FLIGHT MANUAL

P2008 US-LSA

912 iS

Manufacturer
COSTRUZIONI AERONAUTICHE TECNAM S.p.A.

Serial number: 070

Build year: 2012

Registration: N363X

Introduction

This manual contains information to be furnished to the pilot as required by the FAA in addition to further information supplied by the manufacturer.
This manual must always be present on board the aircraft.
The aircraft is to be operated in compliance with information and limitations contained herein. All sections follow the ASTM guidelines as finalized 14 December 2007 and those related with applicable consensus standards in the latest revision.

Ed. 2 Rev. 6 – November 27, 2023

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RECORD OF REVISIONS

Any revisions to the present Manual, except actual weighing data, must be recorded in the following table.
New or amended text in the revised pages will be indicated by a black vertical line in the left-hand margin.

Previous Editions

1st Edition, Rev 00 January 1, 2013
2st Edition, Rev 00 April 19, 2017

Current Edition

Revision No.	Date released	Chapters	Approved By
00	April 19, 2017	all	TECNAM
01	April 19, 2018	9	TECNAM
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03	February 23, 2021	1,2,8,9	TECNAM
04	February 26, 2021	9	TECNAM
05	July 31, 2023	1, 2, 3, 4, 5, 6, 8	TECNAM
06	November 27, 2023	3	TECNAM

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ABBREVIATIONS AND TERMINOLOGY

The following definitions apply.

WARNING
Means that the non-observation of the corresponding procedure leads to an immediate or important degradation of the flight safety

CAUTION
Means that the non-observation of the corresponding procedure leads to a minor or to a more or less long-term degradation of the flight safety

NOTE
Draws the attention to any special item not directly related to safety but which is important or unusual.

Airspeed Terminology

KCAS	Calibrated Airspeed is the indicated airspeed corrected for position and instrument error and expressed in knots.
KIAS	Indicated Airspeed is the speed shown on the airspeed indicator and expressed in knots.
KTAS	True Airspeed is the airspeed expressed in knots relative to undisturbed air, which is KCAS, corrected for altitude and temperature.
V_A	Design maneuvering speed
V_C	Design cruising speed
V_{FE}	Maximum Flap Extended Speed is the highest speed permissible with wing flaps in a prescribed extended position.
V_H	Max Speed in level flight with Max continuous power
V_{LO}	Lift off speed: is the speed at which the aircraft generally lifts off from the ground.
V_{NE}	Never Exceed Speed is the speed limit that may not be exceeded at any time.
V_{NO}	Maximum Structural Cruising Speed is the speed that should not be exceeded except in smooth air, then only with caution.
V_S	Stalling Speed or minimum steady flight speed flaps retracted
V_{S0}	Stalling speed or minimum steady flight speed in landing configuration
V_{S1}	Stalling speed in clean configuration (flap 0°)
V_X	Best Angle-of-Climb Speed is the speed, which results in the greatest gain of altitude in a given horizontal distance.
V_Y	Best Rate-of-Climb Speed is the speed, which results in the greatest gain in altitude in a given time.
V_R	Rotation speed: is the speed at which the aircraft rotates about the pitch axis during takeoff.

Meteorology Terminology

OAT	Outside Air Temperature is the free air static temperature expressed in degrees Celsius (°C).
T_S	Standard Temperature is 15°C (59°F) at sea level pressure altitude and decreased by 2°C for each 1000 ft of altitude.
H_P	Pressure Altitude is the altitude read from an altimeter when the barometric subscale has been set to 29.92”

Engine Power Terminology

RPM	Revolutions Per Minute: is the number of revolutions per minute of the propeller, multiplied by 2.4286 yields engine RPM.

Airplane Performance and Flight Planning Terminology

Crosswind Velocity	is the velocity of the crosswind component for which adequate control of the airplane during takeoff and landing is guaranteed
Usable fuel	is the fuel available for flight planning
Unusable fuel	is the quantity of fuel that cannot be safely used in flight
g	is the acceleration of gravity
TOR	is the takeoff distance measured from actual start to wheel lift off point
TOD	is total takeoff distance measured from start to clearing a 50' obstacle
GR	is the distance measured during landing from actual touchdown to stop point
LD	is the distance measured during landing, from clearing a 50' obstacle to actual stop
S/R	is specific range, that is, the distance (in nautical miles) which can be expected at a specific power setting and/or flight configuration per gallon of fuel used

Weight and Balance Terminology

Datum	"Reference datum" is an imaginary vertical plane from which all horizontal distances are measured for balance purposes
Arm	is the horizontal distance from the reference datum to the center of gravity (C.G.) of an item
Moment	is the product of the weight of an item multiplied by its arm
C.G.	Center of Gravity is the point at which the airplane, or equipment, would balance if suspended. Its distance from the reference datum is found by dividing the total moment by the total weight of the airplane
Empty Weight	Empty Weight is the weight of the airplane with engine fluids and oil at operating levels
Useful Load	is the difference between takeoff weight and the empty weight
Maximum Takeoff Weight	is the maximum weight approved for the start of the takeoff run
Maximum Landing Weight	is the maximum weight approved for the landing touch down
MAC	Mean Aerodynamic Chord
Tare	is the weight of chocks, blocks, stands, etc. used when weighing an airplane, and is included in the scale readings; tare is then deducted from the scale reading to obtain the actual (net) airplane weight

UNIT CONVERSION CHART

Multiplying		by ➔	Yields	
Temperature				
Fahrenheit	[°F]	$\frac{5}{9}\cdot(F-32)$	Celsius	[°C]
Celsius	[°C]	$\left(\frac{9}{5}\cdot C\right)+32$	Fahrenheit	[°F]
Forces				
Kilograms	[kg]	2.205	Pounds	[lbs]
Pounds	[lbs]	0.4536	Kilograms	[kg]
Speed				
Meters per second	[m/s]	196.86	Feet per minute	[ft/min]
Feet per minute	[ft/min]	0.00508	Meters per second.	[m/s]
Knots	[kts]	1.853	Kilometers / hour	[km/h]
Kilometers / hour	[km/h]	0.5396	Knots	[kts]
Pressure				
Atmosphere	[atm]	14.7	Pounds / sq. in	[psi]
Pounds / sq. in	[psi]	0.068	Atmosphere	[atm]
Length				
Kilometers	[km]	0.5396	Nautical miles	[nm]
Nautical miles	[nm]	1.853	Kilometers	[km]
Meters	[m]	3.281	Feet	[ft]
Feet	[ft]	0.3048	Meters	[m]
Centimeters	[cm]	0.3937	Inches	[in]
Inches	[in]	2.540	Centimeters	[cm]
Volume				
Liters	[l]	0.2642	U.S. Gallons	[US Gal]
U.S. Gallons	[US Gal]	3.785	Liters	[l]
Area				
Square meters	[m^2]	10.76	Square feet	[sq ft]
Square feet	[sq ft]	0.0929	Square meters	[m^2]
Torque				
foot-pounds		1.3558	Newton-meters	
foot-pounds		0.1383	kilogram-meters	
foot-pounds		12.0	inch-pounds	
inch-pounds		0.0115	kilogram-meters	
inch-pounds		0.1130	Newton-meters	
inch-pounds		0.0833	foot-pounds	
kilogram-meters		7.233	foot-pounds	
kilogram-meters		86.7964	inch-pounds	
kilogram-meters		9.8067	Newton-meters	
Newton-meters		0.7376	foot-pounds	
Newton-meters		8.8508	inch-pounds	
Newton-meters		0.1020	kilogram-meter	

SECTION 1
GENERAL

1.1 Introduction

The P2008 is a high wing, two-place, single-engine airplane equipped with tricycle landing gear. It has metal wings and stabilator/rudder and composite fuselage and vertical stabilizer. It is an ASTM compliant airplane designed to be flown by sport pilot rated pilots as well as higher rated pilots.
This aircraft is designed and built in Italy and as such, was built using the metric system. Therefore, the primary numbers are in metric and the US conversion is in parenthesis for your information.
This Flight Manual has been prepared to ASTM standards to provide pilots and instructors with information for the safe and efficient operation of this aircraft.

This Flight Manual contains the following sections:

1. General Information
2. Operating Limitations
3. Weight & Balance
4. Performance
5. Emergency Procedures
6. Normal Procedures
7. Aircraft Ground Handling and Servicing
8. Required Placards and Markings

1.2 Certification Basis

This aircraft is certificated as a Special Light Sport Aircraft under FAR part 21.190 and complies with all applicable ASTM consensus standards.

THREE VIEW DRAWING

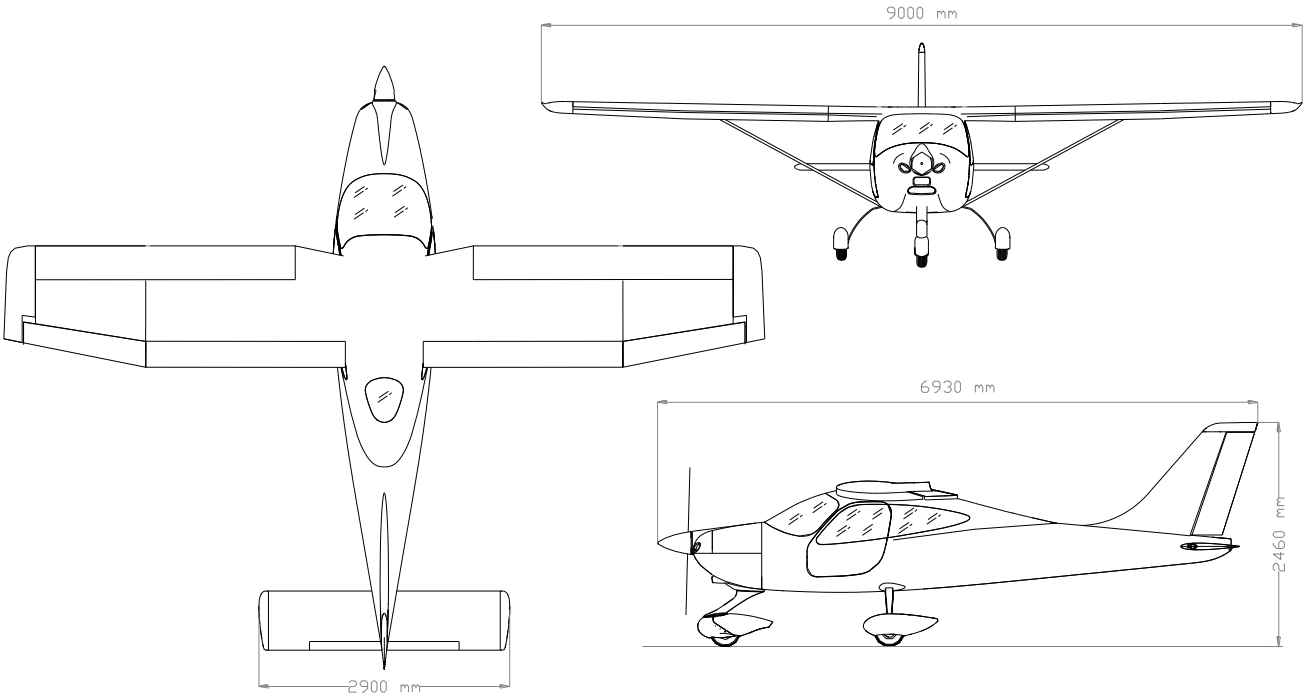


Figure 1-1 General Views

Wing Span	**9.00 m**	**(29.5 ft)**
Length	**6.93 m**	**(22.7 ft)**
Tail height	**2.46 m**	**(8.1 ft)**
Propeller ground clearance	**310 ± 40 mm**	**(12.2 ±1.6 in)**
Minimum ground steering radius	**5.50 m**	**(18.0 ft)**

NOTE

- Dimensions shown refer to aircraft weight of 600 kg (1320 lbs) and normal operating tire pressure

1.3 Descriptive Data

1.3.1 Airframe

1.3.1.1 Wing

Wing Span	9.00 m (29.5 ft)
Wing Area	12.16 m^2 (130.9 ft^2)
Aspect Ratio	6.7
Taper Ratio	0.8
Wing chord (MAC)	1.373 m (4.5 ft)

1.3.1.2 Fuselage

Overall length	6.93 m (22.7 ft)
Overall width	1.20 m (3.9 ft)
Overall height	2.46 m (8.07 ft)

1.3.1.3 Empennage

Stabilator span	2.90 m (9.51 ft)
Stabilator area	2.03 m^2 (21.8 ft^2)
Vertical tail area	1.06 m^2 (11.4 ft^2)

1.3.1.4 Landing Gear

Wheel track	1.8 m (5.9 ft)
Wheel base	1.94 m (6.4 ft) - 1.74 m (5.7 ft steerable nose landing gear)
Main gear tire	Air Trac 5.00-5 (alternative Goodyear flight special II tire - 5.00-5 6 ply can be fitted)
Nose Gear tire	Air Trac 5.00-5 (alternative Goodyear flight special II tire - 5.00-5 6 ply can be fitted)
Wheel brakes	Marc Ingegno 199-102

1.4 Powerplant

1.4.1 Engine

Manufacturer	Bombardier-Rotax GmbH
Model	912is
Certification basis	ASTM F2339-19a
Type	4 cyl. - Horizontally opposed, normal aspirated engine
Maximum power	73.5 kW (98.5 hp) @ 5800 rpm (max. 5 minut 69.0 kW (92.5 hp) @ 5500 rpm (cont.)

1.4.2 Allowed Propellers

Manufacturer	GT Tonini
Model	GT-2/173/VRR- FW101
Number of blades	2
Diameter	1730 mm (68") (no reduction permitted)
Type	Fixed pitch – wood / composite

Manufacturer	Sensenich
Model	2A0R5R70EN (or 2A0R5R70E-0)
Number of blades	2
Diameter	1778 mm (70") (no reduction permitted)
Type	Fixed - ground adjustable pitch
Spacer	B-1805-81 TECNAM Spacer

Manufacturer	Sensenich
Model	3B0R5R68C
Number of blades	3
Diameter	1730 (68") (no reduction permitted)
Type	Fixed - ground adjustable pitch
Spacer	B-1805-81 TECNAM Spacer

Manufacturer	Sensenich
Model	W68T2ET-70J
Number of blades	2
Diameter	1730 (68") (no reduction permitted)
Type	Fixed - ground adjustable pitch
Spacer	B-1805-81 TECNAM Spacer

1.4.3 Oil System

Oil system	Forced, with external oil reservoir
Oil	See Rotax operator's manual
Oil capacity	Max. 3.0 liters (3.2qt) – min. 2.5 liters (2.6qt)

1.4.4 Cooling

Cooling system:	Combination air and liquid cooled system
Coolant:	See Rotax operator's manual
Capacity	3.0 liters (3.17 quarts)

1.4.5 Fuel

Fuel grade: Auto fuel Avgas	 Min. RON 95 (AKI 91 Premium USA) 100LL
Fuel tanks	2 integral wing tanks
Capacity of each	60 liters (15.8gal)
Total capacity	120 liters (31.7gal)

1.5 Weights

1.5.1 Maximum Weights

Maximum take-off	600 kg	(1320 lb)
Maximum landing	600 kg	(1320 lb)
Maximum baggage	20 kg	(44 lb)

1.5.2 Standard Weights

Empty weight	375 kg	(827 lb)
Maximum payload	225 kg	(496 lb)

1.5.3 Specific Loadings

Wing loading 49 kg/m^2 (10 lb/ft^2)
Power loading 6.1 kg/hp (13.5 lb/hp)

NOTE
Standard weights are estimates based on standard equipment.

1.6 Standard Equipment

1.6.1 Flight Instruments
Airspeed Indicator, Altimeter, Vertical Speed Indicator, Compass
1.6.2 Engine instruments
TL-6724 as standard EMS which includes the following informations: Tachometer, MAP indicator, Oil Pressure, Oil Temperature, Cylinder Head Temperature, EGT, Hour Meter, Left and Right Fuel Quantity indicator, Volt Meter (battery, lane A, lane B), ammeter, Fuel flow, Inlet air temperature and pressure. **DYNON SKYVIEW 7" AND 10"** available as optional
1.6.3 Warning Lights and Indicators
Trim Indicator, Flap Indicator, Annunciator panel with FUEL PUMP 1, FUEL PUMP 2, LANE A, LANE B, EMERGENCY BATTERY ON
1.6.4 Controls
Dual Stick Flight Controls and Rudder Pedals, Single Throttle, Throttle Friction Control, Electric Flaps, Hydraulic Disc Brakes with Parking Brake and toe brakes on both seats, Left and Right Andair duplex Fuel Selector Valve, Direct Nose Wheel Steering (or pivoting NLG with differential breaking system)
1.6.5 Interior
Adjustable Pilot and Copilot Seats, reclining for baggage compartment access, Acoustic Cabin Soundproofing, Adjustable Cabin Air Intakes, Cabin Heat and Windshield Defrost, 12V Power Outlet, Composite Instrument Panel
1.6.6 Exterior
Composite structure, Landing Light, Strobe Light, Fixed Landing Gear, Nose and Main Wheel Fairings
1.6.7 Powerplant and Accessories
Rotax 912is Engine (100 hp), Composite Covered Wood Propeller with Spinner, 12Volt 13 or 18 Ah Battery, Electric Starter, Engine Exhaust Muffler, Gascolator with Quick Drain, Integral Wing Fuel Tanks with sump and quick drain, Integral INOX hoses and AN Fittings for fuel line, All Electric Circuits Protected by breakers

1.7 Airframe

1.7.1 Wing

The wing is constructed of a central light alloy torque box; an aluminum leading edge is attached to the front spar while flap and aileron are hinged to rear spar. Flaps are constructed of a center spar to which front and rear ribs are joined; wrap-around aluminum skin panels cover the flap structure. The aileron is constructed of an aluminum spar to which a formed sheet metal leading edge and metal ribs are attached; a wrap-around. Aluminum material covers aileron structure too.
The wing box incorporates the integral fuel tanks of 60 liters each.

1.7.2 Fuselage

The fuselage and the vertical stabilizer are made up of a composite fiber structure. The engine housing is isolated from the cabin by a stainless steel firewall (0.5mm thick); the steel engine mount is fitted to the cabin's composite structure.

1.7.3 Empennage

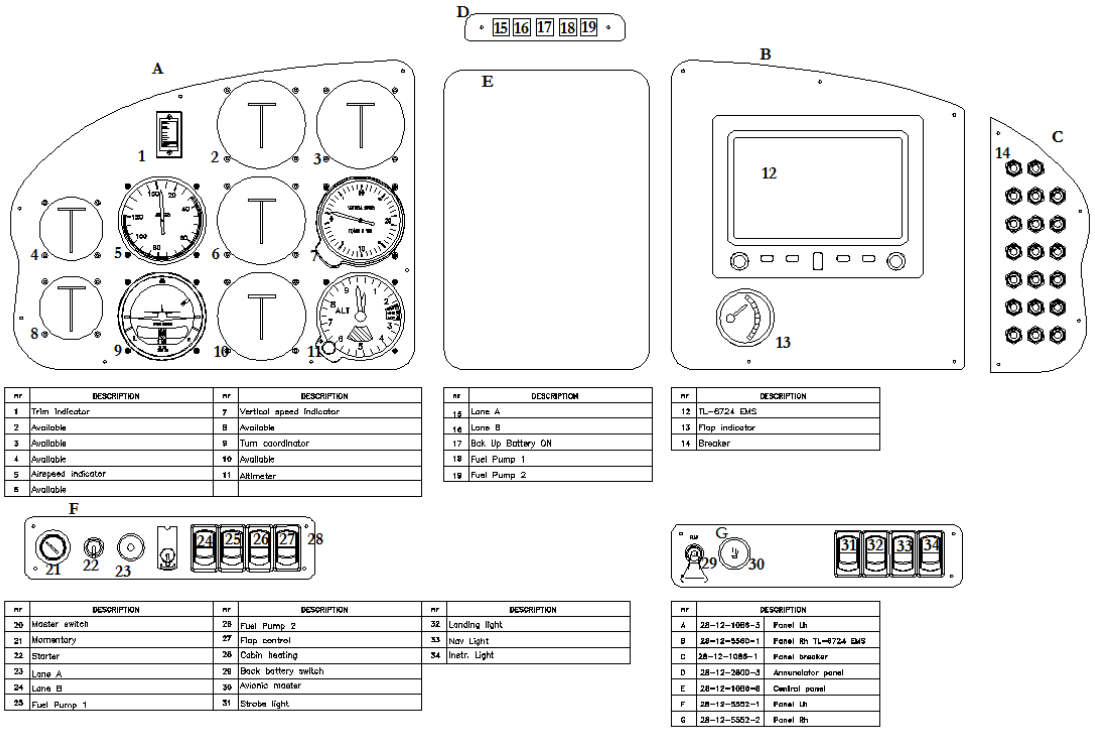
The vertical tail is made up of a mixed structure: the vertical stabilizer is made up of composite fiber while the rudder consists of an aluminum torque stringer connected to light alloy ribs and skin. The horizontal tail is an all-moving type (stabilator); its structure consists of an aluminum spar connected to ribs and leading edge; the entire structure is covered with aluminum alloy skin.

