

P2002 If

SPECIFICATION & DESCRIPTION



TECNAM P2002JF

Specification & Description

INTRODUCTION

This document is published for the purpose of providing general information for the evaluation of design, performance and equipment of the Tecnam model **P2002JF**.

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This document describes only the Tecnam model **P2002JF**, its powerplant and equipment.

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General description

All information here applies to the Tecnam model P2002JF equipped with the Rotax 912S2 / S3 engine.

Construction

The P2002JF is a two-seater side by side, low wing aircraft. The P2002JF features superlative performance and flying qualities, now confirmed by hundreds of P2002 ultralights, Light Sport and VLA aircraft sold throughout the world and validated in 15 countries other than Europe. The ease of piloting and maintenance make this aircraft an excellent solution for training in flight schools. It is also an ideal platform for surveillance and as well as, of course, for pure recreational and private use. The option to use 100LL AVGas or unleaded automotive fuel (with up to 10% ethanol content) makes this aircraft even more flexible and cost effective. The P2002JF encompasses the latest developments of Tecnam aircraft. The use of advanced software for design, structural and fluidynamics analysis, and experience in building airplanes with all types of materials results in continuous aircraft improvement. Due to the tapered laminar airfoil and the slotted flaps the P2002JF is an outstanding aircraft, with the perfect mix of aerodynamics, performances, and structural efficiency.

Many flight schools in Europe and all over the world rely on P2002JF (certified according to the CS-VLA and validated in several foreign countries) for students initial training. Many of them continue their training up to the ATPL with the Tecnam P2006T twin making Tecnam the ideal one-stop-shop for flight training aircraft all over the world.

The Tecnam P2002JF structure is based on a steel tubing cabin truss covered by aluminium sheets. The wing is all aluminium made and built with a single spar and full metal torsion box. The wing's leading edges are easily detachable for repairs and also incorporate the fuel tanks (50 Lt - 13.2 gal each). They are separated from the cabin in order to maximize passive protection. The sliding canopy allows 360° of vision in the cockpit and has full rollover protection tested via inverted drop tests.

The stabilator, horizontal tail design, provides remarkable longitudinal hands-off stability along with minimum drag and weight penalty. This provides balanced two finger flight control. The wide slotted flaps, electrically activated, allow stall speed lower than 40 Kts and allows the aircraft to perform steep approaches and easier landings. The all aluminium ailerons are effective and ensure a quick roll rate without being overly sensitive. All control surfaces are made out of aluminium and all of them, except for flaps and tab, are mass-balanced.

Landing Gear

The main landing gear are constructed of spring steel. This provides a main gear that is robust enough for unimproved landing strips and requires no service. The trailing link nose gear uses a rubber shock absorber system that was designed for the rigours of the training environment. The main landing gear wheels and brakes are 5.00x5 providing ability to use multiple different tire brands that can be chosen in relation with the mission-type and expected landings per hour. The brake control is activated by a single central lever located between the seats or, alternatively, by toe brakes which are also available as an option. A parking brake valve is located on the console between the seats.

Powerplant and propeller

The top and bottom engine cowls are quickly and easily removable making any maintenance procedure faster to accomplish. The top cowl has 2 large hinged gull-wing style doors for easy access and effective pre-flight inspections of the entire engine compartment.

The engine is set low and the cowling slopes down from the windshield, so forward visibility is outstanding even with a fully equipped instrument panel. The steel firewall is soundproofed. The power plant is a Rotax 912S2 series four-cylinder, four-stroke engine. The engine is liquid and air cooled with an integrated

1:2.4286 reduction gear. The use of liquid cooled heads and air cooled cylinders allows the engine to maintain safe operating temperatures even if a rapid descent is performed immediately after a prolonged climb. A fixed pitch wood, composite wrapped Hoffmann propeller comes standard while the hydraulic variable pitch propeller from Hoffman is also available as an option. The quick drain gascolator is installed under the cabin floor and provides easy access for checking fuel.

An electrical fuel pump is installed to provide an effective back-up to the mechanical one. Circuit breakers are standard. The battery is located in the rear of the fuselage with easy access through an external hinged door. An external power socket allows for engine start, tests, and avionics management/training without the use of internal battery.

