 m 1942 ft	199 m 653 ft	615 m 2018 ft	208 m 682 ft	639 m 2096 ft
870 kg	85 KIAS	6000 ft	203 m 666 ft	627 m 2057 ft	211 m 692 ft	652 m 2139 ft	220 m 722 ft	678 m 2224 ft
800 kg (1764 lb)	83 KIAS	SL	158 m 518 ft	488 m 1601 ft	164 m 538 ft	507 m 1663 ft	171 m 561 ft	527 m 1729 ft
800 kg	83 KIAS	2000 ft	165 m 541 ft	518 m 1699 ft	175 m 574 ft	537 m 1762 ft	181 m 594 ft	558 m 1831 ft
800 kg	83 KIAS	4000 ft	177 m 581 ft	548 m 1798 ft	185 m 607 ft	570 m 1870 ft	192 m 630 ft	592 m 1942 ft
800 kg	83 KIAS	6000 ft	188 m 617 ft	582 m 1909 ft	195 m 640 ft	605 m 1985 ft	203 m 666 ft	627 m 2057 ft
750 kg (1653 lb)	81 KIAS	SL	150 m 492 ft	465 m 1526 ft	156 m 512 ft	483 m 1585 ft	163 m 535 ft	502 m 1647 ft
750 kg	81 KIAS	2000 ft	159 m 522 ft	492 m 1614 ft	166 m 545 ft	511 m 1677 ft	173 m 568 ft	532 m 1745 ft
750 kg	81 KIAS	4000 ft	168 m 551 ft	522 m 1713 ft	176 m 577 ft	543 m 1781 ft	184 m 604 ft	565 m 1854 ft
750 kg	81 KIAS	6000 ft	179 m 587 ft	553 m 1814 ft	186 m 610 ft	575 m 1886 ft	194 m 636 ft	598 m 1962 ft

SECTION 6

Weight and balance

Calculation method and loading references

6.1 Responsibility

The pilot is responsible for ensuring that the airplane is loaded within approved weight and centre-of-gravity limits. Use the current aircraft weight-and-balance record and equipment list; generic examples in this section are not aircraft-specific.

6.2 Weighing method

Weigh all three wheels simultaneously with the upper fuselage reference line horizontal. The reference datum is the firewall.

Symbol	Definition
X1	Firewall to main-wheel axle distance
X2	Firewall to tailwheel axle distance
W1	Combined main-wheel load
W2	Tailwheel load
W	Total weight = W1 + W2
XG	CG arm aft of firewall

Centre of gravity: $XG = [(W1 \times X1) + (W2 \times X2)] \div W$.

6.3 Adding or removing an item

New weight: $W = W0 + Wn$. New CG: $XG = [(W0 \times X0) + (Wn \times Xn)] \div W$. Use negative weight for removed equipment and maintain consistent units.

6.4 Loading arms

Item	Arm aft of firewall
Pilot and Parachute	190 cm / 75 in
Acro tank (combined in sim)	25.8 cm / 10.2 in
Rear centre tank (combined in sim)	68.5 cm / 27.0 in
Front centre tank (combined in sim)	23.7 cm / 9.3 in

6.5 Fuel Loading references

Tank	Capacity (total / unusable)
Left wing	15.85 / 0 US gal
Right wing	15.85 / 0 US gal
Centre	27.5 / 0.8 US gal

6.6 Pilot loading examples

Pilot + parachute	Moment at 190 cm	Moment at 170 cm
70 kg / 154 lb	13,300 kg·cm	11,900 kg·cm
80 kg / 176 lb	15,200 kg·cm	13,600 kg·cm
90 kg / 198 lb	17,100 kg·cm	15,300 kg·cm
100 kg / 220 lb	19,000 kg·cm	17,000 kg·cm

6.7 Loading calculation worksheet

Item	Weight	Arm	Moment
Basic empty aircraft			
Pilot and parachute			
Acro fuel (combined in sim)			
Rear centre fuel (combined in sim)			
Front centre fuel (combined in sim)			
Wing fuel			
Smoke oil / optional equipment			
TOTAL			

Calculated CG arm = total moment ÷ total weight. Plot the result on the approved aircraft-specific envelope.