1.7.4 Flight controls

The control surfaces are manually operated using a control stick for ailerons and stabilator and rudder pedals for the rudder; longitudinal control acts through a system of push-rods and is equipped with a trim tab. Aileron control is of mixed type with push-rods and cables; the cable control circuit is confined within the cabin and is connected to a pair of push-rods positioned in the wings that control ailerons differentially. Aileron trimming is carried out on ground through a small tab positioned on left aileron.
Flaps are extended via an electric servo actuator controlled by a switch on the panel. A panel mounted indicator shows surface position. A breaker positioned on the right side of the panel protects the electric circuit.
Longitudinal trim is performed by a small tab positioned on the stabilator and controlled via an electric servo actuator by pushing an Up/Down push-button located on the control stick.

1.7.5 Instrument Panel - 912is

The instrument panel is of conventional type, allowing space for a broad range of equipment



nr	DESCRIPTION	nr	DESCRIPTION
1	Trim Indicator	7	Vertical speed indicator
2	Available	8	Available
3	Available	9	Turn coordinator
4	Available	10	Available
5	Airspeed indicator	11	Altimeter
6	Available		

nr	DESCRIPTION
15	Lane A
16	Lane B
17	Bck Up Battery ON
18	Fuel Pump 1
19	Fuel Pump 2

nr	DESCRIPTION
12	TL-6724 EMS
13	Flap indicator
14	Breaker

nr	DESCRIPTION	nr	DESCRIPTION	nr	DESCRIPTION
20	Master switch	26	Fuel Pump 2	32	Landing light
21	Momentary	27	Flap control	33	Nav Light
22	Starter	28	Cabin heating	34	Instr. Light
23	Lane A	29	Back battery switch		
24	Lane B	30	Avionic master		
25	Fuel Pump 1	31	Strobe light		

nr	DESCRIPTION	
A	28-12-1086-3	Panel Lh
B	28-12-5560-1	Panel Rh TL-6724 EMS
C	28-12-1085-1	Panel breaker
D	28-12-2800-3	Annunciator panel
E	28-12-1060-6	Central panel
F	28-12-5552-1	Panel Lh
G	28-12-5552-2	Panel Rh

Fig. 1-2 Instrument Panel - standard 912is version

1.7.6 Cabin Heat / Defrost

The cabin heat control knob (if available) is positioned on the lower of the instrument panel; when knob is pulled fully outward, cabin receives maximum hot air. Vents are located by the rudder pedals and above instrument panel. If necessary, outside fresh air can be circulated inside cabin by opening the vents on the panel.

1.7.7 Throttle Friction Lock

Adjust the engine's throttle friction by tightening or loosening the friction lock located on the console side near center throttle control.

1.7.8 Seats, Seatbelts, and Shoulder harnesses

The P2008usually comes with three point safety belts with waist and diagonal straps adjustable via a sliding metal buckle.
Standard seats are aluminum with cushions. Seats are adjustable fore and aft by using the handle located under the seat on the outboard sides. Pushing the lever towards the center of the aircraft will release the locking pin allowing you to move the seat fore and aft. Release the lever when the desired position is found making sure that the locking pin reengages in the seat track.
P2008 is equipped with standard bucket seat for the access to the baggage compartment. The same lever allows the pilot to regulate the seat in two position: 20° and 25° to increase the flight comfort.

WARNING

Make sure that the locking pin is securely installed or the seat will not lock in position.

1.7.9 Doors

Standard doors are made by a composite frame supporting a clear or tinted window. An internal safety latch mechanism is positioned in proximity of door's upper edge and must be used before flight to secure door. Mechanism rotates, before flight, to engage doorframe to cabin composite frame.

1.7.10 Baggage compartment

The baggage compartment is located behind the seats. Baggage shall be uniformly distributed and its weight shall not exceed 20 kg (44 lbs) and the c.g. must be computed before flight.

1.8 Powerplant

1.8.1 Engine

Bombardier-Rotax GmbH 912iS (2 or 3 depending on fixed or constant speed propeller governor shaft pre-installation), is a four strokes-four cylinders engine with 1352cc displacement and mixed air-water cooling. The engine has a mechanical 2.43:1 gearbox with integrated friction. The electronic fuel injection is completely redundant with 2 separated lines and generators. For any further information see ROTAX manuals available in the aircraft documentation or on official ROTAX website:

www.flyrotax.com

1.8.2 Propeller

The GT propeller is a wood composite propeller built by GT Tonini in Italy. The Tonini brothers began building propellers in 1969.
The propeller is finished with a white polyurethane lacquer and an additional layer of transparent lacquer. The tips are painted in bright yellow and red so that when the propeller is turning it is obvious to personnel on the ground. The back of the propeller is painted black to prevent reflections. More information on the company and the propeller can be found at:

http://www.gt-propellers.com

The Sensenich 2 or three blades propellers are also allowed to be mounted with the Sensenich provided installation kit for Tecnam. The propeller pitch must be always set following Tecnam related job card to ensure the pitch will not allow the airplane to fly over the maximum legal 120KCAS and in order to avoid overspeeds which could damage the engine.

1.8.3 Fuel system

The fuel system is equipped with two separate fuel tanks integrated inside the wing box. Each tank has 60lt (15.8 gal) capacity and is drainable via quick drain fitted below the sump. The lowest point of the system is provided with a gascolator with its own quick drain valve. The fuel level indication is provided by TL or DYNON EMS which convert the televel signal into a graphic indication on display.
The fuel system is shown in the next picture: the fuel which is drawn from the wing tank flows into the andair fuel valve via rigid 3/8 steel hoses, then the fuel comes into the gascolator, fuel pumps box, fine filter and finally into the engine inlet. The return line comes from the right side of the engine directly into the fuel selector, which deviates the flow into the selected tank. All flexible lines are covered by fireproof sleeve while all the cabin and wing lines are made in 3/8'' inox steel rigid hoses. All fittings used are AN type for 37° flared -6 hoses.

WARNING

Fuel quantity should be checked on a level surface or a false reading may result. Always visually verify fuel quantity by looking inside the tanks during filling.

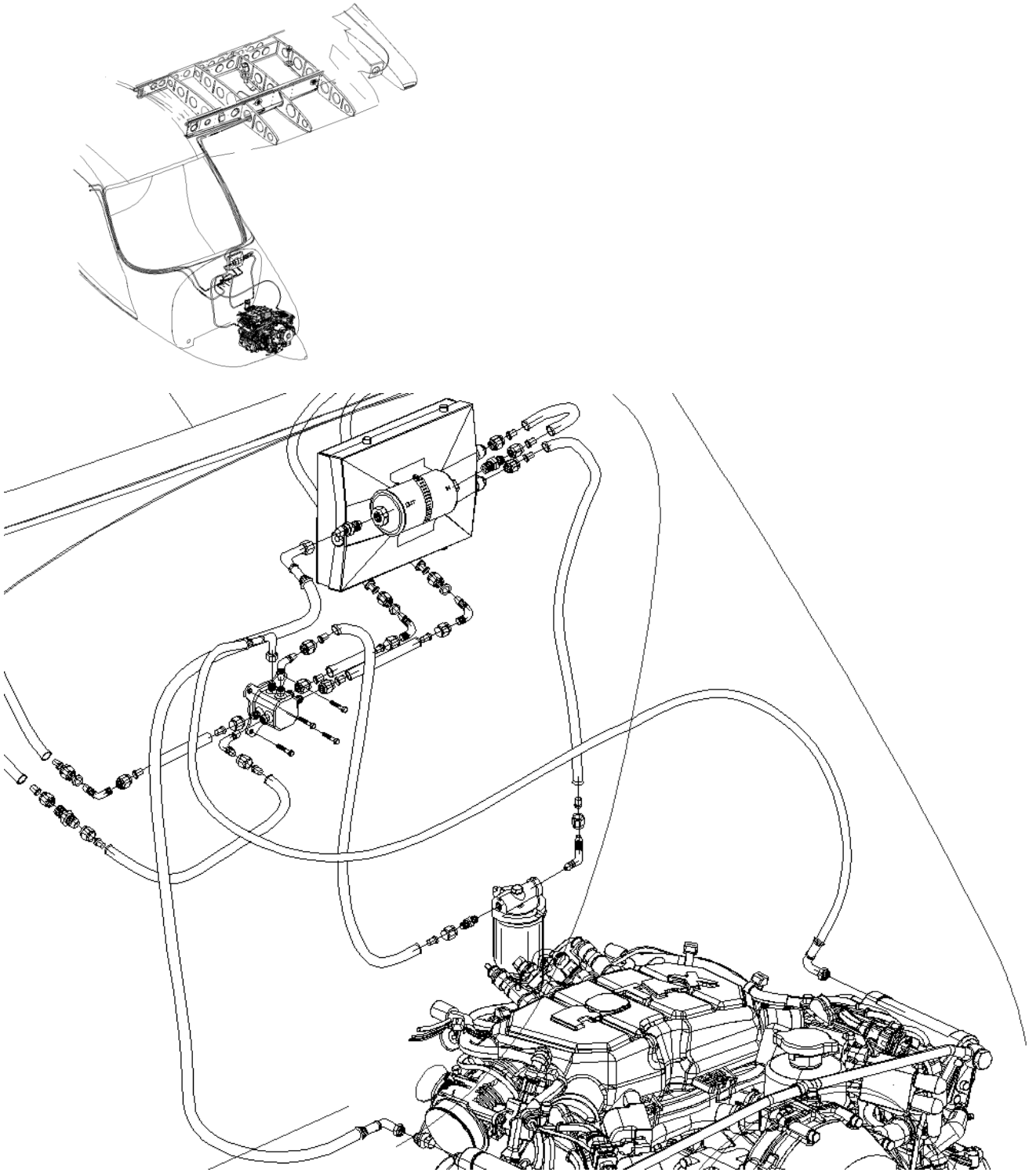


Figure 1-3 Fuel System

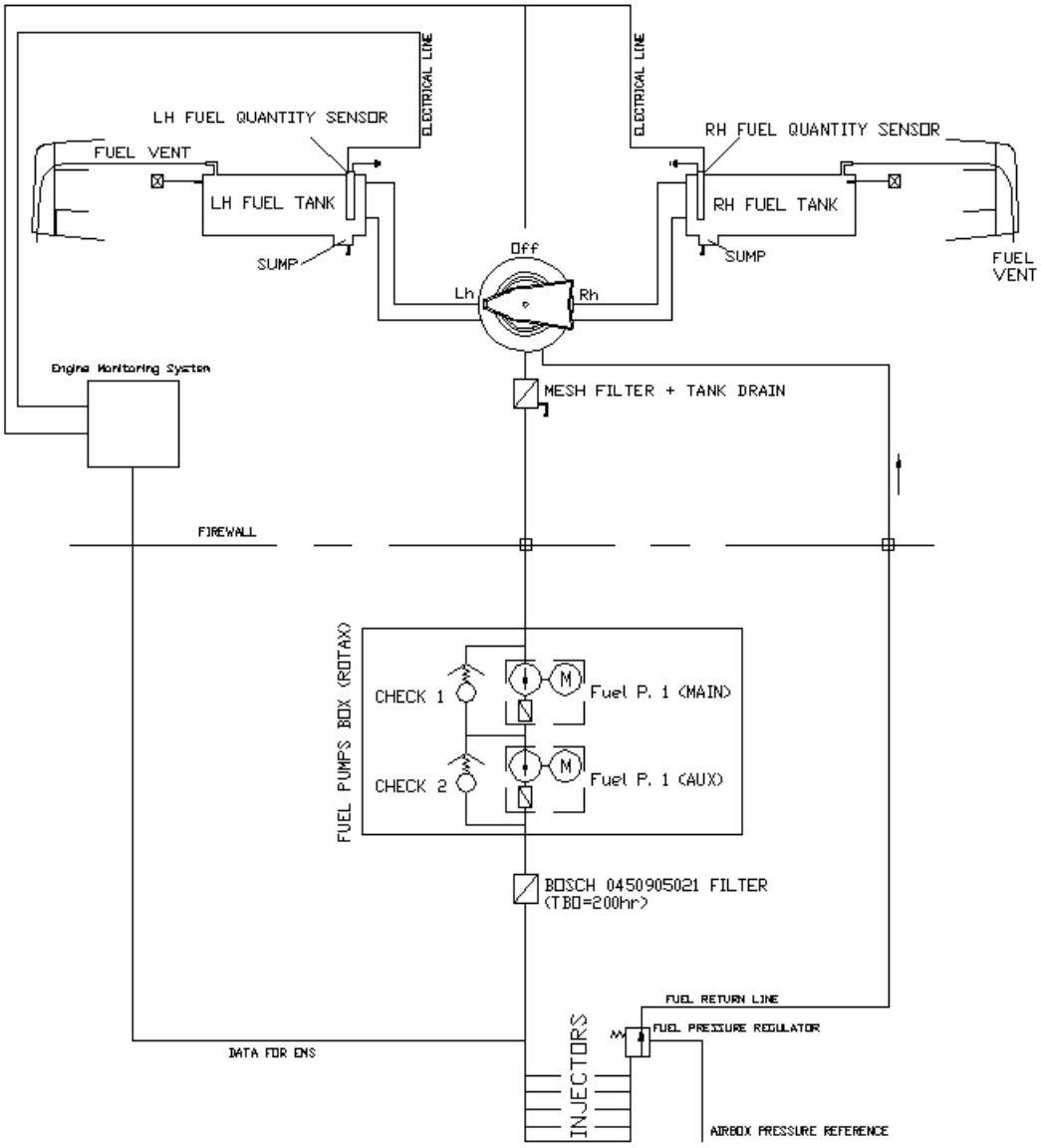


Figure 1-3 Fuel System schematic

1.9 Electrical System

The aircraft's electrical system consists of a 12 VoltDC circuit controlled by a Master switch located on the instrument panel. The engine is provided with two integral 3-phase current generators One is used only for ECU while the other is available for the aircraft systems. If the ECU power source fails, the system automatically switches the ECU on the remaining alternator.

NOTE

Always contact Tecnam if any problems occur with the electrical system.

1.10 Pitot and Static Pressure Systems

The airspeed indicator system for the aircraft is shown below.
On the left wing's strut the Pitot tube (1) while on the fuselage's sides there are two static ports (2). Two flexible hoses (3) feed the airspeed indicator (4), the altimeter (5) and the VSI (6) on the instrument panel.

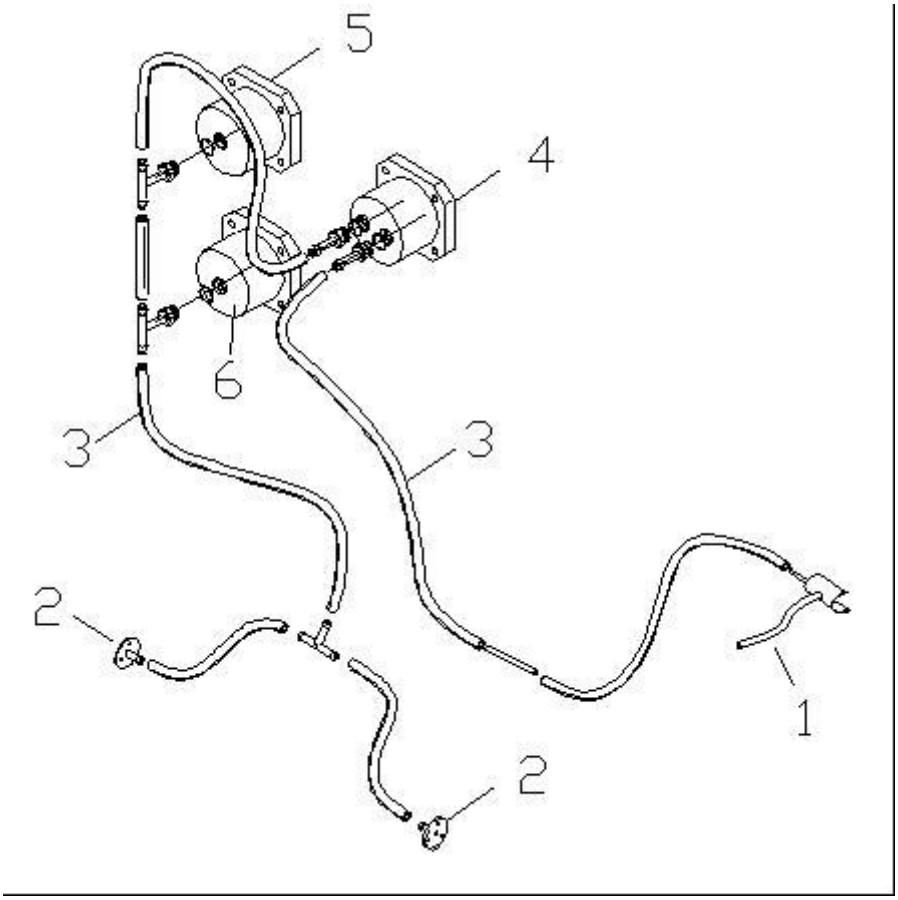


Fig.1-5 Pitot Static system

1.11 Landing Gear

The main landing gear consists of two special steel spring-leaf springs positioned crossways to fuselage for elastic cushioning of landing loads. 7075T6 Aluminium alloy is available in order to achieve more useful weight.
The two steel spring-leaf struts are attached to the fuselage underside via the main girder.
Two rawhide liners are inserted between each spring-leaf and the girder. Two bolts and nuts secure the individual spring-leaf to the edge of the girder via a light alloy clamp while a single bolt and nut secures the inboard end of the leaf-spring to the girder.

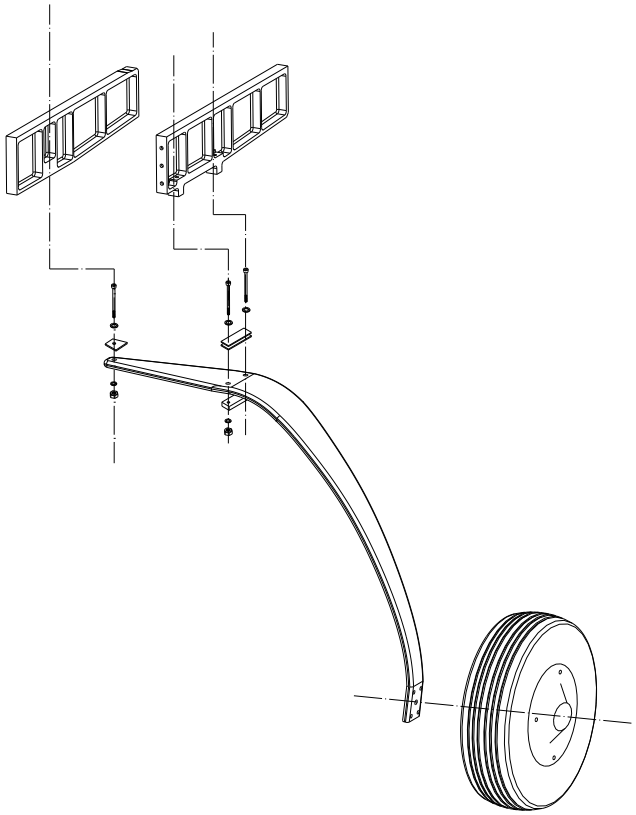


Figure 1-6 Main landing gear

1.11.1 Brake System

Figure 7-2 shows the brake system schematic diagram.
The left and right wheel brakes are independent systems. The system has a reservoir (4) on the co-pilot's brake pedals (1). The reservoir is directly connected to the brake master cylinders (3). Two flexible hoses connect the master cylinders on the co-pilot's brake pedals to the master cylinders on the pilot's brake pedals.
The parking brake valve (6) is mounted on the floor of the fuselage, below the seats and it's activated by lever (2).
Each main wheel has a brake disc (7).