Avionics

The largest selection of avionics choices are available on the P2002JF in order to allow almost any type of operations: basic VFR-DAY equipment, VFR-NIGHT equipment and glass cockpits are available. With an extremely wide choice of rack-mounted avionics, such as the latest Garmin radios and GPS, IFR training procedures (not in IMC conditions) can be possible via dual VOR indicators and radios, ADF and DME options.

Special Hand Controls version

On March, 27th, 2014, the P2002JF airplane was approved by EASA to incorporate full integrated hand control kits for disabled pilots. This makes the P2002JF the first worldwide factory-built VLA certified aircraft equipped with hand controls. This version of the Tecnam P2002JF aircraft architecture is very simple and flexible. Flight instruction will be allowed by a third throttle control and second slip indicator on the RH side, while whomever is seated on the left side (student or disabled pilot flying solo) will:

- Control the stick (pitch and roll) and the brakes with the left hand;
- Control the rudder, throttle and flap with the right hand on the central control.

No flight control operations other than the radio and altitude settings, will need to separate the hands from controls making this solution safe and ergonomic.

In addition to the flight control modifications, several improvements have been made to make the access to disabled pilots easier: strengthened leading edges (both LH and RH), four additional grab handles to help in step inside and outside the cabin and finally an increased canopy opening.



- **Certification**

The Tecnam **P2002JF** is delivered in full compliance with the requirements of EASA CS VLA

- **Engine & Propeller**

Allowed engine power:	100hp
Manufacturer:	ROTAX
Models:	912S2
Propeller diameter:	1.74 to 1.8mt (5.73 to 5.98ft)
Number of blades:	2/3
Approved manufacturers:	Hoffman - Sensenich
Approved prop. types:	Fixed - Ground adj. – Variable pitch

- **Dimensions**

Overall Height:	7.9ft	2.4mt
Overall Length:	21.7ft	6.63mt

- **Wing**

Span (overall):	28.2ft	8.6mt
Area:	123.8ft ²	11.5mt ²
Dihedral:	5°	
Aspect ratio:	6.4	

- **Cabin**

Height (max):	3ft	0.91mt
Width (trim to trim):	3.6ft	1.1mt

- **Baggage Compartment**

Width:	2.62in	0.80mt
Length:	1.48ft	0.45mt
Height:	1.48ft	0.45mt
Volume:	5.74cu.ft	162lt
Max. permissible load:	44lb	20kg

