

P2002JF



SPECIFICATION AND DESCRIPTION



QUALITY AIRCRAFT SINCE 1948

TECNAM

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P2002JF

This document applies only to the Tecnam P2002JF and is published for the purpose of providing general information for the evaluation of design, powerplant, performance and equipment.



Pascale Museum at Tecnam Headquarter Capua

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GENERAL DESCRIPTION

P2002JF

Low Wing High Pleasure

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.

P2002-JF hand controls



INTERIOR AND EXTERIOR

Seats are adjustable in flight and increase in height as they are moved forward.

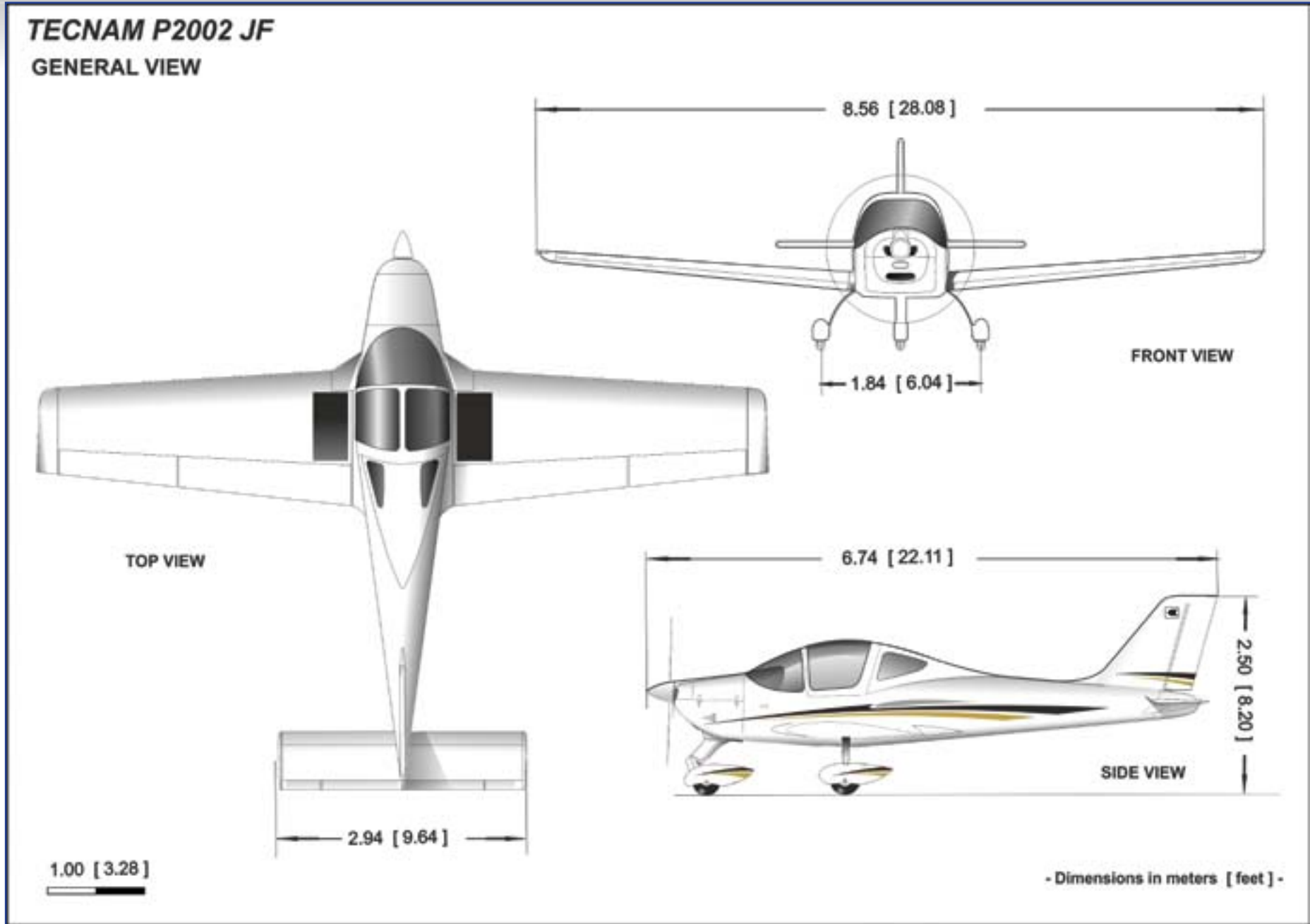
The luggage area allowing for 44 pounds/20 kg of weight is located behind the seats with ample room for several travel bags. The interior is spacious, ergonomic and comfortable. Dual throttles allow the pilot to fly either left or right handed.