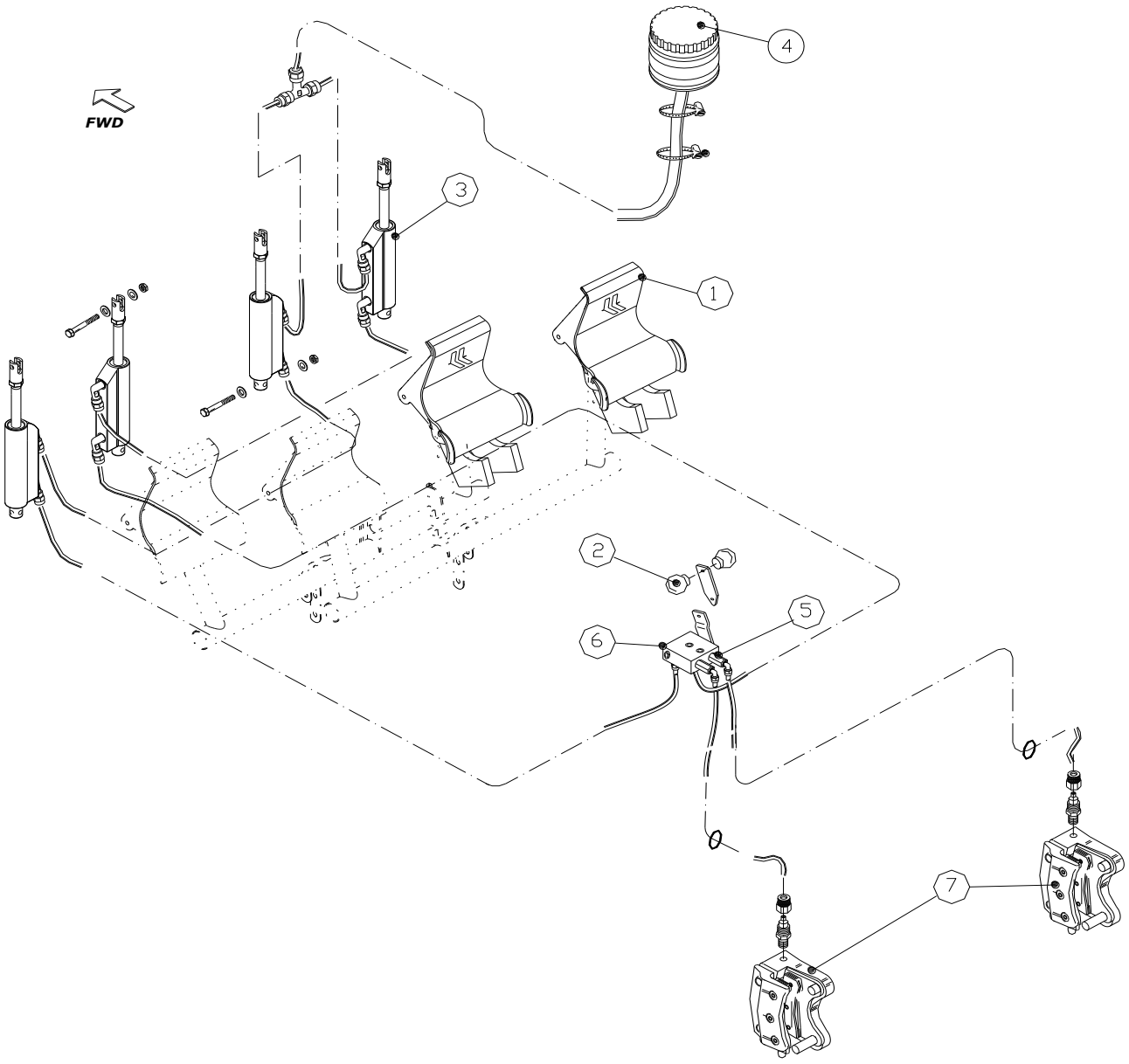


Fig. 1-7 Brake System

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SECTION 2
OPERATING LIMITATIONS

2 Introduction

Section 2 includes operating limitations, instrument markings, and basic placards necessary for safe operation of the P2008, its engine, standard systems and standard equipment.

2.1.1 Airspeed Limitations

Airspeed limitations and their operational significance are shown below:

SPEED		KCAS	KIAS	REMARKS
V_{NE}	Never exceed speed	135	134	Never exceed this speed in any operation
V_{NO}	Maximum Structural Cruising Speed	105	106	Never exceed this speed unless in smooth air, and then only with caution
V_A	Maneuvering speed	97	98	Do not make full or abrupt control movements above this speed as this may cause stress in excess of limit load factor
V_{FE}	Maximum flap extended speed	66	68	Never exceed this speed for any given flap setting
V_H	Maximum speed	119	120	Maximum speed in level flight at max continuous power (MSL)
V_X	Best Angle Climb	62	63	The speed which results in the greatest gain of altitude in a given horizontal distance
V_Y	Best Rate Climb	67	69	The speed which results in the greatest gain of altitude in a given time

2.1.2 Airspeed Indicator Markings

Airspeed indicator markings and their color code are explained in the following table:

MARKING	KIAS	SIGNIFICANCE
White arc	44 – 68	FlapOperatingRange (lower limit is V_{S0}, at maximum weight and upper limit is maximum speed permissible with full flaps)
Green arc	48– 106	NormalOperatingRange (lower limit is V_{S1} at maximum weight and flaps at 0° and upper limit is maximum structural speed V_{NO})
Yellow arc	106-134	Operations must be conducted with caution and only in smooth air
Red line	134	Maximum speed for all operations

2.1.3 Powerplant Limitations

The following table lists operating limitations for aircraft installed engine:
Engine manufacturer: Bombardier Rotax GmbH.
Engine model: 912iS

Maximum power: (see table below)

	Max Power kW (hp)	Max rpm. rpm prop.(engine)	Time max. (min)
Max.	73.5 (100)	2388 (5800)	5
Max cont.	69 (93)	2265 (5500)	-

NOTE
Static engine rpm should be 5100 ± 250 under no wind conditions.

2.1.4 Temperatures

Max coolant	120° C	248° F
Min. / Max. Oil	50° C / 130° C	120° F / 266° F
Oil normal operating temperature (approx.)	90° C – 110° C	190° F / 230° F

2.1.5 Oil Pressure

Minimum	0.8 bar / 12psi	Below 3500 RPM
Normal	2.0 - 5.0 bar / 29-73psi	Above 3500 RPM

2.1.6 Operating & starting temperature range

OAT Min	-20° C	-13° F
OAT Max on gr.	+50° C	120° F
OAT Max in flight	+60° C	140° F

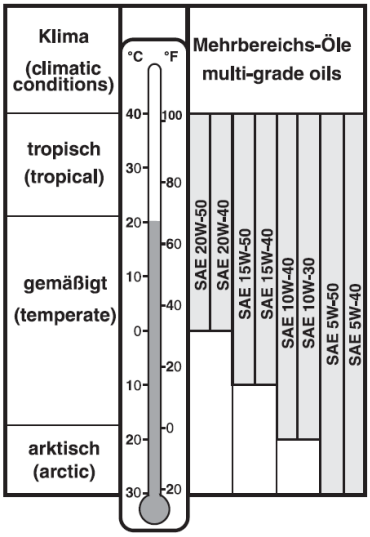
Warning
Admissible pressure for cold start is 7 bar maximum for short periods.

2.1.7 Fuel Pressure

Min	2.8 bar (42 PSI)
Max	3.2 bar (45 PSI)

2.1.8 Lubricant

Viscosity
Use viscosity grade oil as specified in the following table:



Warning

Admissible pressure for cold start is 7 bar maximum for short periods

Warning

Use of Aviation Grade Oil with or without additives is not permitted

2.1.9 Coolant

Coolant type and specifications are detailed into the "Rotax Operator's Manual" and in its related documents.

2.1.10 Fuel

Two tanks:	60 liters (15.8 gallons)
Total fuel capacity:	120 liters (31.7 gallons)

With 1/4 tank or less, prolonged uncoordinated flight is prohibited.

NOTE

During all phases of flight, one tank normally supplies engine fuel feed

Warning

Compensate for uneven fuel tank levels by closing the fuel valve on the tank with more fuel making sure that one fuel valve is in the on position at all times.

2.1.11 Approved Fuel

Min. RON 95 (AKI 91) AKI = (RON+MON)/2
AVGAS 100LL (see Warning below)

Warning

Prolonged use of Aviation Fuel Avgas 100LL results in greater wear of valve seats and greater combustion deposits inside cylinders due to higher lead content. It is therefore suggested to avoid using this type of fuel unless strictly necessary for vapor lock or when other types of gasoline are unavailable.

2.1.12 Powerplant Instrument Markings

Powerplant instrument markings and their color code significance are shown below:

Instrument		Red line Minimum limit	Green arc Normal operating	Yellow arc Caution	Red line Maximum limit
Engine Tach	Rpm	--------	1400-5500	5500-5800	5800
Oil Temp.	°C	50	90-110	50 - 90 110-130	130°C
Cylinder heads temp.	°C	--------	50 - 135	--------	135°C
Oil pressure	Bar	0.8	2 – 5	0.8 – 2 5 – 7	7
Fuel Pressure	Bar	2.8 (42psi)	2.8 – 3.2 (45psi)		3.2 (45psi)
EGT	°C	--------	--------	--------	950

2.1.13 Other Instrument Markings

Instrument	Red line Minimum limit	Green arc Normal operating	Yellow arc Caution	Red line Maximum limit
Suction gauge (if installed)	4.0 in. Hg	4.5 – 5.5 in. Hg	----	----

2.1.14 Weights

Maximum takeoff weight:	600 kg (1320 lbs)
Maximum landing weight:	600 kg (1320 lbs)
Maximum baggage weight:	20 kg (44 lbs)

2.1.15 Center of Gravity Limits

Forward limit	20% MAC for all weights
Aft limit	33% MAC for all weights
Datum	Propeller support flange w/o spacer
Bubble Level	Baggage compartment floor

Warning

It is the pilot's responsibility to insure that airplane is properly loaded

2.1.16 Approved Maneuvers

This aircraft is intended for non-aerobatic operation only. Non-aerobatic operation includes:

- Any maneuver pertaining to "normal" flight
- Stalls (except whip stalls)
- Lazy eights

- Chandelles
- Turns in which the angle of bank is not more than 60°
- Acrobatic maneuvers are not approved

Recommended entry speeds for each approved maneuver are as follows:

Maneuver	Speed (KIAS)	Speed (KCAS)
Lazy eight	93	88
Chandelle	93	88
Steep turn (max 60°)	93	88
Stall	Slow deceleration (1 Knots/sec)	

Warning

Limit load factor could be exceeded by moving the flight controls abruptly to full control deflection at a speed above V_A (Maneuvering Speed).

2.1.17 Maneuvering Load Factor Limits

Maneuvering load factors are as follows:

Flaps		
0°	+4	-2
LND	+2	0

2.1.18 Flight Crew

Minimum crew for flight is one pilot seated on the left side.

2.1.19 Kinds of Operations

The airplane, in standard configuration, is approved only for day VFR operation with terrain visual contact. Minimum equipment required is as follows:

- Altimeter
- Airspeed Indicator
- Heading Indicator
- Fuel Gauges
- Oil Pressure Indicator
- Oil Temp. Indicator
- Cylinder Heads Temp. Indicator
- Outside Air Temp. indicator
- Tachometer
- Chronometer

For further standard equipment refer to section 6.
Flight into expected and/or known icing conditions is prohibited.

WARNING

A different equipment list may be asked to fulfill specific kind of operations such as night-VFR. Review the applicable Tecnam service bulletins, instructions or authorizations before expanding the kind of operation of your plane

2.1.20 Day VFR

The airplane, in standard configuration, is approved only for day VFR operations under VMC:

- Altimeter
- Airspeed Indicator
- Compass
- VSI
- Engine monitoring system TL-6724

Flight into expected and/or known-icing conditions is prohibited

2.1.21 Night

Night flight is approved if the aircraft is equipped as per the applicable ASTM consensus standard as well as any pertinent FAR.

NOTE

The FAA requires that the pilot possesses a minimum of a Private Pilot certificate and a current medical to fly at night. See the FARs for more information.

2.1.22 IFR

IFR flight is not allowed

2.1.23 Demonstrated Crosswind Safe Operations

Demonstrated crosswind component is 15 knots.

2.1.24 Service Ceiling

13,110’

2.1.25 Limitation Placards

See Section 8

SECTION 3
WEIGHT & BALANCE

3 Introduction

This section describes the procedure for establishing the basic empty weight and moment of the aircraft. Loading procedure information is also provided.

3.1 Aircraft weighing procedures

3.1.1 Preparation

- Carry out weighing procedure inside closed hangar
- Remove from cabin any objects left unintentionally
- Insure Flight Manual is on board
- Align nose wheel
- Drain fuel via the specific drain valve
- Oil, hydraulic fluid and coolant to operating levels
- Move sliding seats to most forward position
- Raise flaps to fully retracted position (0°)
- Place control surfaces in neutral position
- Place scales (min. capacity 200 kg440 pounds) under each wheel
- Level the aircraft using baggage floor as datum
- Center bubble on level by deflating nose tire
- Record weight shown on each scale
- Repeat weighing procedure three times

3.1.2 Calculate empty weight Weighing

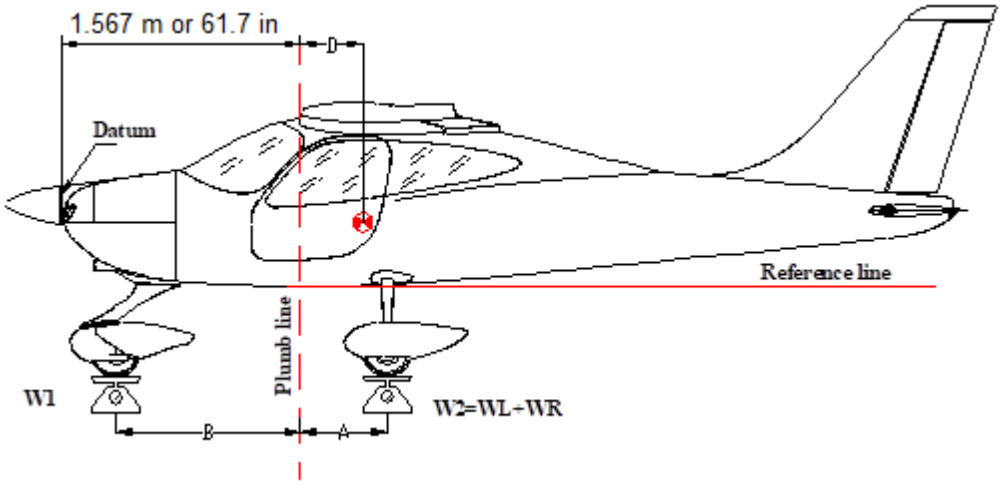
- Record weight shown on each scale
- Repeat weighing procedure three times
- Calculate empty weight

3.1.3 Determination of C.G. location

- Drop a plumb bob tangent to the leading edge (approximately one meter from wing root) and trace reference mark on the floor.
- Repeat operation for other half-wing.
- Stretch a taught line between the two marks
- Measure the distance between the reference line and main wheel axis
- Using recorded data it is possible to determine the aircraft's C.G. location and moment (see following table)

3.2 Weighing report

Model P2008is_____S/N_____Date _____



Datum: Propeller support flange w/o spacer. - *Equipment list,* date: _____

	Kg or lbs
Nose wheel weight	W_1 =
LH wheel weight	W_L =
RH wheel weight	W_R =
$W_2 = W_L+W_R$ =	

	Meters or inches
Plumb bob distance LH wheel	A_L=
Plumb bob distance RH wheel	A_R =
Average distance (A_L+ A_R)/2	A =
Bob distance from nose wheel	B =

Empty weight (1) We = W_1 + W_2 =

$D=\frac{W_2 \cdot A - W_1 \cdot B}{We} = m$ $D=\frac{W_2 \cdot A - W_1 \cdot B}{We} = in$	[m]→ $D\% = \frac{D}{1.373} \cdot 100 =$ [in]→ $D\% = \frac{D}{54} * 100 =$

Empty weight moment: **M** = [(D+1.567) ·We] =*Kg · m* *or*

Empty weight moment: **M** = [(D+61.7) ·We] =*lbs · in*

Maximum takeoff weight	W_T = 600 kg or 1320 lbs
Empty weight	We =
Maximum payload W_T - We	Wu =

Sign: _____

1 - Including unusable fuel

NOTE: The distances A and B vary from the aircraft with pivoting NLG configuration and the aircraft with steerable NLG. This weighing report remains valid.

3.2.1 Center of Gravity Limits

Forward limit	20% MAC for all weights
Aft limit	33% MAC for all weights
Datum	Propeller support flange w/o spacer
Bubble Level	Cabin floor

3.2.2 Distances from the datum

The mean distances of the occupants, baggage and fuel from the datum are:

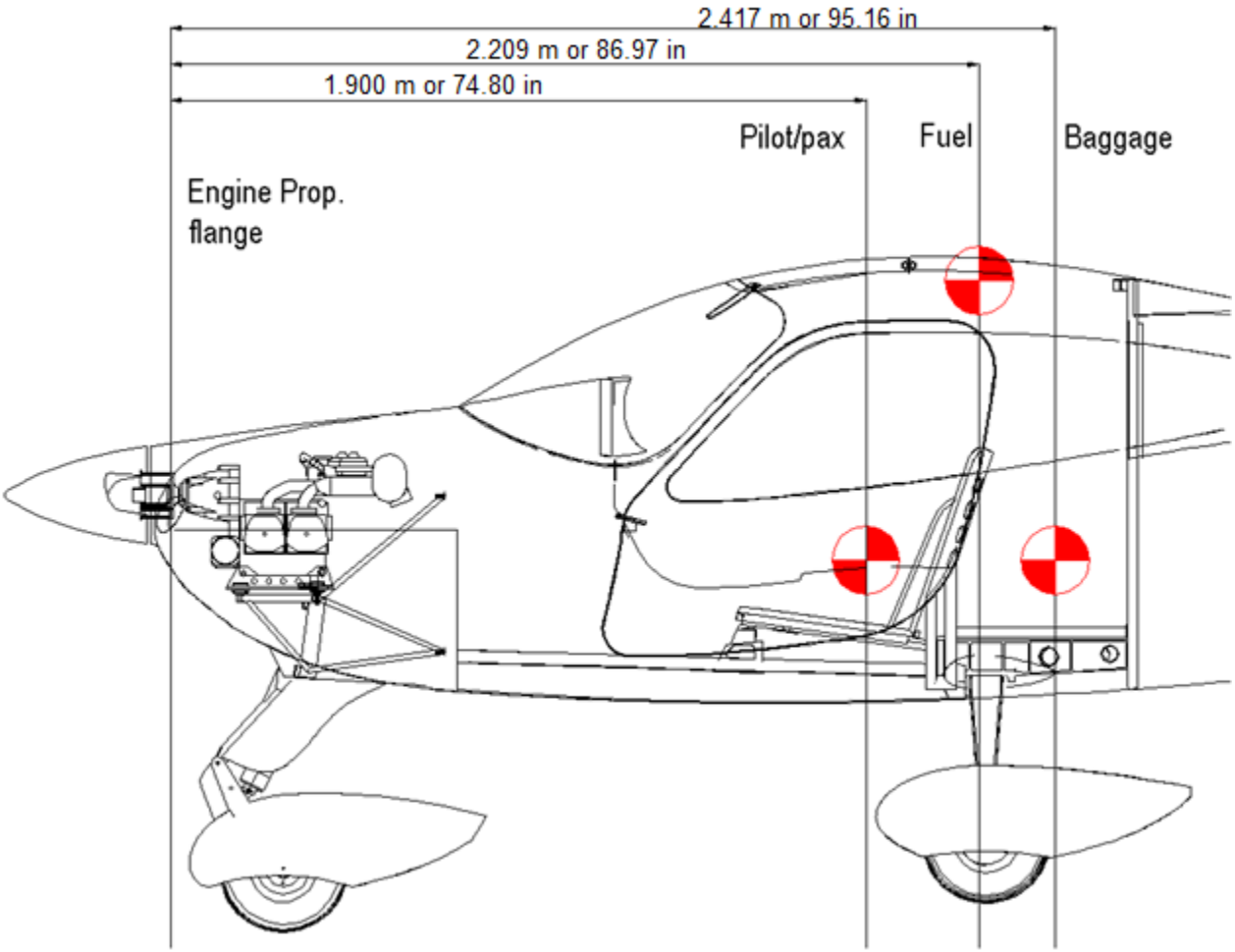


Figure 3-1

3.3 Weight and Balance

In order to compute the weight and balance of this aircraft, we have provided the following loading charts. This will reduce the amount of math you need. To compute weight and balance use the formula:

Weight * Arm = Moment.