- **Performance (620kg\1367lbs)**

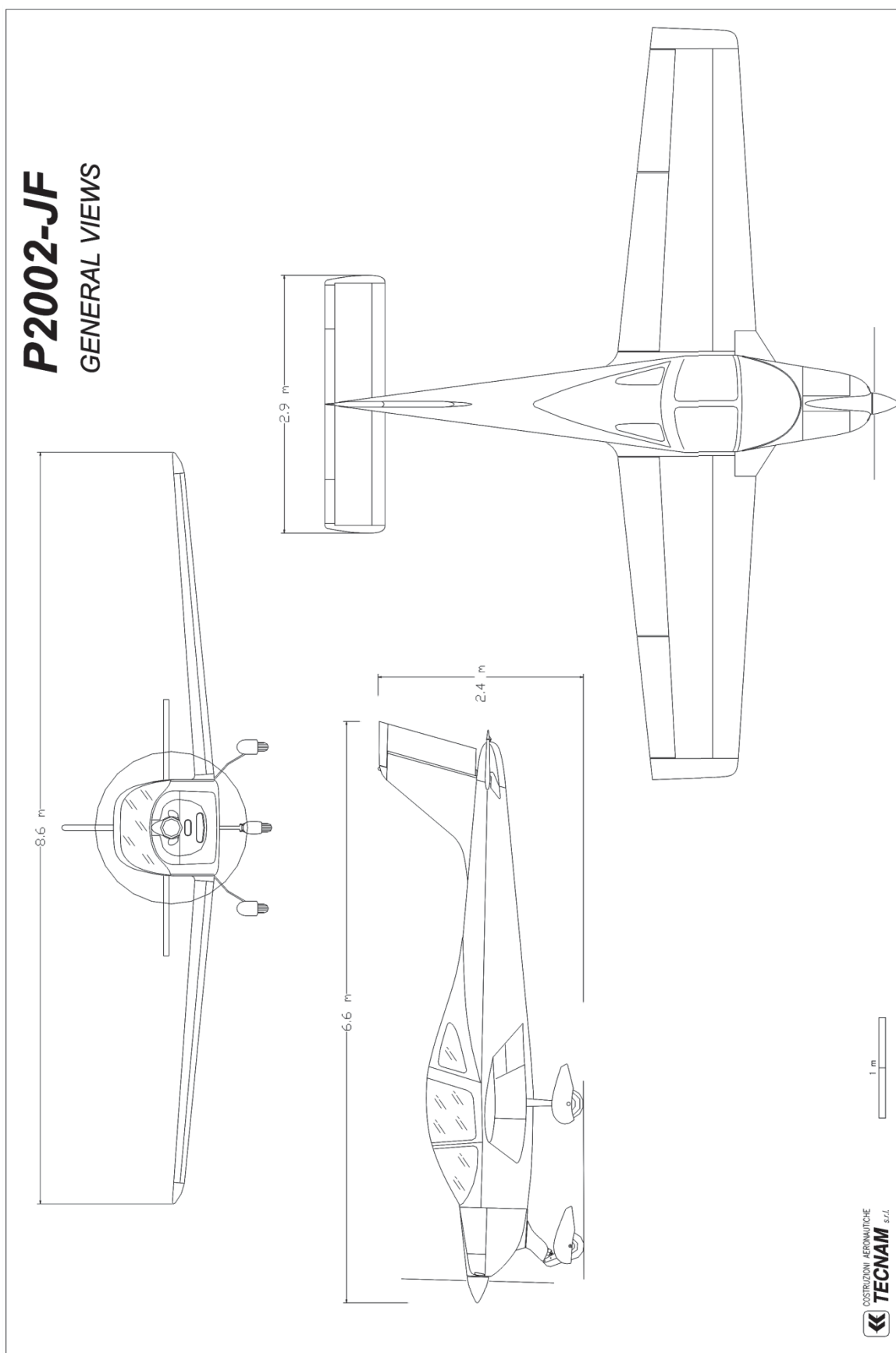
Service Ceiling:	15.000ft	4572mt
Takeoff Distance S.L. (Ground Roll):	860ft	262mt
Takeoff Distance S.L. (To Clear 50ft. Obstacle):	1424ft	434mt
Max Climb Rate S.L:	800ft/min	4,06mt/sec
Max Speed S.L:	120kt	222km/h
Max Range:	600nm	
Cruise Speed (75% pwr at 6.500ft):	118kt	219km/h
V _{ne} (never exceed this speed)	142kt	263km/h
Landing Distance (Ground Roll):	558ft	170mt
Landing Distance (To Clear 50 ft Obstacle):	1092ft	333mt
Stall Speed, flap UP	41kt	76km/h
Stall Speed, flap DW	38kt	70km/h

- **Design weight and capacities**

Standard empty weight	815lb	370kg
Max Take-off Weight:	1367lb	620kg
Maximum Useful Load:	511lb	250kg
Fuel Capacity:	26,4US Gal	100lt



Three views



P2002JF Standard equipment list

The following list of equipment is included in the standard aircraft Analog Avionics Package and does not reflect optional equipment.

Flight instruments and indicators

- MAGNETIC COMPASS
- AIRSPEED IND., Kts
- ALTIMETER (IN)
- VERTICAL SPEED
- ATTITUDE GYRO
- DIRECTIONAL GYRO
- TURN AND BANK INDICATOR
- FLAPS INDICATOR
- PITOT SYSTEM
- STATIC SYSTEM
- STABILATOR TRIM POSITION INDICATOR

Engine instruments

- RPM INDICATOR
- HOUR RECORDER
- OIL PRESS
- OIL TEMP.
- HEAD TEMP.
- FUEL PRESS.
- VOLTMETER
- AMMETER
- LH + RH FUEL QTY