WARNING	Do not infer a valid CG envelope from the example values in this edition. The current approved weight-and-balance record and POH loading envelope are controlling.

SECTION 7

Aircraft and systems

Description and operating logic

7.1 Structure

The fuselage is a welded steel-tube structure with composite fairings. The wing and empennage are composite. The fixed conventional landing gear uses a composite main spring and a free-swivelling tailwheel unless an optional steerable system is installed.

7.2 Flight controls

Axis / control	Description
Elevator	Push-pull control system; trim tab driven by electric servo and dual Bowden cables.
Ailerons	Aluminium and carbon push-pull rods; statically and dynamically balanced with spades; sealed bearings.
Rudder	Cable-operated from adjustable rudder/brake pedals; springs maintain cable tension.
Canopy	Internal and external locking handles provide normal and emergency operation.

7.3 Instrument panel - core items

Item	Function / note
Airspeed indicator	Primary indicated airspeed; observe markings in Section 2.
Manifold pressure / fuel flow	Power and fuel-flow indication.
Magnetic direction indicator	Heading reference.
Digital RPM indicator	Engine RPM and magneto status indications.
Accelerometer	Optional or installed according to equipment list.
Trim position indicator and switch	Electric elevator-trim control.
Altimeter	Pressure altitude indication.
Transponder and COM	Installed equipment varies.
Ammeter and alternator warning	Electrical-system monitoring.
Oil pressure / oil temperature	Engine lubrication monitoring.
Fuel quantity	Separate indications for rear centre, front centre and wing tanks.
EGT / CHT	Optional engine-temperature indication.
Ignition / starter switch	Magneto selection and starter operation.

7.4 Landing gear and restraint system

The main wheels are 5.00-5 and use hydraulic disc brakes. The standard tailwheel has a solid rubber tyre and full-swivel capability. The carbon-composite seat back is ground-adjustable. The restraint system includes shoulder straps, lap belts and a negative-g strap, with redundant lap-belt releases for aerobatic security.

7.5 Engine installation and controls

Control / component	Description
Engine mount	Four shock mounts connect the AEIO-580-B1A to a welded steel-tube support.
Cowling	Two-piece carbon-fibre reinforced epoxy cowling with oil-dipstick access hatch.
Oil cooler	Single cooler mounted aft on the right side of the engine.
Throttle	Left cockpit side, Cub-type lever.
Mixture	Right cockpit side, red vernier control.
Propeller RPM	Left cockpit side, blue vernier control operating the constant-speed governor.
Fuel selector	Right side behind firewall; cockpit handle operates through a torque tube.

7.6 Fuel system

The fuel system consists of two independent supply systems: the acro/centre-tank system and the wing-tank system. The 9 L acro tank is located behind the firewall and is gravity-fed from the 54 L front centre tank and 41 L rear centre tank. Check valves limit crossflow between centre tanks. The wing tank is a separate 120 L system.

NOTE	When ACRO & CENTRE TANKS are selected, the centre tank with the higher level may empty slightly faster. When both centre indications read zero, less than 9 L remains in the acro tank; 2.5 L is unusable. Centre tanks may be filled separately but are selected together. Unequal centre-tank loading changes CG.

Centre tanks may be filled separately but are selected together. Unequal centre-tank loading changes CG. Fuel supply remains available with one centre tank empty, subject to the aircraft-specific system condition and approved manual.

7.7 Electrical system

The electrical panel includes a master switch, boost-pump switch/circuit breaker, optional strobe and smoke switches, overvoltage protection, alternator-output circuit breaker, starter, instruments, COM, transponder, trim and optional 12 V circuits. Installed equipment and circuit protection vary by aircraft serial number and equipment list.

7.8 Cabin ventilation

Fresh-air ventilation is provided through canopy and side adjustable vents. An optional cabin-heating system uses outside air heated through an exhaust muffler and is covered by its Section 9 supplement.