Pilot & Passenger			
Weight (lbs)	Moment (lbs x in)	Weight (lbs)	Moment (lbs x in)
10	748	260	19448
20	1496	270	20196
30	2244	280	20944
40	2992	290	21692
50	3740	300	22440
60	4488	310	23188
70	5236	320	23936
80	5984	330	24684
90	6732	340	25432
100	7480	350	26180
110	8228	360	26928
120	8976	370	27676
130	9724	380	28424
140	10472	390	29172
150	11220	400	29920
160	11968	410	30668
170	12716	420	31416
180	13464	430	32164
190	14212	440	32912
200	14960	450	33660
210	15708	460	34408
220	16456	470	35156
230	17204	480	35904
240	17952	490	36652
250	18700	500	37400

Fuel		
Gallons	Weight (lbs)	Moment
1	6,26	544
2	12,52	1089
3	18,78	1633
4	25,04	2178
5	31,3	2722
6	37,56	3267
7	43,82	3811
8	50,08	4355
9	56,34	4900
10	62,6	5444
11	68,86	5989
12	75,12	6533
13	81,38	7078
14	87,64	7622
15	93,9	8166
16	100,16	8711
17	106,42	9255
18	112,68	9800
19	118,94	10344
20	125,2	10889
21	131,46	11433
22	137,72	11978
23	143,98	12522
24	150,24	13066
25	156,5	13611
26	162,76	14155
27	162.76	14155
28	169.02	14700
29	175.28	15244
30	181.54	15789
31	187.8	16333
32	194.06	16877

Baggage	
Weight (lbs)	Moment (lbs x in)
5	476
10	952
15	1427
20	1903
25	2379
30	2855
35	3331
40	3806
44	4187

	Meter	Inches
PAX	1.900	74,80
FUEL	2.209	86,97
BAGGAGE	2.417	95,16

To compute weight and balance:

1. Get moments from loading charts
2. Obtain the empty weight and moment from the most recent weight and balance
3. Insert the weights and the moments for fuel, occupants and baggage from the previous chart
4. Total the weight and the moment columns
5. Divide the total moment by the total weight to get the arm
6. Check that the total weight does not exceed maximum gross weight of 1320 pounds
7. Check that the arm falls within the C.G. range

CoG Position Computation Chart			
	Weight (lbs)	Arm (inches)*	Moment
Empty Weight			
Fuel		86.97	
Pilot & Passenger		74.80	
Baggage		95.16	
Total **MOMENT**			
Total **WEIGHT**			
Distance "D"= **MOMENT/WEIGHT**			

*ADD to the distance "D" the value 1567mm (62in)

C.G.Range		
Meters	1.842	2.020
Inches	72.50	79.5
Max Weight	**Pounds**	**Kilograms**
	1320.00	600.00

Example Problem			
	Weight (lbs)	Arm (inches)	Moment
Empty Weight	813,5	77,13	62741,99
Fuel	150	86,97	13045,50
Pilot & Passenger	300	74,80	22440,00
Baggage	20	95,16	1903,20
Totals	1283,5	78,01	100130,69

In this example, the gross weight is under the max gross weight of 1320 pounds and the Arm or C.G. is within the C.G. range listed above.

3.3.1 Loading

Baggage compartment is designed for a maximum load of 44 pounds. Baggage size shall prevent excessive loading of utility shelf (maximum pressure 12.5 kg/dm^2). Maximum baggage size is: 80x45x32 cm . Baggage shall be secured using a tie-down net to prevent any baggage movement during maneuvers.

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SECTION 4
PERFORMANCE

4 Introduction

This section provides all necessary data for accurate and comprehensive planning of flight activity from takeoff to landing.
Data reported in graphs and/or tables were determined using:

- "Flight test data" with conditions as prescribed by ASTM and bilateral agreements
- Aircraft and engine in good condition
- Average piloting techniques

Each graph or table was determined according to ICAO Standard Atmosphere (ISA - MSL); evaluations of the impact on performance were carried out by theoretical means for:

- Airspeed
- External temperature
- Altitude
- Weight
- Type and condition of runway

4.1 Use of Performance Charts

Performance data is presented in tabular or graphical form to illustrate the effect of different variables such as altitude, temperature and weight. Given information is sufficient to plan journey with required precision and safety.
Additional information is provided for each table or graph.

4.2 Airspeed Indicator System Calibration

Graph shows calibrated airspeed V_{CAS} as a function of indicated airspeed V_{IAS}

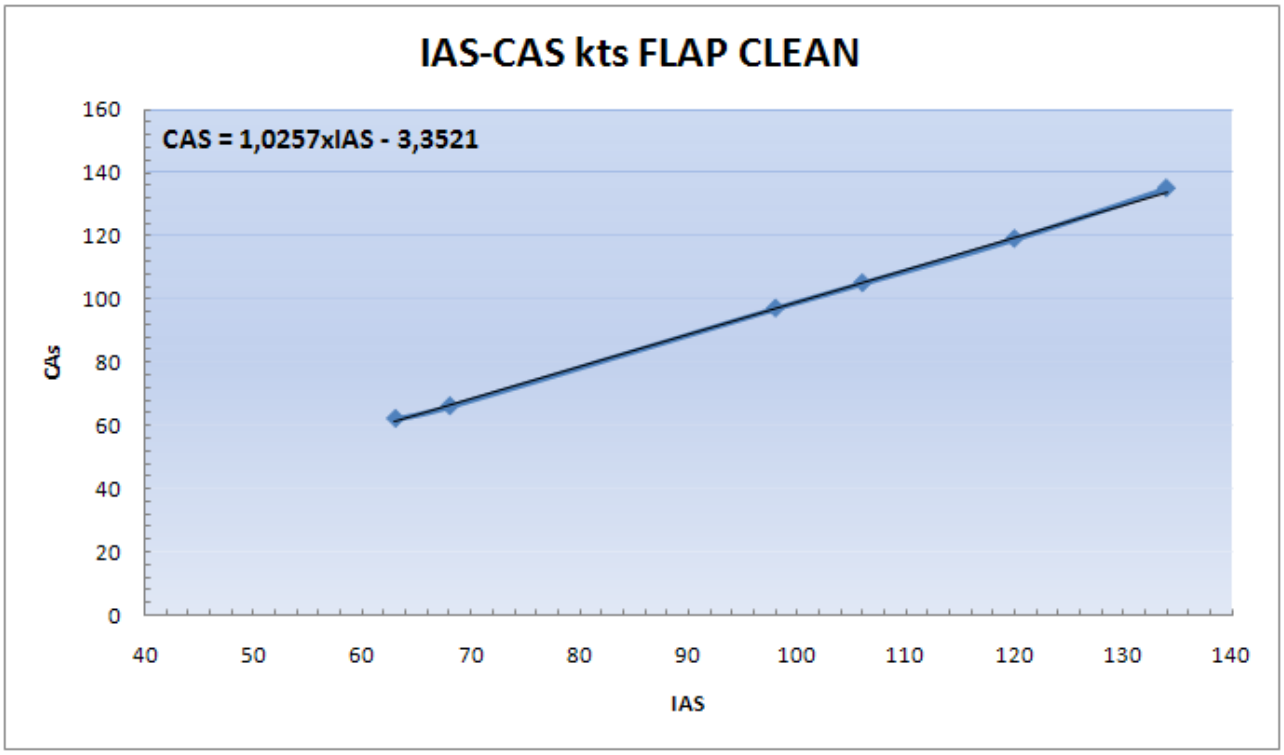


Fig. 4-1 Calibrated vs. Indicated Airspeed

The following formula gives the CAS with the **flaps full deflected**:

$$CAS = 1.0611xIAS - 7.7222$$

4.3 ICAO Chart

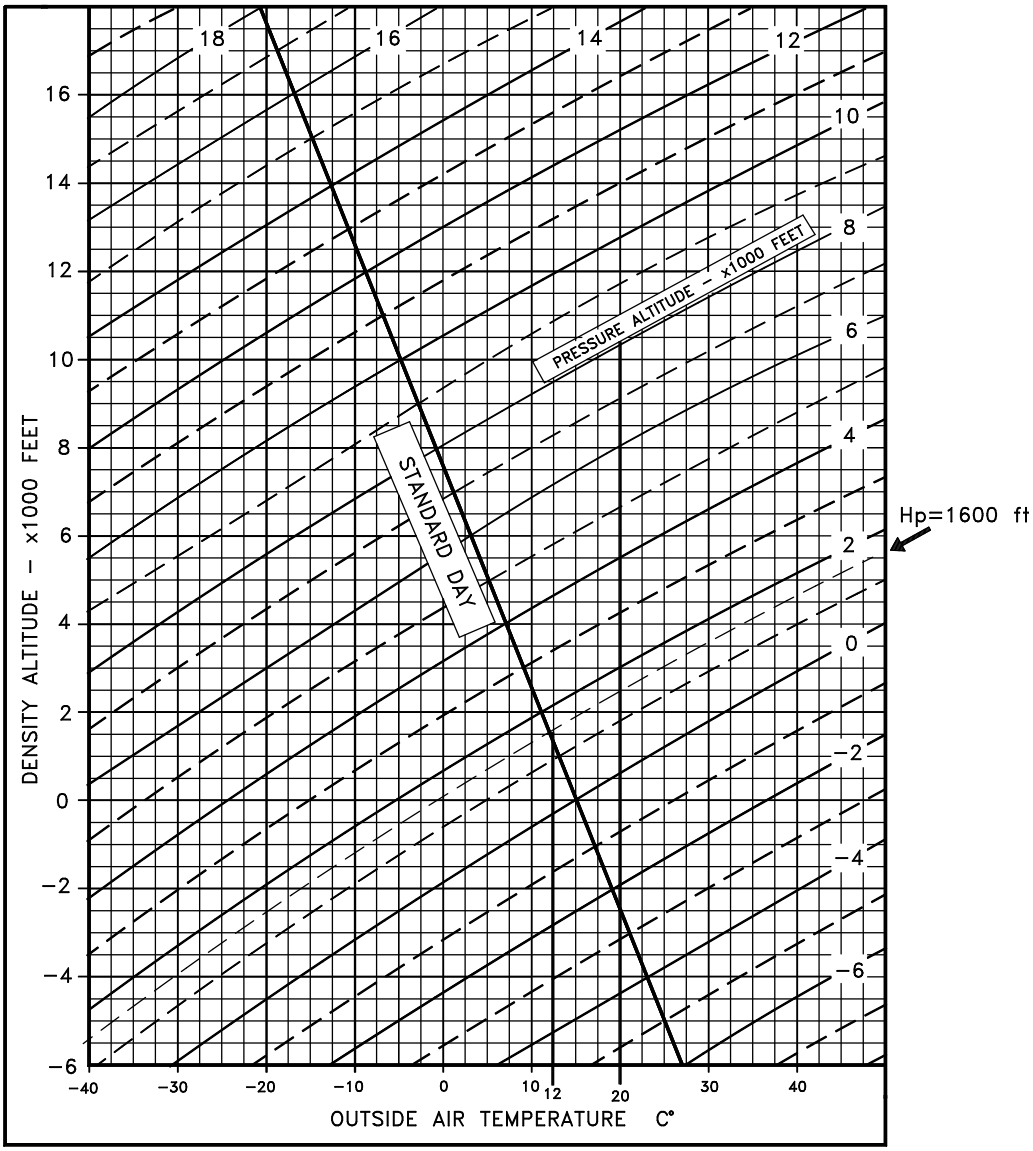


Fig. 4-2 ICAO CHART

4.4 Stall Speeds

Conditions:

- Weight 600 kg (1320 lbs)
- Throttle: idle
- No ground effect

NOTE

Altitude loss during conventional stall recovery as demonstrated during test flights is approximately 100ft with banking under 30°.

FLAPS	KIAS	KCAS
0°	**48**	45
LND	**44**	39

4.5 Crosswind

Maximum demonstrated crosswind velocity is 15 knots

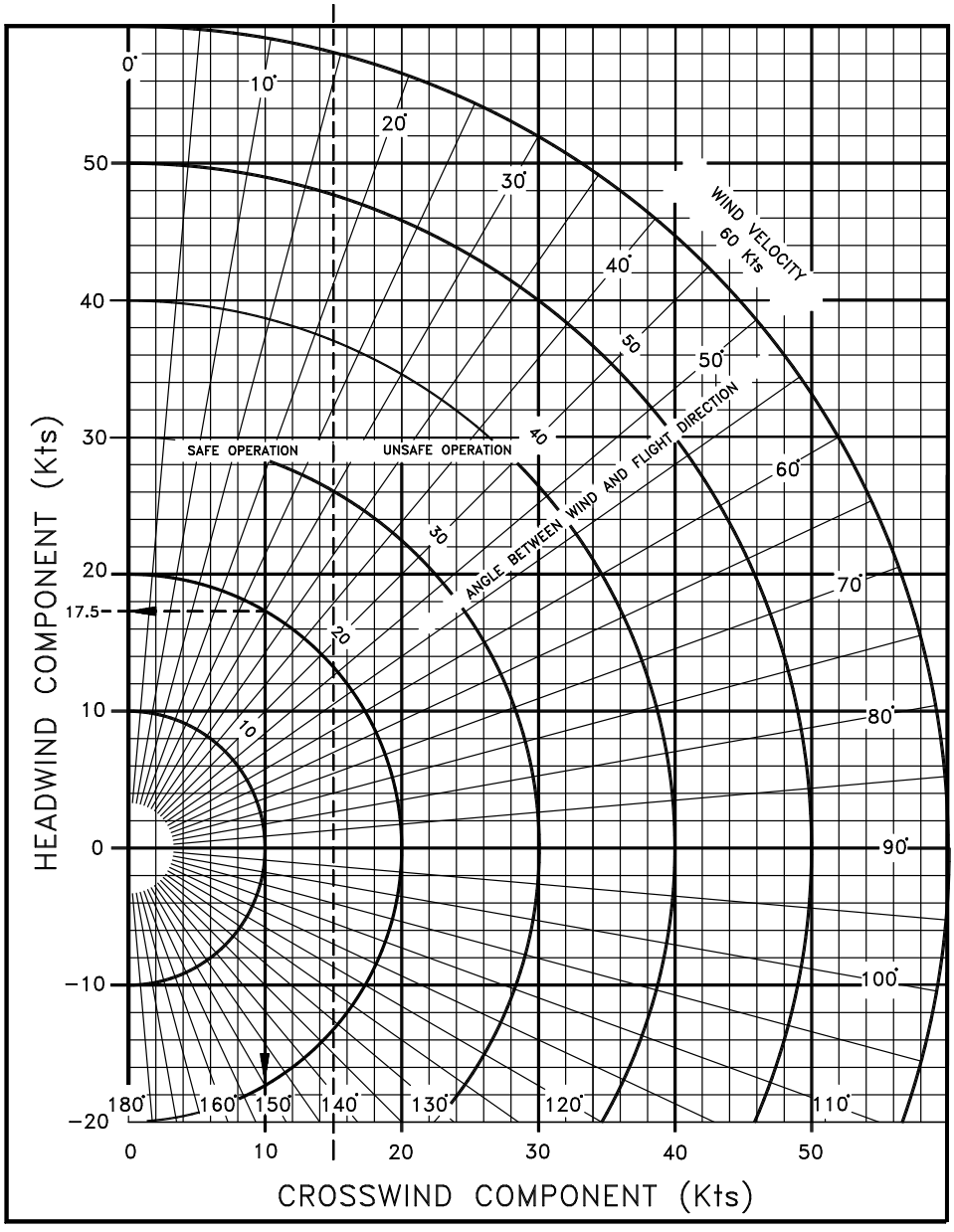


Fig. 4-3 Crosswind chart

4.6 Takeoff Performance

TAKEOFF DISTANCE
Conditions:

Flaps: 15°	Runway: dry, compact, grass
Engine: full throttle	Slope: 0° Wind: zero
Vr = 48 KIAS [45KCAS]	V_{LO} = 50 KIAS [46KCAS]
Vx flaps 15 = 63 KIAS [62KCAS]	R/C ≥ 200 ft/min

Decrease distances by 10% for each 10 Knots of headwind. Increase distances by 20 % for each 10 Knots of tailwind
For dry and paved runway operation decrease ground run by 6 %.

⇒ Example:

Given	Find
O.A.T. = 15°C	TOD = 170m (557 ft)
Pressure altitude = 2900 ft Weight = 500 Kg	TOR = 355m (1164 ft)

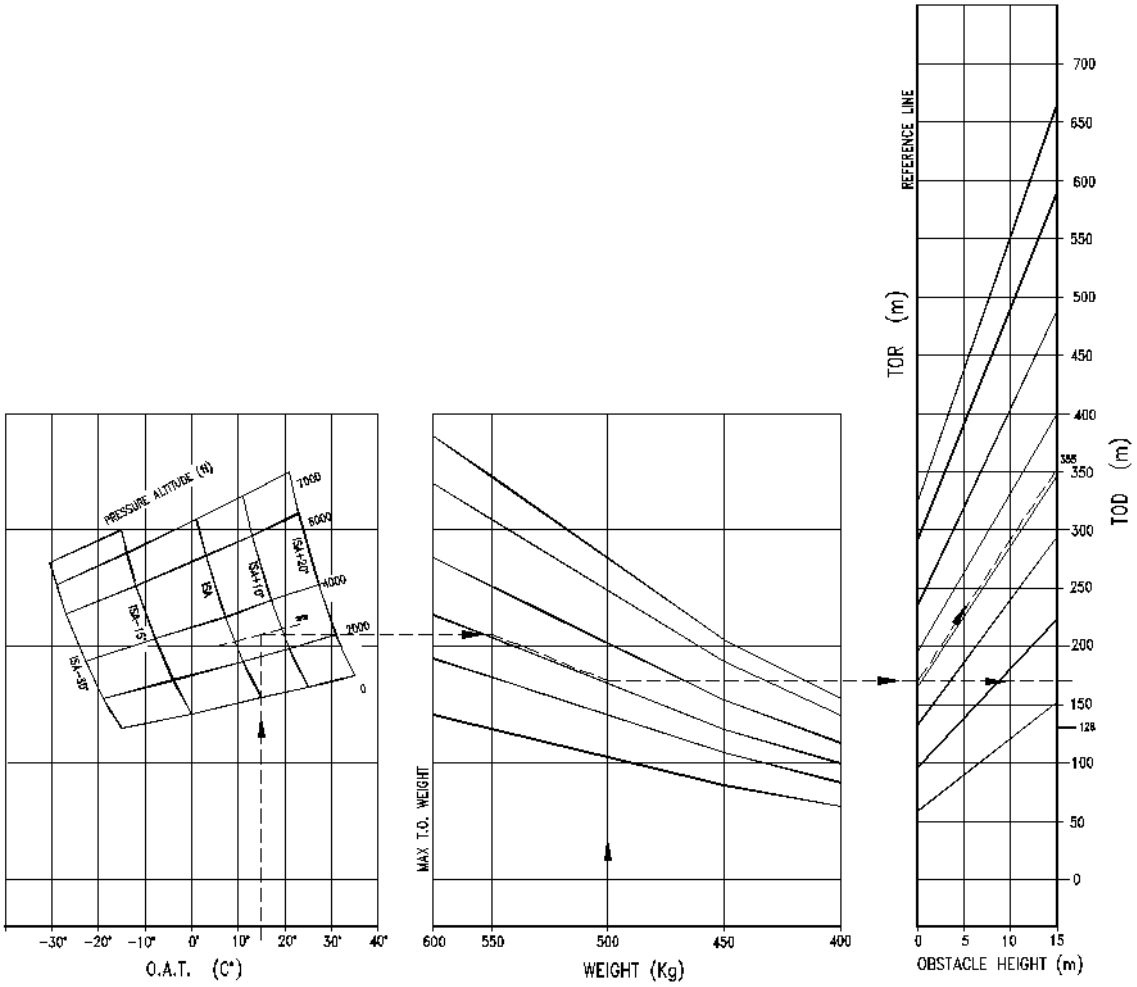


Fig. 4-4 Takeoff performance

4.7 Landing Distance

CONDITIONS:

Maximum weight = 600 kg (1320 lbs)		Engine: throttle idle
Brakes: maximum braking		Runway: dry, compact grass
Slope: 0°	Wind:	zero
Conditions: ISA		Flaps: 35°

NOTE

Decrease distances by 10% for each 10 Knots of headwind. Increase distances by 20 % for each 10 Knots of tailwind;
For dry and paved runway operation increase ground run by 10%
If it becomes necessary to land without flap extension (flap malfunction), increase approach speed by 10 Knots, increase by landing distance by 40% distance pertaining to flap setting at 35° and increase Vx to 58 KIAS[57KCAS]
Vx 15 flaps (speed over obstacle) is 48 KIAS[45KCAS]

Hp (ft)	*0*	*1000*	*2000*	*3000*	*4000*	*5000*	*6000*	*7000*
GR (m)	115	118	122	125	129	133	137	141
GR (ft)	377	387	400	409	422	446	448	463
LD (m)	285	294	299	304	308	314	321	324
LD (ft)	915	966	981	996	1011	1029	1052	1064

HP = pressure altitude
GR = ground run
LD = 50’ obstacle

4.8 Climb Performance

CLIMB RATE IN CLEAN CONFIGURATION

CONDITIONS:

- Flap: 0°
- Engine: Full throttle
- V_Y = 69 KIAS [67KCAS]