Other instruments / warning

- CHRONOMETER
- O.A.T. INDICATOR
- GENERATOR WARNING LIGHT
- VACUUM SUCTION GAUGE
- TRIM INDICATOR
- WARNING LIGHT:
 - ALT. OUT
 - FUEL PUMP ON

Flight controls

- HYDRAULIC BRAKES
- PARKING BRAKE
- ELECTRICAL FLAPS
- DUAL FLIGHT CONTROLS
- STEERABLE NOSE WHEEL
- STABILATOR TRIM (ELECTRIC ACTUATED FROM STICK)
- ENGINE CONTROLS
 - THROTTLE, TWO
 - CARBURETOR HEAT
 - CHOKE
- FLIGHT TRIM CONTROLS
 - STABILATOR WITH INDICATOR
 - FUEL CONTROL SELECTOR AND AIR

Electrical system

- 12 VOLT 18A AMP. BATTERY
- 12 VOLT ALTERNATORS-20 AMP.
- SWITCHES
 - AVIONIC MASTER
 - FUEL PRESS
 - NAV. LIGHTS
 - LANDING LIGHT
 - STROBE LIGHT
- 12 VOLT SOCKET
- EXTERNAL POWER SUPPLY RECEPTABLE
- CIRCUIT BREAKER PANEL

Fuel system

- TWO INTEGRAL FUEL TANKS, 100 LT TOT CAPACITY
- ENGINE DRIVEN FUEL PUMP
- FUEL QUICK DRAIN
- AUXILIARY FUEL PUMP, ELECTRIC
- 1 x SHUT OFF VALVE

Interiors

- PILOT and COPILOT SEATS
 - Adjustable Fore and Aft
- SEAT BELTS & Shoulder Harness, All Seats
- WALL TO WALL CARPETING
- MAP E STORAGE POCKETS
- LUGGAGE COMPARTMENTS
- FIRE EXTINGUISHER
- RADIO CALL PLATE
- SOUNDPROOFING
- FIRST AID KIT
- EMERGENCY HAMMER

Exterior

- EPOXY CORROSION PROOFING, ALL STRUCTURE
- SLIDING CANOPY WITH LOCK AND KEY
- REAR WINDOW
- TIE DOWN RINGS
- MAIN WHEELS, 5,00 X 5 CLEVELAND
- NOSE WHEEL, 5,00 X 5
- STALL WARNING

Exteriors lights

- NAV. LIGHTS LED WITH STROBE AVEO FULL LED TSO
- TAXI LIGHT LED

Cabin comfort system

- WINDSHIELD DEFROSTER
- VENTILATOR ADJUSTABLE 2 PLACE
- HEATING SYSTEM

Standard Garmin Avionics Package

- GMA 340 AUDIO PANEL
- GNC 255A COM/NAV
- GTX 328 TDX
- ELT 406 MHZ
- ANTENNAS:
 - TRANSPONDER
 - VHF
 - ELT
 - MARKER BACON
- SPEAKERS
- MICROPHONE
- STICK PUSH-TO-TALK SWITCH-PILOT/COPILOT
- MIC& PHONE JACKS-PILOT/COPILOT

Powerplant and Propeller

- ENGINE - 1 ROTAX 912S2 100 HP, 4 CYLINDERS
- LIQUID/AIR COOLED, INTEGRATED REDUCTION GEAR
- DUAL IGNITION SYSTEM
- THROTTLE CONTROL LH/RH
- TUBULAR STEEL ENGINE MOUNT
- PROPELLER - HOFFMANN, 2 BLADE FIX
- PROPELLER SPINNER
- AIR FILTER
- OIL FILTER
- OIL AND WATER COOLERS
- CARBURETOR HEAT WITH MANUAL CONTROL
- THERMOSTAT VALVE

Product support/documents

- MANUFACTURER'S FULL TWO YEAR LIMITED WARRANTY
- PILOT'S OPERATION HANDBOOK
- MAINTENANCE MANUAL
- PARTS CATALOG
- AIRCRAFT LOG BOOK
- ENGINE LOG BOOK