SECTION 8

Handling, servicing and maintenance

Owner and operator responsibilities

8.1 Inspections

The maintenance schedule calls for an annual inspection every 12 calendar months, a complete inspection every 100 flight hours, and
intermediate checks at 50 and 25 hours. National rules, maintenance programme requirements, airworthiness directives and service information may impose additional or different requirements.

8.2 Preventive maintenance

Pilot-permitted preventive maintenance depends on the aircraft's state of registry. All other maintenance must be performed by appropriately licensed personnel using current approved data.

8.3 Alterations and repairs

WARNING	Alterations and repairs must be completed and released by appropriately authorised personnel using approved data.

8.4 Servicing

Fuel and oil specifications are summarized in Sections 1 and 2. Refer to current engine, propeller, component and aircraft maintenance documentation for servicing methods, quantities, torques, lubrication and inspection limits.

8.5 Ground handling and parking

- Two people can normally move the airplane by hand because of its low weight and swivelling tailwheel.
- Park into wind and chock the main wheels for short periods in favourable weather.
- Use control locks, covers, tie-downs and weather protection appropriate to the conditions and duration.
- Protect the pitot system, canopy and composite structure from contamination, moisture, UV and excessive heat.
- Include the aircraft serial number in all service correspondence.

SECTION 9

Supplements

Optional equipment and special approvals

9.1 Applicability

A supplement is part of the approved operating information whenever the associated equipment is installed or the special operation applies. Each supplement is self-contained and may modify limitations, procedures, weight and balance, systems or maintenance information.

WARNING	Do not operate installed optional equipment using this summary. The current approved supplement assigned to the aircraft must be carried and followed.

9.2 Represented supplements

Supplement	Subject	Typical effect
901	Steerable tailwheel	Taxi handling; inspection and lubrication
902	Smoke system	Smoke-oil limits, emergency actions, operation and servicing
903	Becker ATC 4401 transponder	Equipment operation and limitations
905	P-1000 digital RPM indicator	Display, magneto monitoring and controls
906	TL-3424_EXT accelerometer	Instrument operation and limitations
907	External power	Ground power connection and procedures
909	Electric pedal adjustment	Pedal-position system
910	Aircraft registered in Brazil	National placards and approval differences
912	Cabin heating system	Heater operation and engine-fire action
913	KANNAD 406 AF Compact / Integra ELT	Emergency-locator transmitter operation and maintenance

9.3 Smoke system - key operating limits

- Use straight paraffin smoke oil with viscosity 30-50 cSt at 20°C and initial boiling point above 330°C.
- Coordinate smoke use with local airfield and air-traffic requirements.
- If the smoke system fails or is suspected of contributing to fire, switch the system off and pull its circuit breaker.
- After smoke use, clean belly areas and rudder-control cables to prevent residue-related wear.

SECTION A

Quick reference

Selected reference values - not a substitute for checklists

Item	Value
VNE	219 KIAS
VNO / VA Acrobatic	154 KIAS
VA Normal	138 KIAS
Stall, 870 kg, wings level	64 KIAS
Stall, 780 kg, wings level	61 KIAS
Engine-out / glide / forced landing	90 KIAS
Approach at 870 kg	85 KIAS
Rotation at 870 kg	70 KIAS
Maximum demonstrated crosswind	15 kt
Maximum normal weight	870 kg / 1918 lb
Maximum aerobatic weight	780 kg / 1720 lb
Load factors Normal	+6 / -3 g
Load factors Aerobatic	+10 / -10 g
Maximum altitude	10,000 ft MSL
Approved OAT range	-20°C to +38°C
Fuel total / usable	224 / 221 L
Aerobatic fuel total / usable	104 / 101 L
Oil quantity	9-16 US qt
Maximum oil temperature	245°F / 118°C
Maximum CHT	465°F / 241°C

WARNING	This page is intentionally incomplete. Memory items, aircraft-specific placards, installed supplements and current revisions remain controlling.