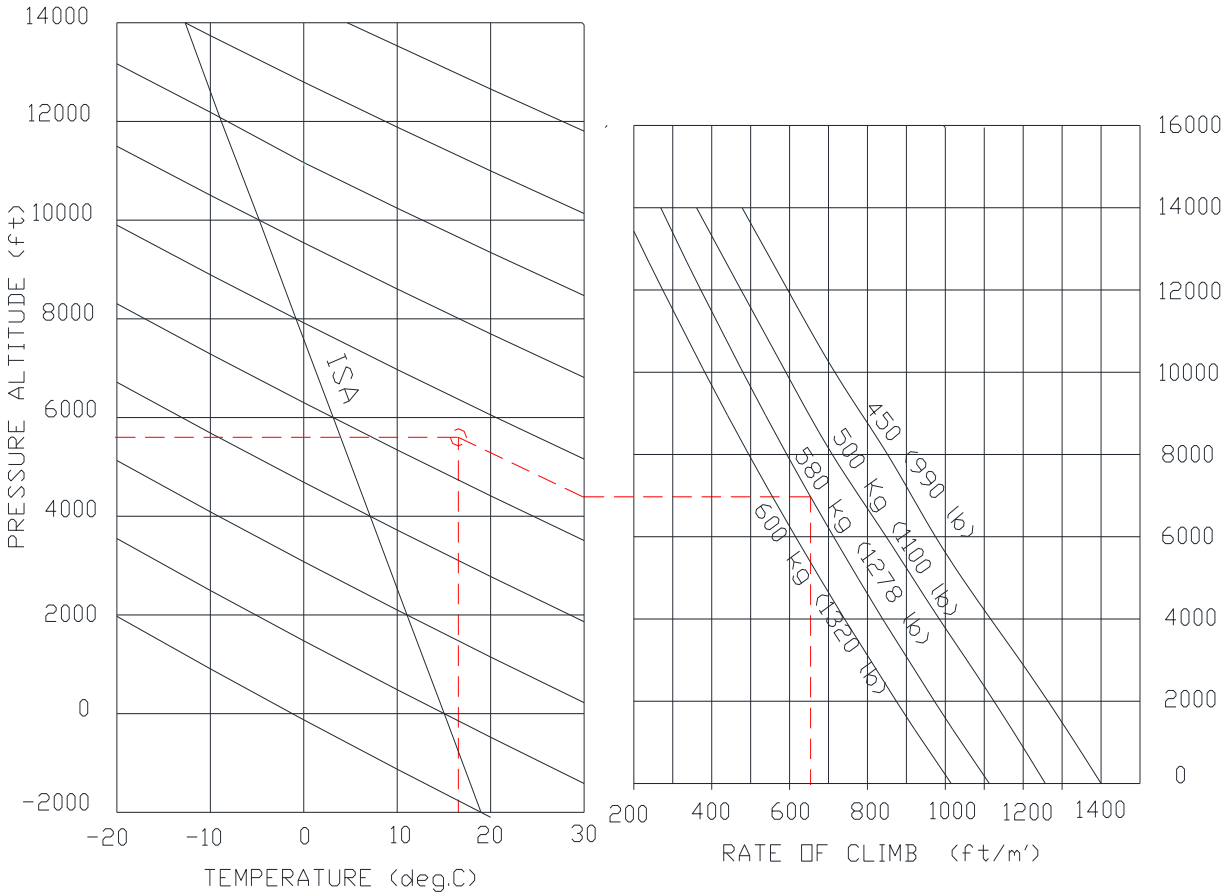


Fig. 4-5 CLIMB

⇒ *Example:*

Given

O.A.T. = 17°*C*

Pressure altitude = 5600 *ft*

Weight = 580 *Kg (1279 lb)*

Find

Rate of climb = *654 ft/min*

4.9 Cruise

Maximum takeoff weight = 600 kg (1320 lbs)
Fuel tanks 2x60 liters (2 x 15.8 gal) (less the unusable fuel = 1.1 gal)

ALL ENDURANCE DATA (HOURS AND n.m.) ARE GIVEN WITH A RESERVE OF 30' (FOR EXAMPLE: THE FIRST ROW INDICATES A RANGE OF 7.8 hrs + 0.5 hr RESERVE AND A RANGE OF 747 nm + 48 nm RESERVE)

Pressure altitude H_P: 0 *ft OAT: +15°C*

Engine RPM		Speed KTAS	Consumption (gal/h)	Endurance (hrs)	Range (N.m.)
55%	4600	96	3.7	7.8	747
65%	5000	102	4.2	6.8	693
75%	5200	108	5.0	5.6	608

Pressure altitude H_P: 2000 *ft OAT: +11°C*

Engine RPM		Speed KTAS	Consumption (gal/h)	Endurance (hrs)	Range (N.m.)
55%	4600	98	3.7	7.8	763
65%	5000	106	4.2	6.8	720
73%	5200	109	5.0	5.6	613

Pressure altitude H_P: 4000 *ft OAT: +7°C*

Engine RPM		Speed KTAS	Consumption (gal/h)	Endurance (hrs)	Range (N.m.)
55%	4600	101	3.7	7.8	786
60%	5000	105	4.2	6.8	714
70%	5200	110	5.0	5.6	619

Pressure altitude H_P: 6000 *ft OAT: +3°C*

Propeller RPM		Speed KTAS	Consumption (gal/h)	Endurance (hrs)	Range (N.m.)
55%	5000	104	3.7	7.8	809
60%	5200	108	4.2	6.8	734

4.10 Balked Landing

RATE OF CLIMB: BALKED LANDING

CONDITIONS:

Maximum weight = 600 kg (1320 lb) Engine: full throttle

Flaps: 35° V_x 15 flaps = 63 KIAS [62 KCAS]

NOTE

During balked landing maneuver, flaps should be retracted immediately after applying full power.

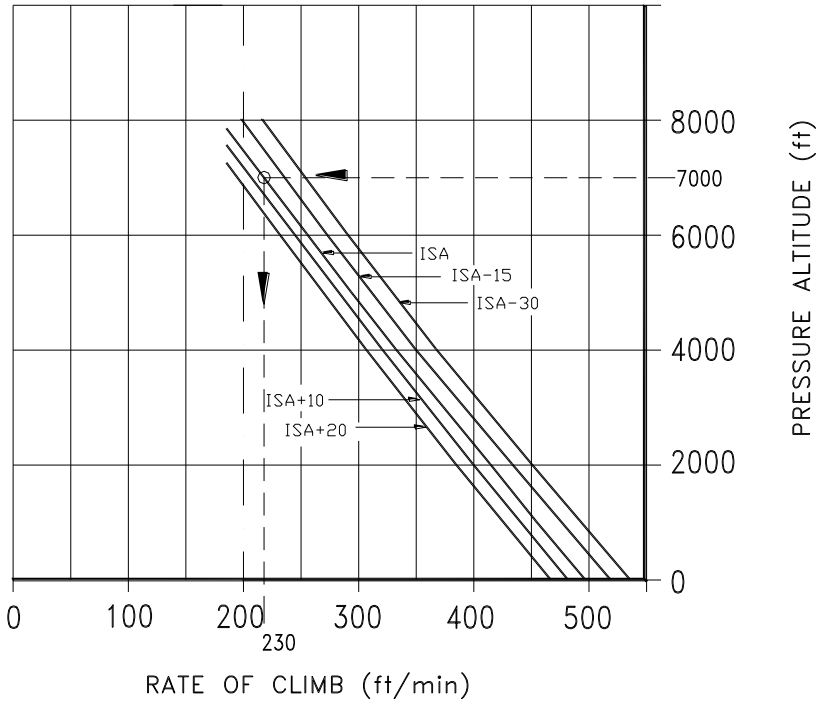


Fig.5-6. BALKED LANDING

4.11 Effects of Rain and Insects

Flight tests have demonstrated that neither rain nor insect impact build-up on leading edge has caused substantial variations on aircraft's flight qualities.

SECTION 5
EMERGENCY PROCEDURES

5 Introduction

Section 5 includes checklists and detailed procedures to be used in the event of emergencies. Emergencies caused by a malfunction of the aircraft or engine is extremely rare if appropriate maintenance and pre-flight inspections are carried out.
In case of emergency, suggestions of the present section should be considered and applied as necessary to correct the problem.
Before operating the aircraft, the pilot should become thoroughly familiar with the present manual and, in particular, with the present section. Further, a continued and appropriate training program should be provided.
In case of emergency the pilot should act as follows:

- Keep control of the airplane
- Analyze the situation
- Apply the pertinent procedure
- Inform the Air Traffic Control if time and conditions allow

AIRSPEEDS FOR SAFE OPERATION IN EMERGENCY SITUATIONS - KIAS	
Engine failure after takeoff (15 degrees of flaps)	60 Knots
Engine failure during flight	65 Knots
Maneuvering speed	98 Knots
Maximum glide	65 Knots

5.1 Engine Failures

If an emergency arises, the basic guidelines described in this section should be considered and applied as necessary to correct the problem.

5.1.1 Engine Failures on Ground

5.1.1.1 ENGINE FAILURE DURING TAKEOFF RUN

Throttle: .....IDLE
Brakes: .....APPLY AS NEEDED
Fuel pump 1 & 2: .....BOTH *OFF*
Flap: .....*ZERO*
MASTER Key/switch: .....*OFF*
When the airplane is under control
LANE A/B switches: .....OFF
Fuel selector valve: .....OFF

5.1.2 Engine Failure during Flight

5.1.2.1 ENGINE FAILURE IMMEDIATELY AFTER TAKEOFF (T/O Flaps)

Airspeed: .....60 KIAS

Find a suitable place on the ground to land safely. The landing should be planned straight ahead with only small changes in directions not exceeding 45° to the left or 45° to the right

IF UNABLE TO RESTART THE ENGINE

Flaps: .....AS REQUIRED
Throttle: .....IDLE
Fuel pump 1 & 2: .....BOTH *OFF*
MASTER Key/switch: .....*OFF*
Fuel selector valve: .....OFF

5.1.2.2 IRREGULAR ENGINE RPM

Throttle: .....CHECK & REGULATE FRICTION
Engine monitor: .....CHECK
Fuel quantity indicators: .....CHECK Q.ty
Fuel pump 1 & 2: .....CHECK BOTH ON
Lane A & B: .....CHECK BOTH ON
Fuel selector valve: .....SWITCH on the other tank
If the engine continues to run irregularly:
Land as soon as possible

5.1.2.3 LOW OIL PRESSURE

Oil temperature: .....CHECK
If the temperature tends to increase:
If stable within the green arc: .....LAND as soon as possible
If increasing: .....LAND as soon as possible and be alert for impending engine failure

5.1.2.4 IN-FLIGHT ENGINE RESTART

Fuel selector valve: .....LEFT or RIGHT
Throttle: .....MIDDLE POSITION
Fuel pump 1 & 2: .....BOTH ON
Lane A & B: .....BOTH ON
Master Key/Switch: .....CHECK ON
Start Power Switch: .....KEEP ON and...
Starter Button: .....ON

If the restart attempt fails:
Procedure for a forced landing: .....APPLY
In case of an engine restart:
Land as soon as possible monitoring the engine parameters

5.1.2.5 ENGINE OUT GLIDE

Flaps: .....RETRACT
Speed: .....65 KIAS
Electric equipments: .....OFF
In-flight engine restart: .....If conditions permit, try to restart

NOTE

Glide ratio is 12.8 therefore with 1000 ft of altitude, it is possible to cover ~2 nautical miles in zero wind conditions.

5.2 Smoke and Fire

5.2.1 Engine Fire while parked

Fuel Pump 1&2: .....BOTH OFF
Fuel selector valve: .....OFF
Cabin heat: .....OFF
Master key/switch: .....OFF
Parking brake: .....SET
Escape rapidly from the aircraft

5.2.2 Engine Fire during Takeoff

Throttle: .....IDLE
Fuel Pump 1&2: .....BOTH OFF
Brakes: .....AS NEEDED
With the airplane is under control:
Fuel selector valve: .....OFF
Cabin heating: .....OFF
Master key/switch: .....OFF
Parking brake: .....SET

Escape rapidly from the aircraft. Extinguish fire with a suitable fire extinguisher. Do not use water!

5.2.3 Engine Fire in-flight

Fuel Pump 1&2: .....BOTH OFF
Fuel selector valve: .....OFF
Cabin heat: .....OFF
Lane A: .....OFF
Lane B: .....OFF
Master key/switch: .....OFF
Cabin vents: .....OPEN

Do not attempt an in-flight restart

Procedure for a forced landing: .....APPLY

5.2.4 Cabin Fire during Flight

Cabin heat: .....OFF
Cabin vents: .....OPEN
Master key/switch: .....OFF

Try to choke the fire. Direct the fire extinguisher towards flame base

Procedure for a forced landing: .....APPLY

5.3 Landing Emergency

FORCED LANDING WITHOUT ENGINE POWER

Establish: .....65 KIAS
Locate most suitable terrain for emergency landing, upwind if possible
Fuel Pump 1&2: .....BOTH OFF
Fuel selector valve: .....OFF
Lane A: .....OFF
Lane B: .....OFF
Master key/switch: .....OFF
Safety belts: .....TIGHTEN
Doors: .....UNLATCHED
Landing assured:
Flaps: .....AS NECESSARY
Master key/switch: .....OFF
Touchdown Speed: .....45 KIAS

POWER-ON FORCED LANDING

Descent: .....ESTABLISH
Establish: .....65 KIAS
Flaps: .....AS NECESSARY
Select terrain area most suitable for emergency landing and flyby checking for obstacles and wind direction
Safety belts: .....TIGHTEN
Doors: .....UNLOCK
Landing assured:
Flaps: .....AS NECESSARY
Fuel Pump 1&2: .....BOTH OFF
Fuel selector valve: .....OFF
Lane A: .....OFF
Lane B: .....OFF
Master key/switch: .....OFF

LANDING WITH A FLAT NOSE TIRE

Pre-landing checklist: .....COMPLETE
Flaps: .....FULL
Land and maintain aircraft NOSE HIGH attitude as long as possible

LANDING WITH A FLAT MAIN TIRE

Pre-landing checklist: .....COMPLETE
Flaps: .....FULL

NOTE

Align the airplane on the opposite side of runway to the side with the defective tire to compensate for change in direction, which is to be expected during final rolling.
Touchdown with the GOOD TIRE FIRST and hold aircraft with the flat tire off the ground as long as possible.

5.4 Recovery from Unintentional Spin

Power: .....IDLE
Ailerons: .....NEUTRAL (and Flaps Up)
Rudder: .....FULL OPPOSITE
Elevator: .....THROUGH NEUTRAL
HOLD THESE INPUTS UNTIL ROTATION STOPS, THEN:
Rudder: .....NEUTRAL
Elevator: .....RECOVER

NOTE

Use elevator control to recover to straight and level or a climbing attitude

NOTE

The first letter in each of the four primary recovery inputs spells out the acronym, PARE (pronounced "pair"). PARE is a convenient memory aid that points the way to spin recovery. The PARE format mimics the most docile spin configuration possible, affording the greatest response to recovery inputs. Errant control inputs that may aggravate the spin are avoided in the process. As a mental checklist, it forces you to focus on the appropriate recovery actions. Calling each item out loud also tends to reinforce the physical inputs.

5.5 Other Emergencies

5.5.1 UNINTENTIONAL FLIGHT INTO ICING CONDITIONS

Get away from icing conditions by changing altitude or direction of flight in order to reach an area with warmer external temperature.
Increase rpm to avoid ice formation on propeller blades.
Cabin heat: .....ON

WARNING

In case of ice formation on wing leading edge, stall speed may increase.

5.5.2 Trim System Failure - locked control

In case the trim control should not respond, act as follows:
Fuses / breakers .....CHECK
LH/RH switch .....CHECK for correct position
Airspeed .....Adjust speed to control aircraft without excessive stick force

Land aircraft as soon as possible

5.6 Engine Electronic injection system failures

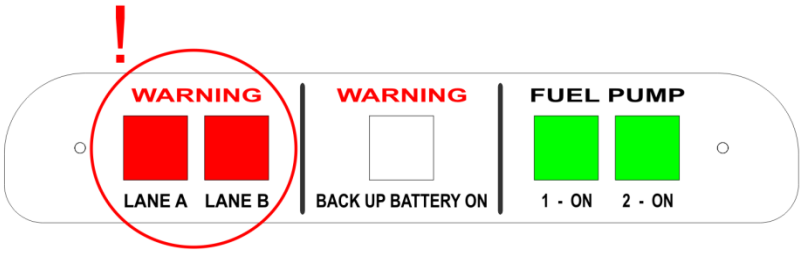
Following the possible failures related with the engine electronic fuel injection and management system. Even if extremely remote due to the redundancy of the system, these failures must be correctly managed and read by the pilot which has the responsibility to follow the instructions reported here and in the 912iS Operator's Manual.

- FAILURES RELATED WITH LANE A e LANE B LIGHTS
- ENGINE NOT RESPONDING TO POWER INPUTS
- ENGINE VIBRATIONS
- EMS GENERATOR FAILURE
- EXCEEDING MAXIMUM COOLANT TEMPERATURE
- EXCEEDING MAXIMUM OIL TEMPERATURE
- OIL PRESSURE BELOW MINIMUM - IN FLIGHT
- OIL PRESSURE BELOW MINIMUM - ON GROUND
- OIL PRESSURE ABOVE PERMITTED RANGE AT LOW AMBIENT TEMPERATURES
- FUEL PRESSURE OUTSIDE RANGE
- MAXIMUM PERMISSIBLE EGT EXCEEDED
- EMS VOLTAGE SUPPLY BELOW THE MINIMUM REQUIRED LEVEL
- THE SPRAG CLUTCH DECOUPLES NOT FROM THE STARTER

Some of the mentioned failures can be detected by the annunciator panel's lights on the cockpit centerline - upper position. The panel is made by 5 lamps:

LANE A/B: they illuminate during the pre-start check and when some problem occurs. They can flash or be permanently ON.
BACK UP BATTERY ON: it illuminates when the related guarded switch is in ON position (check EMS GENERATOR FAILURE procedure);
FUEL PUMP: they illuminate when the related fuel pump is drawing current (is functioning)

FAILURES RELATED WITH LANE A e LANE B LIGHTS



If:

1. One lamp is ON, the other is OFF;
2. One lamp is ON, the other is flashing;
3. Both lamps are ON;
4. Both lamps flashing.

LAND AS SOON AS POSSIBLE

If one lamp is flashing while the other is OFF the flight operations are limited for maximum 10 hours

LANE A	LANE B	Action
OFF	Flashing	Limited flight operation
Flashing	OFF	Limited flight operation
OFF	ON	Land the aircraft
Flashing	Flashing	Land the aircraft
Flashing	ON	Land the aircraft
ON	OFF	Land the aircraft
ON	Flashing	Land the aircraft
ON	ON	Land the aircraft

ON = permanently on

HEAVY ENGINE VIBRATIONS

In this case, usually experienced with a loss of power, engine may operate with only 3 cylinders. Thus, flight operations are limited and the maintenance check must be performed on the aircraft before next flight.

EMS GENERATOR FAILURE

If the A alternator (TO BE NOT CONFUSED WITH "A" LANE) stops its function or has a failure, the EMS switches automatically on alternator "B" in order to ensure the correct engine functions.

WARNING

!Due to this switch the battery is not more charged!

In the event that both alternators fail, the engine stops. In this case the back up battery switch can be activated: from this moment the engine is functioning only on the aircraft battery limiting the engine operation to few minutes if the external generator is not installed. For this reason avoid to keep turned ON any non necessary avionic and/or system.

The back up battery lamp means that the related switch is into ON position

EXCEEDING MAXIMUM COOLANT TEMPERATURE

- Decrease the throttle to the minimum necessary
- Land as soon as practical
- Register the exceeding on the pilot's and engine logbook indicating duration and reached temperature
- Perform a maintenance inspection
- Check the ECU error log file

EXCEEDING MAXIMUM OIL TEMPERATURE

- Decrease the throttle to the minimum necessary
- Land as soon as practical
- Register the exceeding on the pilot's and engine logbook indicating duration and reached temperature
- Perform a maintenance inspection
- Check the ECU error log file

OIL PRESSURE BELOW MINIMUM - IN FLIGHT

- Decrease the throttle to the minimum necessary
- Land as soon as practical
- Register the exceeding on the pilot's and engine logbook indicating duration and reached pressure
- Perform a maintenance inspection on the oil system
- Check the ECU error log file

OIL PRESSURE BELOW MINIMUM - ON GROUND

- Immediately stop the engine
- Register on the pilot's and engine logbook
- Perform a maintenance inspection on the oil system

OIL PRESSURE ABOVE PERMITTED RANGE AT LOW AMBIENT TEMPERATURES

- Decrease the throttle and check the pressure after the oil temp. increment
- If the oil pressure indication does not change, it is possible that the indication is faulty

- Register on the pilot's and engine logbook
- Perform a maintenance inspection on the oil system

FUEL PRESSURE OUTSIDE RANGE

- Decrease the throttle to the minimum necessary
- Land as soon as possible
- If fuel pressure is too high, switch OFF the PUMP 2
- If fuel pressure is too low and PUMP 2 is OFF, switch it ON
- Register the exceeding on the pilot's and engine logbook indicating duration and reached pressure
- Perform a maintenance inspection
- Check the ECU error log file

TENSIONE DI ALIMENTAZIONE EMS SOTTO IL LIMITE

- Limit the flight operations if the A or B tension is OK
- Refer to the EMS GENERATOR FAILURE section
- Decrease the throttle to the minimum necessary
- Land as soon as possible
- Register the event on the pilot's and engine logbook
- Perform a maintenance inspection
- Check the ECU error log file

THE SPRAG CLUTCH DECOUPLES NOT FROM THE STARTER

- Stop the engine - fire risk caused by starter overheating
- Throttle: IDLE
- Lane A & B: BOTH OFF
- Master key/switch: OFF
- Perform a maintenance check

SECTION 6
NORMAL PROCEDURES

6 Introduction

Section 6 contains checklists and the procedures for normal operation.