STANDARD

Export certificate requirements may require additional equipment or a different equipment list

www.tecnam.com

PACKAGES

1002 P2002JF VP CS/VLA includes:

Non additive, replaces standard equipment and Avionics

- ROTAX 912 S3 100HP ENGINE WITH GOVERNOR
- CENTRAL QUADRANT WITH SINGLE THROTTLE AND PITCH LEVER
- HOFFMANN VARIABLE PITCH PROPELLER
- MANIFOLD PRESSURE INDICATOR
- ATTITUDE AND DIRECTIONAL ELECTRIC

1003 VFR NIGHT VERSION includes:

Non additive, replaces standard equipment and Avionics

- HEATED PITOT
- GILL 25A BATTERY
- INSTRUMENTS LIGHT
- MAP LIGHT
- DIMMER
- AUX ALTERNATOR

1004 GLASS COCKPIT G500 includes:

Non additive, replaces standard equipment and Avionics

- GARMIN G500 PFD
- GTN 650 COM/NAV/GPS WITH ANTENNAS AND INST. (EXCH. FOR GNC225A)
- BACKUP AIRSPEED IND. AND ALTIMETER TSO
- AUX ALTERNATOR

1005 GLASS COCKPIT G500 + VFR NIGHT includes:

Non additive, replaces standard equipment and Avionics

- GARMIN G500 PFD
- GTN 650 COM/NAV/GPS WITH ANTENNAS AND INST. (EXCH. FOR GNC225A)
- BACKUP AIRSPEED IND. AND ALTIMETER TSO
- HEATED PITOT
- GILL 25A BATTERY
- INSTRUMENTS LIGHT
- MAP LIGHT
- DIMMER
- AUX ALTERNATOR

1006 RUDDER, THROTTLE AND BRAKE HAND CONTROLS includes:

Non additive, replaces standard equipment and Avionics

- FULLY REMOVABLE AND AIRFRAME INTEGRATE HAND CONTROLS FOR RUDDER AND BRAKES



PACKAGE 1004
OPTION ALSO PICTURED

OPTIONALS

Code	Description
RADIO AND NAVIGATION EQUIPMENTS	
GARMIN	
117A	GMA 35 Audio Panel with Antenna and inst. Only for GTN750 Exchange for Std. GMA340)
119	MD200 VOR Indicator Only for GNC255A
120B	GARMIN GTR225A Com 8.33 Khz with Ant. & Inst. (From Nov. 2013 mandatory for EU)
120C	GARMIN GTR225A COM 8.33 Khz with Antenna and Inst. (Exch for Standard GNC255A)
121	GTN 650 Com/Nav/Gps with Antennas, Triplex and inst. With GI106A Ind.
121A	GTN 650 Com/Nav/Gps with Antennas, Triplex. & inst. With GI106A Ind.(Exch. for Std. GNC255A)
122	GTN 750 Com/Nav/Gps with Antennas, Triplex and inst. With GI106A Ind.
122A	GTN 750 Com/Nav/Gps with Antennas, Triplex & inst. With GI106A Ind.(Exch for Std. GNC255A)
125	GTX 330 Transponder mode S with Antenna and Inst. Exchange for Std. GTX23)
125A	GTX 330 Transponder mode S with Antenna and Inst. Exchange for Std. GTX328)
126A	GTX 33 Transponder mode S remote mounted with Antenna and Inst. (Requires option 122)
126B	GTX 33 Transponder mode S remote mounted with Ant. and Inst. (Requires option 122) Exch. For Std. GTX328
BECKER	
133A	RA3502 ADF with AN3500 Indicator
BENDIX KING	
137	KR 87 ADF with KI227 Indicator
139	DME KN63-14
OTHERS	
157	Two Head Sets
157A	BOSE A 20 Two Head Sets
AIRCRAFT EQUIPMENTS	
174	Tinted Windows
176	Toe Brakes
178	Central Quadrant with single throttle level (requires opt. 176)
182	Fuselage Cover
184 /E	Spinner Polished Alluminum Look
185	Battery Gill G25 (Exchange for standard battery)
201	Special paint two colors
ENGINE EQUIPMENTS	
187	Aux alternator