6.1 Removing and Reinstalling the Engine Cowling

6.1.1 Upper Cowling

Parking brake: .....ON
Fuel selector valve: .....OFF
Master key/switch: .....OFF
Lane A,B: .....OFF

- Unlatch all four butterfly Cam-locks mounted on the top cowling by rotating them 90° counter clockwise while slightly pushing inwards
- Remove the screws holding the top canopy and doors to the bottom one
- Remove top engine cowling paying attention to propeller shaft passing through nose

To reinstall:

- Rest cowling horizontal insuring proper fitting of nose base reference pins
- Reinstall the four screws
- Secure latches by applying light pressure, check for proper assembly and fasten Cam-locks

WARNING

Butterfly Cam-locks are locked when tabs are horizontal and open when tabs are vertical. Verify tab is below latch upon closing.

6.1.2 Lower Cowling

After disassembling upper cowling

- Move the propeller to a horizontal position
- Using a screwdriver, remove all screws that fix the lower cowling on the fuselage sides
- Disconnect the ram-air duct from the NACA intake
- Disconnect the landing light connector if installed
- Remove cowling with downward motion

For re-installation follow reverse procedure

6.2 Checklist Procedures

6.2.1 Pre-Flight Inspection

Before each flight, it is necessary to carry out a complete inspection of the aircraft starting with a cabin inspection followed by an external inspection.

6.2.1.1 Cabin Inspection

All required paperwork: .....ONBOARD
Weight and balance: .....CHECK
Safety belts used to lock controls: .....RELEASE
Flight controls: .....CHECK
Check for freedom of movement and proper direction
Parking brake: .....SET
Friction lock: .....CHECK
Throttle: .....IDLE
Master key/switch: .....OFF
Lane A&B: .....OFF
Fuel Pump 1&2: .....OFF

Master key/switch: .....ON
Avionic Master (if installed): .....ON
EMS: .....ON (wait for the complete software loading)

Fuel Pump 1: .....ON
Start Power Switch: .....KEEP ON
Check the FUEL PUMP 1 is working and green lamp is ON
Start Power Switch: .....RELEASE
Fuel Pump 1: .....OFF

Repeat the squared procedure with PUMP 2

Flaps: .....EXTEND
Visually check that flaps are fully extended and instrument indication is correct
Trim: .....CHECK
Activate control in both directions checking for travel limits and instrument indication
Stall warning: .....CHECK
Navigation lights and strobe light: .....CHECK

NOTE
Avoid the strobe light working for many time when the engine is not running

Landing light: .....CHECK
Fuel Tank levels: .....CHECK
Master key/switch: .....OFF
Avionic Master (if installed): .....OFF
EMS: .....OFF

First Aid kit: .....CHECK
Hand-held fire extinguisher: .....CHECK

WARNING
Fuel level indicated by the fuel quantity indicators (on the instrument panel) is only indicative. For flight safety, pilot should verify actual fuel quantity visually in tanks before takeoff.

6.2.1.2 External Inspection

It is best to follow to follow the external inspection in the station order outlined in fig. 6-1 so nothing is missed.
Visual inspection is defined as follows: check for defects, cracks, detachments, excessive play, and unsafe or improper installation as well as for general condition. For control surfaces, visual inspection also involves additional checks for freedom of movement and security.

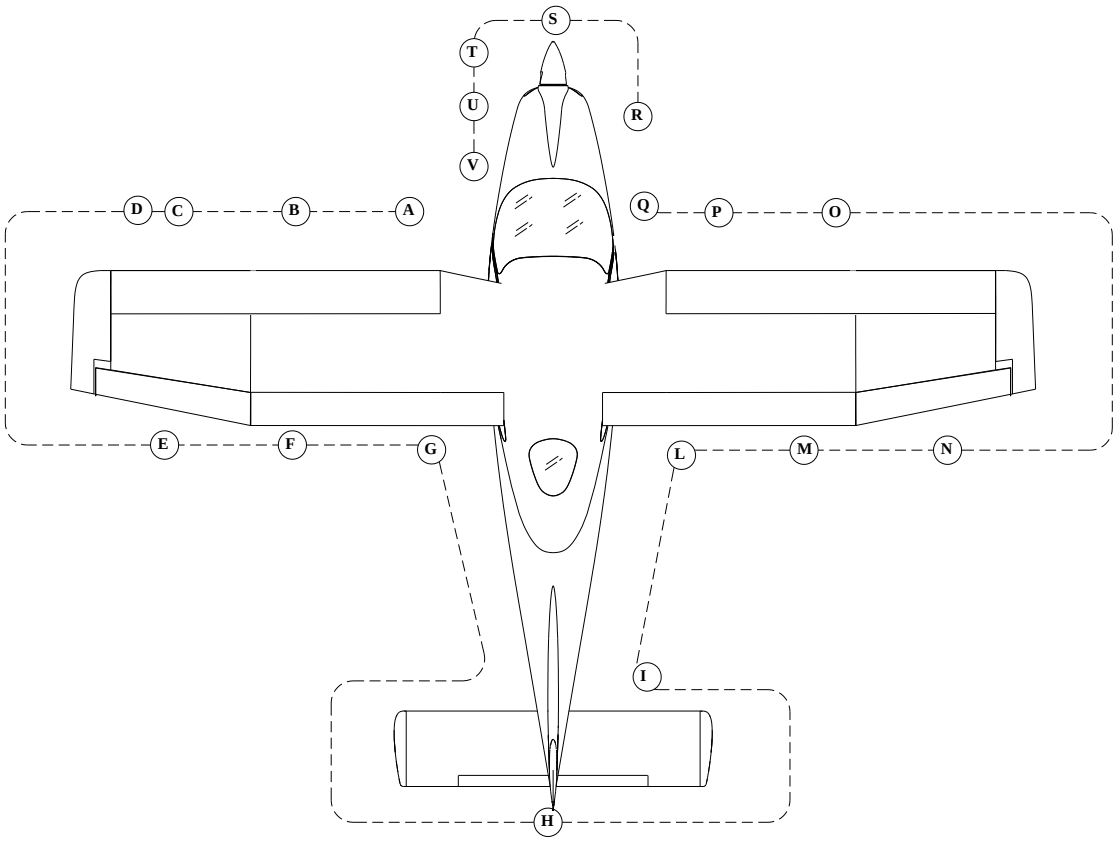


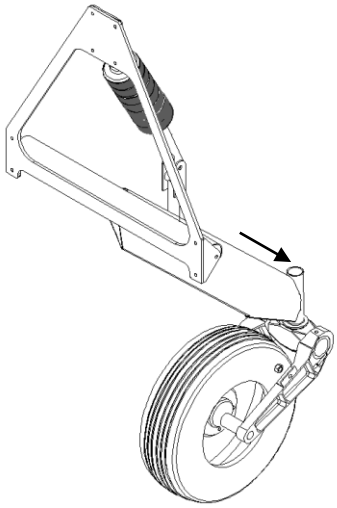
FIG. 6-1

A. Left fuel filler cap: CHECK visually for desired fuel level and secure
B. Pitot tube: Remove pitot tube cover and check that the pitot tube mounted on the left wing is unobstructed. Do not blow inside pitot tube.
C. Left side leading edge and wing skin: CHECK for damage
D. Left aileron: CHECK for damage, freedom of movement: Left tank vent: CHECK for obstructions
E. Left flap and hinges: CHECK security
F. Left main landing gear: CHECK inflation 40 PSI (2.8 bar), tire condition, alignment, fuselage skin condition
G. Horizontal tail and tab: CHECK for damage, freedom of movement
H. Vertical tail and rudder: CHECK for damage, freedom of movement (**NOTE:** do not move rudder unless nosewheel is lifted off the ground on steerable NLG)
I. Right side main landing gear: CHECK inflation 40 PSI (2.8 bar), tire condition, alignment, fuselage skin condition
J. Right flap and hinges: CHECK security
K. Right aileron: CHECK for damage, freedom of movement; Right side tank vent: check for obstructions
L. Right leading edge and wing skin: CHECK for damage

M. Stall indicator micro switch (if available): Check freedom of movement
N. Right side fuel filler cap: CHECK visually for desired fuel level and secure
O. Nose wheel strut and tire: CHECK inflation 15 PSI (1.0 bar) or 32 PSI (2.2 bar); tire condition and condition of oleopneumaticr shock absorber discs or rubber if a steerable NLG is installed.

WARNING

If free castoring NLG is installed, the force needed to rotate it when off from the ground must be 5 to 6kg if pulled on the wheel axle direction as shown in the next picture



P. Check the right static port for obstructions.
Q. Propeller and spinner condition: CHECK for nicks and security
R. Open the upper engine cowling doors and perform the following checklist:
- Check no foreign objects are present
- Check the cooling system for leaks, check coolant reservoir level, and insure radiator honeycomb is unobstructed
- Check oil system for losses, check oil reservoir level, and insure radiator honeycomb is unobstructed
- Check fuel system. Open fuel valve and inspect fuel lines for leaks. Drain Gascolator using a cup to collect fuel. Make sure that valve is closed and not leaking. Check for water or other contaminants.
- Engine mounts: CHECK for integrity and control the bolts reference lines
- Intake system: Check connection and integrity of air intake system, visually inspect that ram air intake is unobstructed
- All parts: Check they are secure or safety wired
- Exhaust system: Check for general conditions, cracks and presence of springs

WARNING

Drain fuel with aircraft parked on level surface

R. Engine cowling doors:.....CLOSE
S. Landing Light: .....CHECK
T. Tow bar and chocks: .....REMOVE

6.2.1.3 BEFORE START

Parking brake: .....SET
Flight controls:.....CHECK
Throttle: .....IDLE
Friction lock: .....ADJUST
Master key/switch: .....ON
Avionic Master (if installed): .....ON
EMS: .....ON
Trim control: .....CENTERED
Trim switch: .....LEFT (pilot in command)
Landing light: .....CHECK
Fuel quantity: .....CHECK

NOTE
Compare the fuel levels read by the fuel quantity indicators with the quantity present in the tanks

WARNING
Be sure that the fuel valve is NOT in OFF position

Master key/switch: .....OFF
Seat position and safety belts: .....ADJUST
If flying solo:
Passenger belt: .....SECURED / CLEAR FROM CONTROLS
Doors: .....CLOSED AND LOCKED

6.2.1.4 STARTING ENGINE

Brakes: .....SET
Breakers: .....ALL ON
Fuel selector valve: .....LEFT or RIGHT
Master key/switch: .....ON
Avionic Master (if installed): .....ON
EMS: .....ON (wait for the complete software loading)
Throttle: .....IDLE
LANE A/B: .....BOTH ON
Fuel Pump 1 and 2: .....BOTH ON
NOTE: fuel pumps will start running as soon as the start power switch will be on

START POWER SWITCH: .....KEEP **ON**
(keep ON by finger until the last check in this square is reached)

LANE A/B LAMPS: .....Wait for the functional check
Fuel Pump 1 and 2 LAMPS: .....BOTH ON and noise from pumps
Propeller area: .....CLEAR
Starter button: .....PUSH
rpm: 2400-2600
LANE A/B voltage (from EMS): .....check that at least 13V is reached

Battery voltage (from EMS): .....check that at least 13V is reached
START POWER SWITCH: .....RELEASE
Oil Pressure: .....Check in range within 10sec
FUEL PUMP 1: .....Switch OFF and check if the PUMP 2 continues to work
FUEL PUMP 1: .....Switch ON again

FUEL PUMP 2: .....Switch OFF and check if the PUMP 1 continues to work
FUEL PUMP 2: .....Switch ON again

LANE A/B LAMPS: .....Check OFF

Engine parameters: .....Within limits

WARNING
If oil pressure doesn't rise within 10 seconds, shut down engine
The maximum oil pressure for cold conditions is 7 bar

6.2.1.5 BEFORE TAXI

Radio and Avionics: .....ON
Altimeter: .....SET
Flight Instruments:.....SET, CHECK
Parking brake: .....OFF

6.2.1.6 TAXI

Brakes: .....CHECK
Flight instruments: .....CHECK

6.2.1.7 BEFORE TAKE-OFF

Parking brake: .....ON
Fuel selector valve: .....ON (LH or RH)
Engine instruments: .....CHECK

- Oil temperature: .....90°-110 ° C
- Oil pressure:..... 2 - 5 bar
- Fuel pressure: ..... 2.8 – 3.2 bar

Battery charge:.....CHECK and AMPS > 0
LANE A and B tension: .....CHECK > 13V
Throttle: .....4000 RPM
LANE A switch: .....OFF
Rpm loss:.....max 180 rpm
LANE A switch: .....ON
LANE B switch: .....OFF
Rpm loss:.....max 180 rpm
LANE B switch: .....ON

Throttle: .....IDLE

Fuel quantity indicators: .....CHECK
Fuel selector valve: .....LEFT or RIGHT
Fuel pumps: .....BOTH ON
Flaps: .....T/O
Flight controls:.....CHECK
Trim: .....CENTERED
Seat belts: .....FASTENED
Doors: .....CLOSED AND LOCKED
Transponder (if installed): .....ALT

6.2.1.8 TAKEOFF AND CLIMB

Parking brake: .....OFF
Taxi to line-up:
Magnetic compass and DG: .....CHECK, SET
Throttle: .....FULL

NOTE

Static RPM is approximately 5100 ± 250 rpm
Engine instruments: .....CHECK
Vr (Rotation speed): .....~ 48 KIAS

NOTE

Rotate to takeoff attitude and accelerate to a climb speed of 60 knots with 15° Flaps
Above 300' AGL:
Flaps: .....RETRACT
Establish Vy clean: .....69 KIAS
Trim: .....ADJUST
Cruise climb: .....65 – 70 KIAS

6.2.1.9 CRUISE

Reaching cruise altitude:
Throttle: .....SET (5500 RPM max)
Engine instruments: .....CHECK

- Oil temperature: .....90°-110 ° C
- Oil pressure:..... 2 - 5 bar
- Fuel pressure: ..... 2.8 – 3.2 bar

CAUTION

Normal position of the fuel selector is LEFT or RIGHT. Check fuel balance during flight

NOTE

Check fuel gauges frequently with one tank shut off to prevent fuel starvation.

6.2.1.10 BEFORE LANDING

Landing light (if installed): .....ON
On downwind leg: Speed and flaps at your discretion based on traffic, etc.
Traffic:.....CHECK
Flaps: .....AS DESIRED
Optimal touchdown speed (full flaps):.....43 KIAS

6.2.1.11 BALKED LANDING

Throttle: .....FULL
Airspeed: .....63 KIAS
Flaps position: .....TO / 15 degrees
Airspeed: .....63 KIAS
Trim: .....ADJUST
Above 300' AGL:
Flaps: .....RETRACT
Establish Vy clean: .....69 KIAS
Trim: .....ADJUST
After takeoff checklist: .....COMPLETE

6.2.1.12 AFTER LANDING

Taxi at an appropriate speed for conditions
Flaps: .....UP
Transponder: .....STANDBY

6.2.1.13 ENGINE SHUT DOWN

Keep engine running at 3000 rpm for about 2 minutes in order to reduce latent heat. This can be accomplished during taxi.

NOTE

Do not ride the brakes to facilitate cool down. If necessary, stop for one minute with parking brake on to cool the engine.

Avionic equipment (except the Strobe Light): .....OFF
Fuel Pumps: .....BOTH OFF and immediately...
Lane A/B: .....BOTH OFF
Avionic Master (if installed): .....OFF
EMS (if installed): .....OFF
Strobe light: .....OFF
Master key/switch: .....OFF
Fuel selector valve: .....OFF
Parking brake: .....ON
Chocks: .....INSTALL

6.2.1.14 POSTFLIGHT CHECK

Pitot tube cover: .....INSTALL
Aircraft: .....TIED DOWN
Control locks: .....INSTALLED
Chocks: .....INSTALLED
Parking brake: .....OFF
Doors: .....CLOSED AND LOCKED

SECTION 7
GROUND HANDLING & SERVICE

7 Introduction

This section contains factory-recommended procedures for proper ground handling and routine care and servicing. It also identifies certain inspection and maintenance requirements, which must be followed if the aircraft is to retain its new-plane performance and dependability. It is recommended to follow a planned schedule of lubrication and preventive maintenance based on climatic and flying conditions encountered locally.

7.1 Aircraft Inspection Periods

Inspection intervals occur at 100 hours and in accordance with special inspection schedules, which are added to regularly, scheduled inspections. Correct maintenance procedures are described in the aircraft's Service Manual or in the engine's Line Maintenance Manual.

7.2 Aircraft Alterations or Repairs

For repairs, refer to aircraft's Line Maintenance Manual and/or contact Tecnam customer Service.

7.3 Ground Handling

7.3.1 Towing

The use of a towbar is recommended even if, pulling on the propeller near the axle you can safely move the aircraft. Aircraft may be steered by turning it or, for steep turns, by pushing lightly on tailcone to lift nose wheel.

7.3.2 Parking and Tiedown

When parking airplane outdoors, head it into the wind and set the parking brake. It is preferable to use chocks if available.
Tie the airplane down in severe weather and high wind conditions. Tie-down ropes shall be fastened to the wing attachments and anchoring shall be provided by ramp tie-downs. Nose gear fork can be used for front tie-down location or the tail can be tied down with the optional Tiedown point.
Secure the flight controls to avoid possible weathervane damage to moving surfaces. Seatbelts may be used to latch control stick to prevent its movement.

7.3.3 Jacking

Given the light empty weight of the aircraft, lifting one of the main wheels can easily be accomplished even without the use of hydraulic jacks. For an acceptable procedure please refer to the Line Maintenance Manual.

7.3.4 Leveling

Aircraft leveling may become necessary to check wing incidence, dihedral or the exact location of CG. Longitudinal leveling verification is obtained by placing a level longitudinally, over the aft part of the baggage compartment floor. See maintenance manual for instructions.

7.3.5 Road Transport

It is recommended to secure tightly all aircraft components onto the cart to avoid damage during transport. Minimum cart size is 7x2.5 meters. It is suggested to place wings under the aircraft's bottom, secured by specific clamps. Secondary components such as stabilator and struts shall be protected from accidental hits using plastic or other material. For correct rigging and de-rigging procedure, refer to the Line Maintenance Manual.

7.3.6 Cleaning and Care

To clean painted surfaces, use a mild detergent such as shampoo normally used for car finish; use a soft cloth for drying.
The plastic windshield and windows should never be dusted when dry; use lukewarm soapy water and dry using chamois only. It is possible to use special glass detergents but, in any case, never use products such as gasoline, alcohol, acetone or other solvents.
To clean cabin interior, seats, upholstery and carpet, it is generally recommended to use foam-type detergents.

7.3.7 Ground anchorage

The airplane should be moored for immovability, security and protection. FAA Advisory Circular AC 20-35C, Tiedown Sense, contains additional information regarding preparation for severeweather, tiedown, and related information. The following proceduresshould be used for the proper mooring of the airplane:

1. Head the airplane into the wind if possible.
2. Retract the flaps.
3. Chock the wheels.
4. Lock the control stick using safety belts.
5. Secure tie-down ropes to the wing tie-down rings and to the tailring at approximately 45-degree angles to the ground, in longitudinal direction (see Fig.8-1).