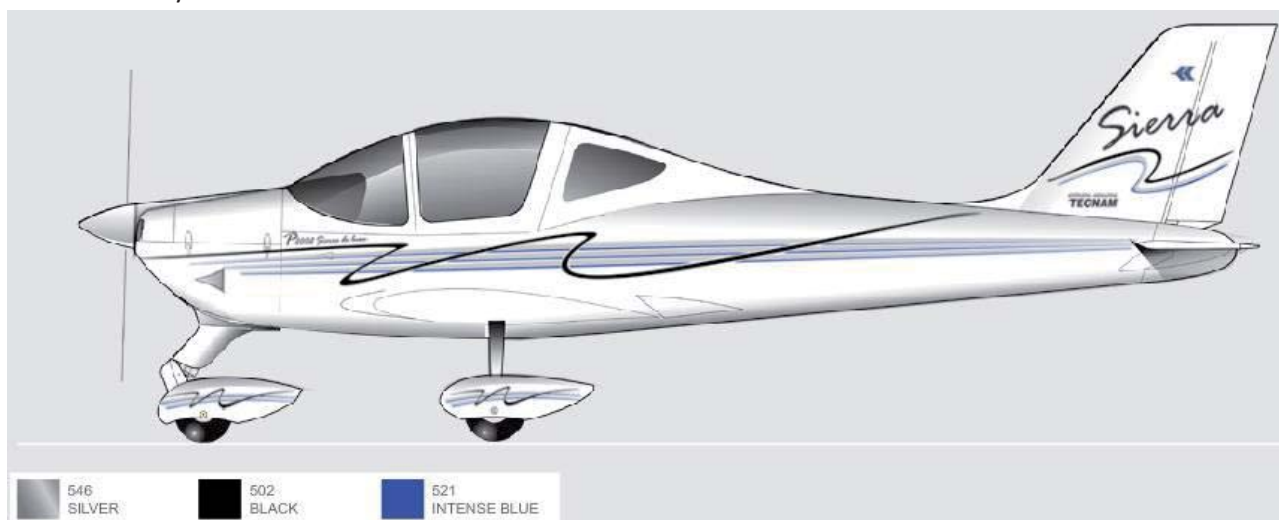
TECNAM COLORS

Standard color, for more information please visit www.tecnam.com

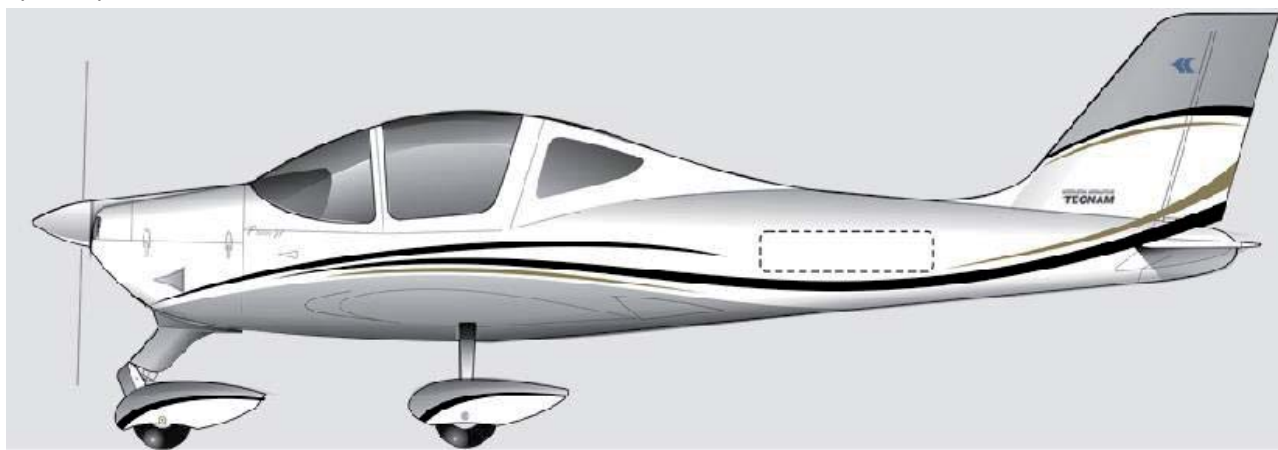
Standard livery #1



Standard livery #2



Special paint #1



Special paint #2



Special paint #3





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