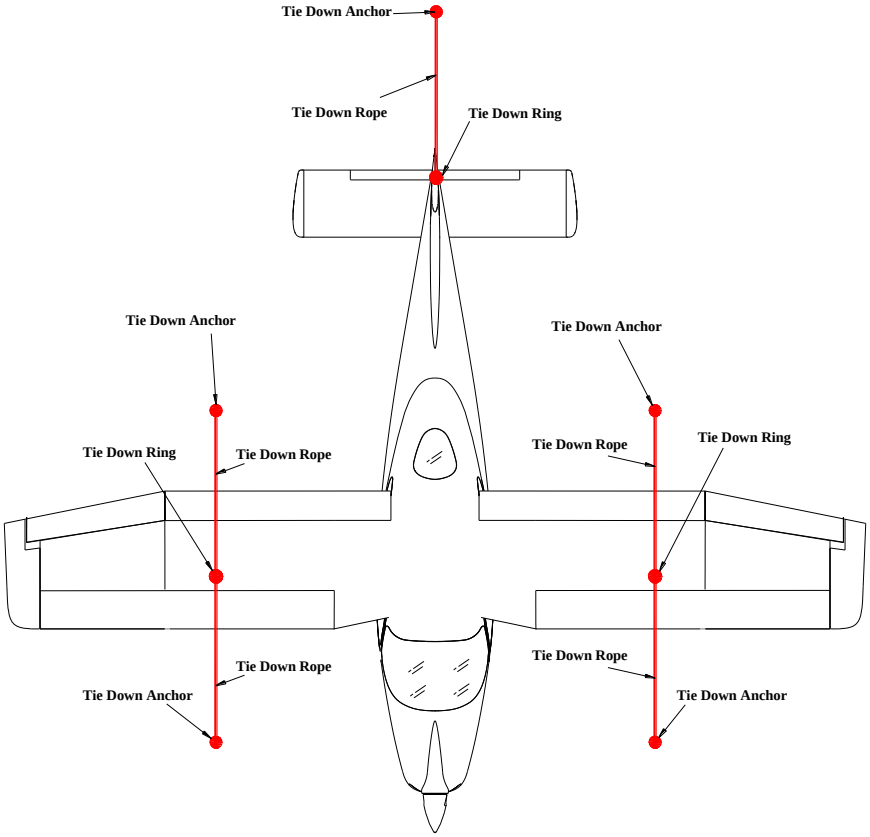


Fig. 7-1. CABLE POCITIONING

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SECTION 8
MARKINGS AND PLACARDS

Magnetic compass compensation table

To compensate the deviation errors of the magnetic compass, the following correction table is located just below the compass:

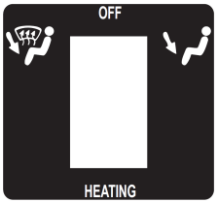
For	N	30	60	E	120	150
Steer						
For	S	210	240	W	300	330
Steer						

DATE RADIO ON AIRPATH

Cabin heat

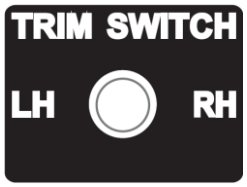
The cabin heat (if available) control knob is located on central tunnel panel area just near the throttle control. The cabin's heat control is marked with this placard.

or

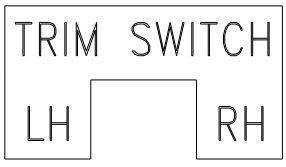


Trim switch

The trim shunt control is located on the upper left area of the instrument panel alternatively allocating trim control to either RH or LH control stick. The following placard is positioned just above of it.



or



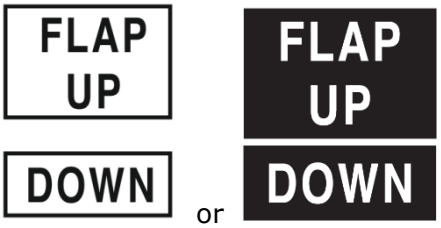
Breakers

Breakers are located on the lower/right side of the instrument panel and each fuse is individually marked

Depending on the specific equipment installed on the a/c the type and position of the breakers could vary.

Flaps

The flap control switch is located on the lower portion of the instrument panel. The following placards (15x10mm the upper, 6x15mm the lower) are just next to it.



Annunciator Panel

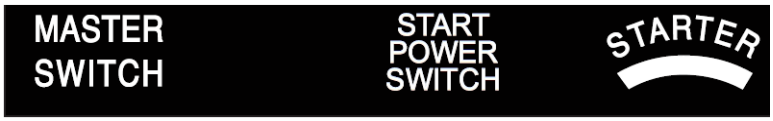
5 lamps on the top of instrument panel show the following information:

Fuel selector valve

Fuel shutoff and selector valve is located on central section of cockpit panel. It controls the fuel coming from the tanks making the pilot able to switch LEFT TANK, RIGHT TANK and OFF.

Master, Start Power and Starter

On the lower part of the instrument panel are located, in order, the Master Switch , the Start Power Switch and the starter placarded as following:

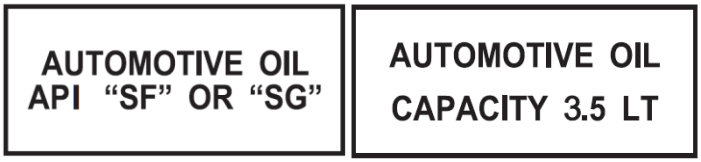


Baggage compartment

A placard (30x50mm) indicating the maximum weight and to fasten the baggage's retain harnesses, is present visible into the baggage compartment.

Oil tank reservoir

On the oil tank reservoir are present two placards (30x12mm) indicating the type and quantity of engine's oil stored into the whole system (reservoir, hoses and engine).



Cooling system overflow tank

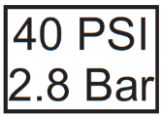
Located on the overflow tank inside the engine cowling left side, is located the following placard (60x15mm):

Brake oil reservoir

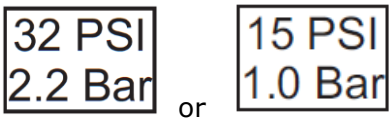
On the cap of the brake's oil tank, is a placard indicating the type of oil that must be used.

Tire pressures

On each steel spring leaf is a placard indicating the main tires inflating pressure (18x6mm):



On the nose gear is located the following placard indicating the nose tire inflating pressure: (Left for GOODYAR/AIR-TRAC tire, Right for SAVA tire)



Doors

Next latch is located a placard that show the correct turn of key for open the door (30x20mm):

Identification plate

The following placard is located on the pilot side of the empennage forward of the stabilator and made of stainless steel.

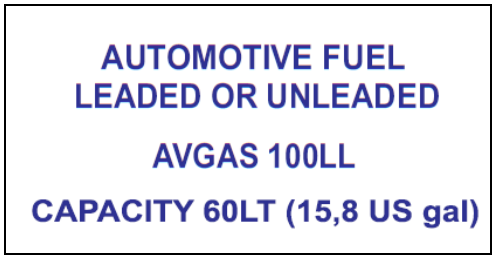
Builder:
CostruzioniAeronauticheTecnam
Model: P2008
Serial number: XXX

Static port

On each static port is locate a placard diam 20mm:

Fuel Tank

Next each fuel tank there are the following placards :



Parking Brake

On parking brake is located the following placard:

Bright Knob

The dimmer - bright knob (if available) is located on the instrument panel. In correspondence of it is located the following placard :

Battery

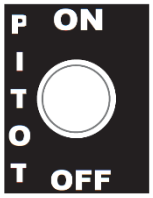
In correspondence of the battery position, on the panel inside the aircraft is located the following placard:

ELT

In correspondence of the ELT position, on the panel inside the aircraft is located the following placard:

Pitot Heater Switch

The pitot heater switch (if available) is located on the instrument panel. In correspondence of it is located the following placard :



Day / Night Switch

The day/night switch (if available) is located on the instrument panel. In correspondence of it is located the following placard :

Limitation Placards

Next to the airspeed indicator is the following placard (6x52mm).

Maneuvering speed V_A=98 KIAS OR Maneuvering speed V_A = 98 KIAS

On the pilot's panel a placard will state the following:

NO INTENTIONAL SPINS OR NO INTENTIONAL SPINS

Located on the instrument panel is the following placard:

This aircraft was manufactured in accordance with Light Sport aircraft airworthiness standards and does not conform to standard category airworthiness requirements

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SECTION 9
SUPPLEMENTS

Aircraft S/N:_____	Marks:_____	Date:_____

TECNAM P2008 SUPPLEMENT LIST						
Supp. No.	Title	Rev.	Date	APPLICABLE		Mark if installed
				YES	NO	
S1	Variable pitch propeller	01	Jun 10, 2021			
S2	Speed increment	00	Apr 19, 2018			
S3	GALAXY GRS RESCUE PARACHUTE	00	Feb 02, 2021			
S4	Garmin G3X Touch Avionic Suite	00	Feb 26, 2021			

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RECORD OF REVISIONS

Any revision to the Supplements is recorded: a Record of Revisions is provided at the front of this Supplement List and the operator is advised to make sure that the record is kept up-to-date.

The revision code is numerical and consists of the number "0"; subsequent revisions are identified by the change of the code from "0" to "1" for the first revision to the basic publication, "2" for the second one, etc.

These pages will be updated to the current regular revision date.

NOTE: It is the responsibility of the owner to maintain this handbook in a current status when it is being used for operational purposes.

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LIST OF EFFECTIVE PAGES

The List of Supplements' Effective Pages (LOSEP), applicable to manuals of every operator, lists all the basic Supplement pages.
Pages affected by the current revision are indicated by an asterisk (*) following the revision code.

Supplement	Pages	Revision
S1	1 thru 11,13 thru 26	00
	12	01
S2	1 thru 10	00
S3	1 thru 6	00
S4	1 thru 8	00

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USEFUL LINKS

ROTAX Technical Publications

TECNAM Official Website

TECNAM Customer Support Contacts

SUPPLEMENT S1
VARIABLE PITCH PROPELLER

WARNING

This supplement must be inserted into the POH if the equipment described is installed onboard

Revision n. 01
Date: July 31, 2023

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S1-1 - GENERAL

The following data represent supplementary information for safe and efficient operation of the aircraft if equipped with the MTV-33 Variable Pitch Propeller. For further details, see MT-Propeller Docs E-2285 (Propeller) and E-1048 (Governor).

Propeller Data	
Manufacturer	MT Propeller
Model	MTV-33-1-A/175-200
Number of blades	2
Diameter	178 cm (no reduction permitted)
Type	Variable pitch

Governor Data	
Manufacturer	MT Propeller
Model	P-850-12UL
Type	Hydraulic

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S1-2 – LIMITATIONS

No further limitations.

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S1-3 - WEIGHT AND BALANCE

Weighing and loading procedures are unchanged.

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S1-4 – PERFORMANCES

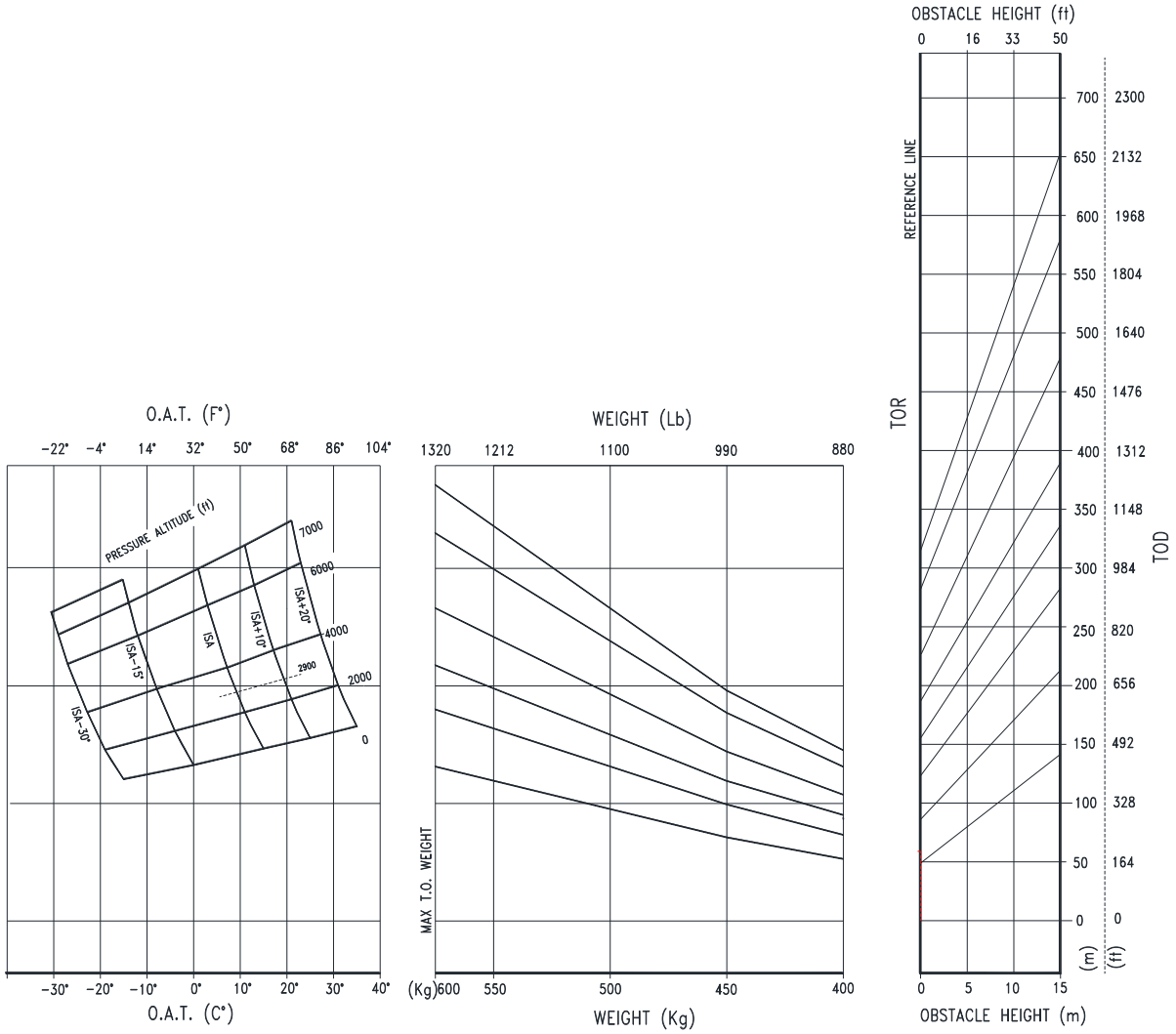
The following paragraphs supersede those reported in Section 4 of the basic POH.

S1-4.6 Takeoff Performance

TAKEOFF DISTANCE
Conditions:

Flaps: 15°	Runway: dry, compact, grass
Engine: full throttle	Slope: 0° Wind: zero
Vr = 48 KIAS [45KCAS]	V_{LO} = 50 KIAS [46KCAS]
Vx flaps 15 = 63 KIAS [62KCAS]	R/C ≥ 200 ft/min

Decrease distances by 10% for each 10 Knots of headwind. Increase distances by 20 % for each 10 Knots of tailwind
For dry and paved runway operation decrease ground run by 6 %.

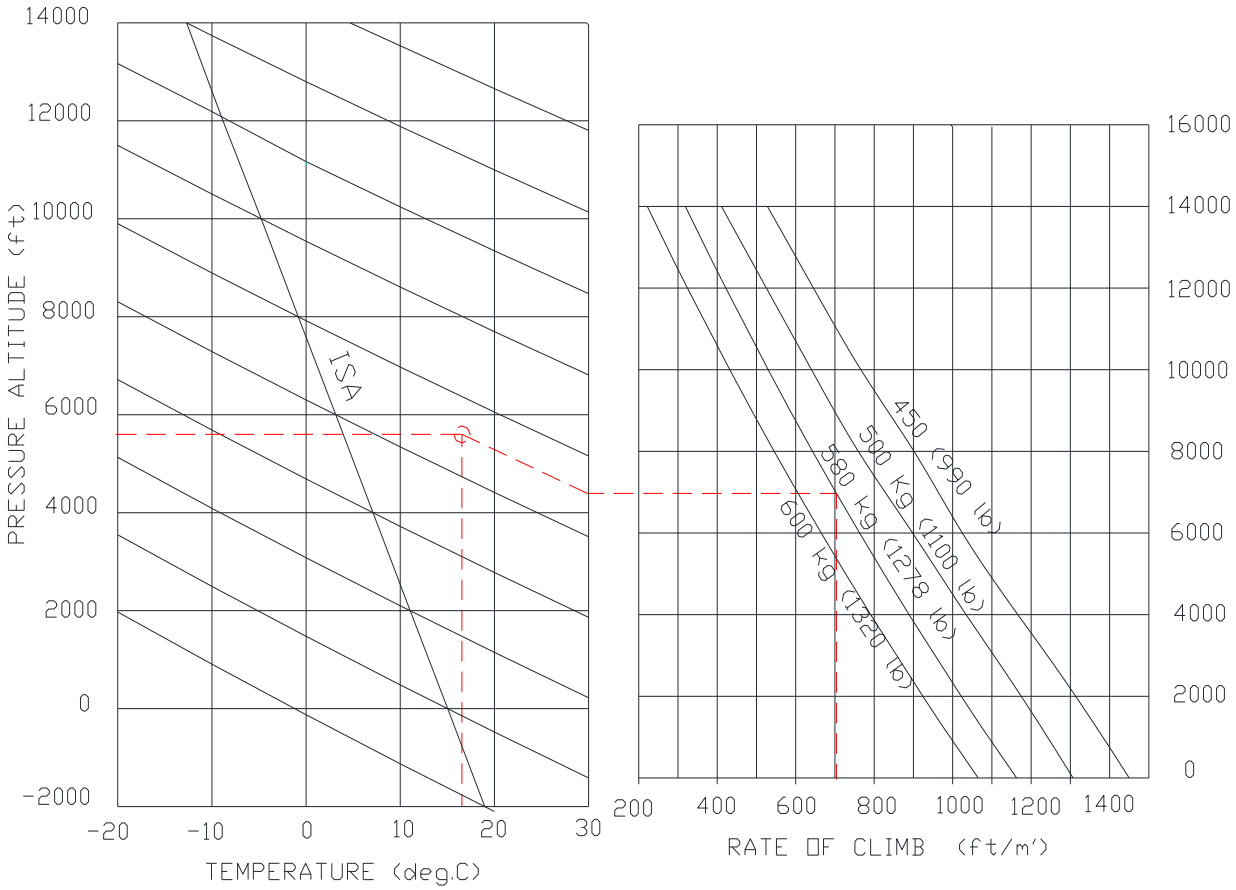


S1-4.8 Climb Performance

CLIMB RATE IN CLEAN CONFIGURATION

CONDITIONS:

- Flap: 0°
- Engine: Full throttle
- V_Y = 67 KIAS [65 KCAS]



⇒ *Example:*

Given

O.A.T. = 17°*C*

Pressure altitude = 5600 *ft*

Weight = 580 *Kg (1279 lb)*

Find

Rate of climb = 705 *ft/min*

S1-4.9 Cruise

Maximum takeoff weight = 600 kg (1320 lbs)
Fuel tanks 2x60 liters (2 x 15.8 gal) (less the unusable fuel = 1.1gal)

ALL ENDURANCE DATA (HOURS AND n.m.) ARE GIVEN WITH A RESERVE OF 30' (FOR EXAMPLE: THE FIRST ROW INDICATES A RANGE OF 7.8 hrs + 0.5 hr RESERVE AND A RANGE OF 763 nm + 49 nm RESERVE)

Pressure altitude H_P: **0** *ft OAT: +15°C*

Engine RPM		Speed KTAS	Consumption (gal/h)	Endurance (hrs)	Range (N.m.)
55%	4600	98	3.7	7.8	763
65%	5000	104	4.2	6.8	707
75%	5200	110	5.0	5.6	619

Pressure altitude H_P: **2000** *ft OAT: +11°C*

Engine RPM		Speed KTAS	Consumption (gal/h)	Endurance (hrs)	Range (N.m.)
55%	4600	100	3.7	7.8	778
65%	5000	108	4.2	6.8	734
73%	5200	111	5.0	5.6	625

Pressure altitude H_P: **4000** *ft OAT: +7°C*

Engine RPM		Speed KTAS	Consumption (gal/h)	Endurance (hrs)	Range (N.m.)
55%	4600	103	3.7	7.8	801
60%	5000	107	4.2	6.8	727
70%	5200	112	5.0	5.6	630

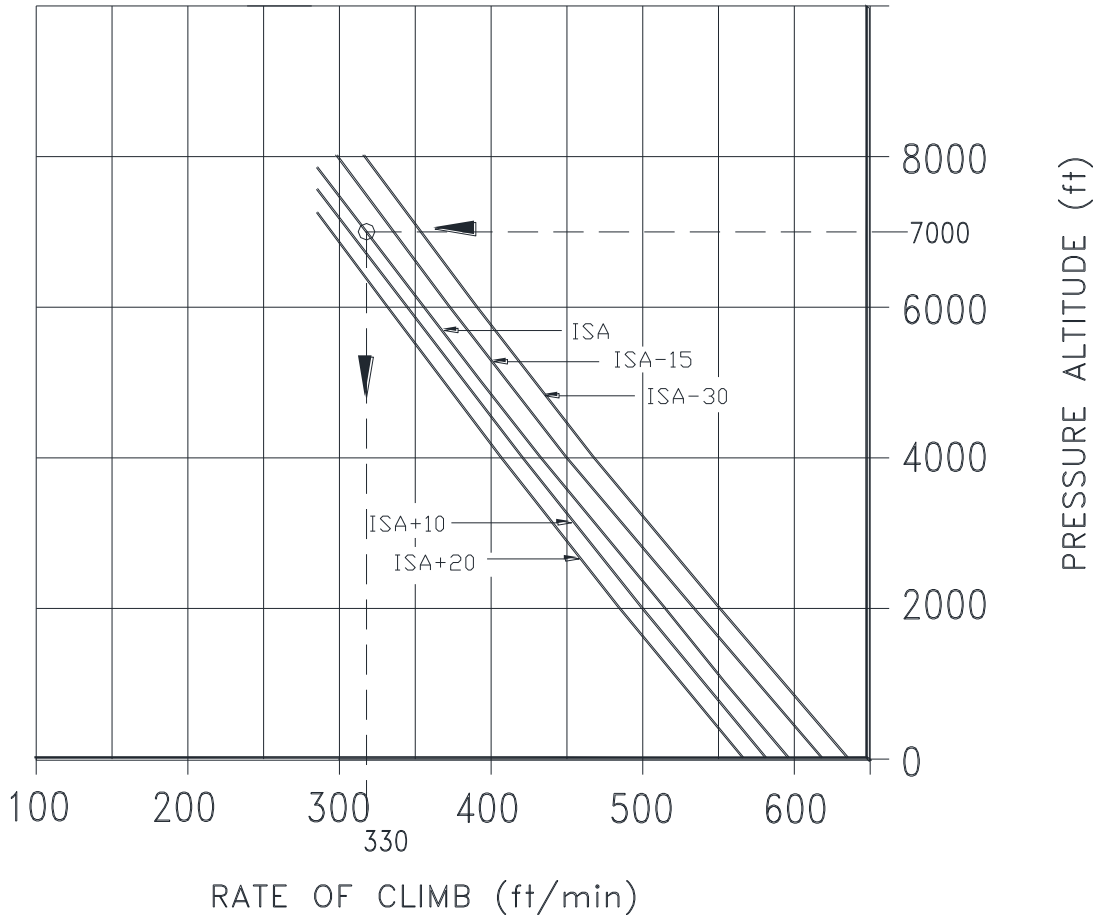
Pressure altitude H_P: **6000** *ft OAT: +3°C*

Propeller RPM		Speed KTAS	Consumption (gal/h)	Endurance (hrs)	Range (N.m.)
55%	5000	106	3.7	7.8	825
60%	5200	110	4.2	6.8	747

S1-4.10 Balked landing

RATE OF CLIMB: BALKED LANDING
CONDITIONS:
Maximum weight = 600 kg (1320 lb) Engine: full throttle
Flaps: 35° V_x 15 flaps = 63 KIAS [62 KCAS]

NOTE
During balked landing maneuver, flaps should be retracted immediately after applying full power.



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S1-5 - EMERGENCY PROCEDURES

The following emergency checklists **are added** to those reported in the basic POH.

S1-5-1.1 PROPELLER OVERSPEEDING

1. Throttle Lever REDUCE power to minimum practical
2. Propeller Lever REDUCE as practical
3. RPM indicator CHECK

CAUTION

Maximum propeller rpm exceedance may cause the engine components damage. Propeller and engine shall be inspected in accordance with related Operators Manuals.

If it is not possible to decrease propeller RPM, land as soon as possible.

S1-5-1.2 DEFECTIVE PROPELLER LEVER CABLE

If power is sufficient to continue flight:

1. Approach nearest airfield, control engine power with throttle
2. Perform normal landing.

WARNING

Go-around may then be impossible.

If power is not sufficient to continue flight, apply Forced Landing Checklist (3.3.9).

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S1-6 - NORMAL PROCEDURES

S1-6.1 External Inspections

Perform checks on propeller and spinner as per MT-Propeller Doc. E-124, Section 6.

S1-6.2 Differing Normal Procedures

The following checklists **supersede** those reported in the basic POH.

6.2.1.4 STARTING ENGINE

Brakes: .....SET
Breakers: .....ALL ON
Fuel selector valve: .....LEFT or RIGHT
Master key: .....ON
Avionic Master: .....ON
EMS: .....ON (wait for software loading)
Throttle: .....IDLE
Propeller lever:..... ....FULL FORWARD
LANE A/B: .....BOTH ON
Fuel Pump 1 and 2: .....BOTH ON
NOTE: fuel pumps will start running as soon as the start power switch will be on

START POWER SWITCH: .....KEEP **ON**
(keep ON by finger until the last check in this square is reached)

LANE A/B LAMPS: .....Wait for the functional check
Fuel Pump 1 and 2 LAMPS: .....BOTH ON and noise from pumps
Propeller area: .....CLEAR
Starter button: .....PUSH
rpm: 2400-2600
LANE A/B voltage (from EMS): .....check that at least 13V is reached
Battery voltage (from EMS): .....check that at least 13V is reached
START POWER SWITCH: .....RELEASE

Oil Pressure: .....Check in range within 10sec
FUEL PUMP 1: .....Switch OFF and check if the PUMP 2 continues to work
FUEL PUMP 1: .....Switch ON again

FUEL PUMP 2: .....Switch OFF and check if the PUMP 1 continues to work
FUEL PUMP 2: .....Switch ON again

LANE A/B LAMPS: .....Check OFF

Engine parameters: .....Within limits

WARNING
If oil pressure doesn't rise within 10 seconds, shut down engine
The maximum oil pressure for cold conditions is 7 bar

6.2.1.7 BEFORE TAKE-OFF

Parking brake: ..... ON
Fuel valve: ..... ON (LH or RH)
Engine instruments: ..... CHECK

- Oil temperature: .....90°-110 ° C
- Oil pressure: ..... 2 - 5 bar
- Fuel pressure: ..... 2.8 – 3.2 bar

Battery charge: ..... CHECK and AMPS > 0
LANE A and B tension: ..... CHECK > 13V
Propeller lever: ..... FULL FORWARD
Throttle: ..... 4000 RPM
LANE A switch: ..... OFF
Rpm loss: ..... max 130 rpm
LANE A switch: ..... ON
LANE B switch: ..... OFF
Rpm loss: ..... max 130 rpm
LANE B switch: ..... ON

Throttle: ..... IDLE
Fuel quantity indicators: ..... CHECK
Fuel selector valve: ..... LEFT or RIGHT
Fuel pumps: ..... BOTH ON
Flaps: ..... T/O
Flight controls: ..... CHECK
Trim: ..... CENTERED
Seat belts: ..... FASTENED
Doors: ..... CLOSED AND LOCKED
Transponder (if installed): ..... ALT

4.3.7 CRUISE

Reaching cruise altitude:

Throttle: ……..	SET cruise MAP
Propeller lever.....	SET (5500 RPM max)
Engine instruments:	CHECK
• Oil temperature:	90°-110 ° C
• Oil pressure:	2 - 5 bar
• Fuel pressure:	2.8 – 3.2 bar

CAUTION

Normal position of the fuel selector is LEFT or RIGHT. Check fuel balance during flight.

NOTE

Check fuel gauges frequently with one tank shut off to prevent fuel starvation.

CAUTION

MAP reduction should be performed before propeller lever retraction.
Conversely, RPM increase should be set before throttle lever is advanced.

6.2.1.10 Before LANDING

Landing light (if installed): ..... ON
On downwind leg: Speed and flaps at your discretion based on traffic, etc.
Propeller lever: .....FULL FORWARD
Traffic: ..... CHECK
Flaps: ..... AS DESIRED
Optimal touchdown speed (full flaps): ..... 43 KIAS

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S1 - 7 - SYSTEM DESCRIPTION

For a detailed description of the system, see MT-Propeller Docs E-2285 (Propeller) and E-1048 (Governor).

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S1-8 – PLACARDS AND MARKING

Refer to basic manual.

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SUPPLEMENT S2
SPEED INCREMENT

INTRODUCTION:

This Supplement is applicable as follows:

From SN 075 to SN 144	At customer's discretion, according to the installed airspeed indicator system
From SN 145	YES to all

The information contained herein supplements or supersedes the basic Aircraft Flight Manual: detailed instructions are provided to allow the owner for replacing the basic AFM pages containing information amended as per the Airspeeds increment in subject.

NOTE: It is the owner's responsibility to replace the mentioned pages in accordance with the instructions herein addressed section by section.

NOTE: TECNAM reminds that flights in yellow arcs should be only performed in smooth air with caution.

SECTION 1 - GENERAL

Refer to basic Flight Manual.

SECTION 2 – LIMITATIONS

Follow the replacement instructions reported in the table below:

Supplement S2 page		Basic AFM page
S29	REPLACES	Page 29

SECTION 2
OPERATING LIMITATIONS

2 Introduction

Section 2 includes operating limitations, instrument markings, and basic placards necessary for safe operation of the P2008, its engine, standard systems and standard equipment.

2.1.1 Airspeed Limitations

Airspeed limitations and their operational significance are shown below:

SPEED		KCAS	KIAS	REMARKS
V_{NE}	Never exceed speed	141	145	Never exceed this speed in any operation
V_{NO}	Maximum Structural Cruising Speed	112	113	Never exceed this speed unless in smooth air, and then only with caution
V_A	Maneuvering speed	97	98	Do not make full or abrupt control movements above this speed as this may cause stress in excess of limit load factor
V_{FE}	Maximum flap extended speed	68	71	Never exceed this speed for any given flap setting
V_H	Maximum speed	119	120	Maximum speed in level flight at max continuous power (MSL)
V_X	Best Angle Climb	63	65	The speed which results in the greatest gain of altitude in a given horizontal distance
V_Y	Best Rate Climb	76	78	The speed which results in the greatest gain of altitude in a given time

2.1.2 Airspeed Indicator Markings

Airspeed indicator markings and their color code are explained in the following table:

MARKING	KIAS	SIGNIFICANCE
White arc	40 – 71	Flap Operating Range (lower limit is V_{S0}, at maximum weight and upper limit is maximum speed permissible with full flaps)
Green arc	48– 113	Normal Operating Range (lower limit is V_{S1} at maximum weight and flaps at 0° and upper limit is maximum structural speed V_{NO})
Yellow arc	113-145	Operations must be conducted with caution and only in smooth air
Red line	145	Maximum speed for all operations

SECTION 3 – WEIGHT & BALANCE

Refer to basic Flight Manual.

SECTION 4 – PERFORMANCE

Follow the replacement instructions reported in the table below:

Supplement S2 page		Basic AFM page
S42	REPLACES	Page 42
S44	REPLACES	Page 44

4.2 Airspeed Indicator System Calibration

Graph shows calibrated airspeed V_{CAS} as a function of indicated airspeed V_{IAS}

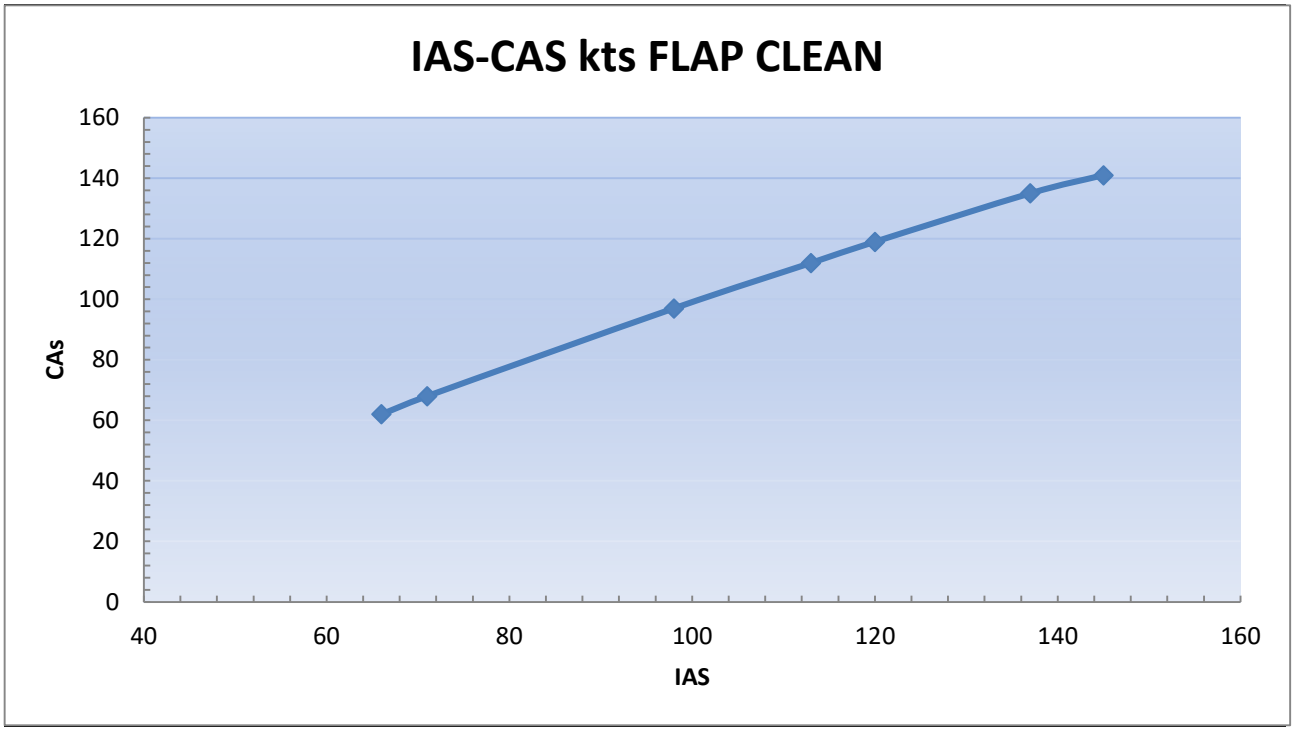

Fig. 4-1 Calibrated vs. Indicated Airspeed

The following formula gives the CAS with the **flaps full deflected**:

$$CAS = 1.0611 \times IAS - 7.7222$$

4.4 Stall Speeds

Conditions:

- Weight 600 kg (1320 lbs)
- Throttle: idle
- No ground effect

NOTE
Altitude loss during conventional stall recovery as demonstrated during test flights is approximately 200ft with banking under 30°.

FLAPS	KIAS	KCAS
0°	**48**	45
LND	**40**	34

SECTION 5 – EMERGENCY PROCEDURE

Refer to basic Flight Manual.

SECTION 6 – NORMAL PROCEDURES

Refer to basic Flight Manual.

SECTION 7 – GROUND HANDLING & SERVICE

Refer to basic Flight Manual.

SECTION 8 – MARKINGS AND PLACARDS

Refer to basic Flight Manual.

SUPPLEMENT S3
GALAXY GRS RESCUE PARACHUTE

WARNING

This supplement must be inserted into the POH if the equipment described is installed onboard

Revision n. **00**
Date: **February 11, 2021**

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INTRODUCTION:

This Supplement contains supplemental information to operate the aircraft in a safe and efficient manner when equipped with GALAXY GRS RESCUE BALLISTIC PARACHUTE Type 6/600 SD Speedy.

SECTION 1 - GENERAL

The GRS Rocket Charged Parachute Rescue System gives you the opportunity to rescue yourself and the aircraft regardless of height, speed and nose position.

The BPRS consists of a parachute, a solid propellant rocket to deploy the parachute, a rocket activation handle, a container, and a harness that connects the parachute to the structure of the aircraft. One box contains the parachute and the solid propellant rocket, this box is mounted on the aircraft frame behind the bulkhead of the luggage rack and isolated from the aircraft cabin.

The parachute system is belted to the fuselage of the aircraft at the wing-fuselage jacks.

The parachute system is activated by an activation handle, located between the occupant seats under the aircraft throttle (P2008). Pulling the activation handle ignites a rocket that exits the fuselage through an exit panel behind the canopy of the aircraft and is indicated externally. The rocket pulls the entire parachute package out of its container at once.

SECTION 2 – LIMITATIONS

Refer to basic Flight Manual.

SECTION 3 – WEIGHT & BALANCE

Refer to basic Flight Manual.

SECTION 4 – PERFORMANCE

Refer to basic Flight Manual.

SECTION 5 – EMERGENCY PROCEDURE

The following emergency checklists **are added** to those reported in the basic POH.

5.1 Rescue System Deployment

Rescue system should be deployed in the event of a life-threating emergency where parachute activation is determined to be safer than continued flight and landing.

CAUTION

Full deployment of parachute is achieved in about 5 seconds at MTOW. Rescue system should only be activated when any other means of handling the emergency would not protect the occupants from serious injury.

CAUTION

Successful deployment depends on aircraft attitude and airspeed: greater deployment altitude yields better chances for successful deployment

Shown below the procedure to be followed:

Airspeed	**MINUM POSSIBLE** (max speed 134 kts IAS)
Magnetos:	**OFF**

Pull activation handle firmly and to end-travel

After deployment

Fuel selector:	**OFF**
Master Switch:	**OFF**
Seat Belts and Harnesses:	**TIGHTEN**

Before impact

Assume emergency landing body position

The emergency landing body position is assumed by placing both hands on the lap, clasping one wrist with the opposite hand, and holding the upper torso erect and against the seat backs.

After the airplane comes to a complete stop, evacuate quickly and move upwind

CAUTION

In case of low altitude emergency where parachute activation is required, the engine can be shut down after rescue system activation.

SECTION 6 – NORMAL PROCEDURES

The following normal procedures **are added** to those reported in the basic POH.

6.1 Cabin Inspection

Emergency parachute release handle	Safety pin removed
Emergency parachute release handle	Make sure unobstructed access is provided

6.2 Starting Engine

Emergency parachute release handle	Check Safety Pin removed

6.3 Post-Flight Check

Emergency parachute release handle	Safety Pin inserted

SECTION 7 – GROUND HANDLING & SERVICE

Refer to basic Flight Manual.

SECTION 8 – MARKINGS AND PLACARDS

The following Marking and Placards **are added** to those reported in the basic POH.

Emergency Parachute:

On the cover of the emergency parachute, install:

On the cover of the emergency parachute, install:

Above the emergency parachute activation handle, install:

SUPPLEMENT S4
Garmin G3X Touch Avionic Suite

WARNING
This supplement must be inserted into the POH if the equipment described is installed onboard

Revision n. **00**
Date: **February 26, 2021**

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INTRODUCTION:

This Supplement contains supplemental information to operate the aircraft in a safe and efficient manner when equipped with Garmin G3X.

SECTION 1 - GENERAL

Avionics

Garmin G3X Touch integrated suite in a dual screen configuration is installed. It provides flight and engine information. G3X also embodies a GPS receiver An automatic reversion mode is integrated within the system in order to continue providing the pilot with the flight and engine information in the event of a LH or RH display failure.
The avionic suite is completed by an audio panel, a VHF/COM radio and an autopilot.
A magnetic compass is installed for additional heading information.
Finally the aircraft is provided with an ELT.

Instrument Panel

- The left area holds:
  - (Pitch) Trim switch
  - PFD
  - Day/ Night switch
  - Pitot (heater) switch
  - Avionic Master switch
  - Fuel Pump switch
  - AP Master switch
  - Ignition key
  - Master and Generator switches
  - Autopilot control panel

- The central area holds:
  - Audio panel
  - Radio VHF
  - MFD
  - Emergency Light switch
  - Fuel selector
  - Flap control switch
  - Choke Push

- The right area holds:
  - ELT
  - Instrument dimmer
  - Heating selector
  - External lights switches
  - Breakers panel
  - Pocket

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Figure 1 - Instrument Panel

In the higher central portion of the instrument panel holds the magnetic direction indicator.

Internal Lights

A couple of instrument lights are fixed in the sides of the instrument panel. Fitted with flexible struts, they can be adapted to illuminate the instruments panel, as per pilot needs. A dimmer device, located on the right area of the instrument panel, allows for regulating instruments lights brightness.
Furthermore, a map light (dimmerable) and an two emergency lights are provided on the ceiling of the cabin.

Heating

The heating system have a diffuser in cabin, the system is fed by a 5 Amp breaker.
The heating system is controlled by a selector, positioned in the lower right area of the instrument panel. In the middle position, the heating system is OFF; in the left position, the heating system provide air to the legs and windshield (defrost); in the right position only to the legs.

SECTION 2 – LIMITATIONS

The airplane, in standard configuration, is approved only for VFR Day operation with terrain visual contact. Minimum equipment required is as follows:

- Magnetic direction indicator;
- ELT;
- Strobe lights;
- G3X Touch suite:
  - Airspeed indicator;
  - Altimeter;
  - RPM indicator;
  - Oil pressure indicator;
  - Oil temperature indicator;
  - Cylinder Head Temp. Indicator (or Coolant Temp. indicator);
  - Fuel quantity indicator.

Flight in VFR Day is permitted only if equipment above is installed and operational.

Flight in VFR Night is approved if the following equipment are installed and operational:

- Instrument lights
- Position (nav) lights

Additional equipment, or a different equipment list, for the intended operation may be required by national operational requirements and also depends on the airspace classification and route to be flown. The owner is responsible for fulfilling these requirements.

NOTE
The FAA requires that the pilot possesses a minimum of a Private Pilot certificate and a current medical to fly at night. See the FARs for more information.

SECTION 3 – WEIGHT & BALANCE

Refer to basic Flight Manual.

SECTION 4 – PERFORMANCE

Refer to basic Flight Manual.

SECTION 5 – EMERGENCY PROCEDURE

G3X Touch Failures

In case of LH or RH display failure, flight, navigation and engine data will be automatically available in the remaining display (split mode).

Instruction: revert to the remaining display.

In case of **LH and RH display failure**, use stall warning for airspeed reference and external reference for altitude.

Land as soon as practical.

Loss of Engine Parameters on G3X

Instruction: Land as soon as practical.

Pitot Heating System Failure

Pitot Heat switch: .....OFF
Check Pitot Heat circuit breaker: .....IN
Pitot Heat switch: .....ON

If Pitot Heat continues to work irregularly, avoid visible moisture conditions.

SECTION 6 – NORMAL PROCEDURES

Garmin G3X provides primary flight parameters and engine information.

Before engine starting check if Pitot heating system work properly. Switch ON the Pitot Heat, wait 5 seconds and switch OFF the Pitot Heat, then check Pitot if warm.

SECTION 7 – GROUND HANDLING & SERVICE

Refer to basic Flight Manual.

SECTION 8 – MARKINGS AND PLACARDS

Refer to basic Flight Manual.