Cabin	ft	m
Height	3	0,91
Width	3.6	1,1

Baggage Compartment

Width	2.62 ft	0,80 m
Length	1.48 ft	0,45 m
Volume	5.74cu.ft	162lt
Max. permissible load	44lb	20kg





P2002JF

DIMENSIONS

	ft	m
Overall Height	7.9	2,4
Overall Length	21.7	6,63

DESIGN WEIGHT AND LOADING

	P2002-JF FP	
	kg	lb
Maximum Take Off Weight	620	1,367
Empty Weight, VFR Standard	380	838
Useful Load	240	906
Baggage allowance	20	44

WING

	ft	m
Span (overall)	28.2	8,6
Area	123.8 ft ²	11,5 mq
Dihedral	5°	
Aspect ratio	6.4	

PERFORMANCE

	P2002-JF			
	Fixed Pitch Propeller		Variable Pitch Propeller	
Max Cruise Speed KTAS	122 kts	226 km/h	128 kts	237 km/h
Stall Speed (Flaps Down Power Off) KCAS	41 kts	76 km/h	41 kts	76 km/h
Practical ceiling	14000 ft	4267 m	14000 ft	4267 m
Take off run	777 ft	237 m	630 ft	192 m
Take off distance	1286 ft	392 m	1083 ft	330 m
Landing Run	538 ft	164 m	446 ft	136 m
Landing Distance	1056 ft	322 m	1099 ft	335 m
Rate of climb	874 ft/min	4,4 m/sec	950 ft/min	4,8 m/sec
Range	568 NM	1502 km	568 NM	1502 km

All estimated performance data are based on airplane weights at MTOW; standard atmospheric conditions; level, hard surface, dry runways, no wind.

POWERPLANT & ACCESSORIES

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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

ROTAX 912 S2/3

ROTAX[®]
AIRCRAFT ENGINES



- 4-cylinder
- 4-stroke liquid-/air-cooled engine with opposed cylinders
- Dry sump forced lubrication with separate oil tank, automatic adjustment by hydraulic valve tappet
- Mechanical fuel pump
- Dual electronic ignition
- Propeller speed reduction unit
- Air intake system
- Gearbox Reduction Ratio 2,43:1



STANDARD 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

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 With On/Off
 Panel Switches:
 _ Starter
 _ Fuel Pump
 _ Engine Lh And Rh Ignition Switches

ELECTRICAL SYSTEM

12 VOLT 18AMP. Battery
 12 VOLT Alternators-20 AMP.
 Switches
 _ Nav. Lights
 _ Landing Light
 _ Strobe Light
 External Power Supply Receptable
 Circuit Breaker Panel

FUEL SYSTEM

Two Integral Fuel Tanks With 100 Litres Total Capacity
 Engine Driven Fuel Pump
 Auxiliary Fuel Pumps, Electric
 Fuel Quick Drain
 1 X Shut Off And Fuel Selector Valve ANDAIR

INTERIOR

Pilot And Copilot Seats
 _ Adjustable Fore And Aft
 Seat Belts & Shoulder Harness, All Seats
 Wall To Wall Carpeting
 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

EXTERIOR LIGHTS

Nav. Lights LED with strobe AVEO Full LED TSO
Taxi Light LED

CABIN CONFORT SYSTEM

Windshield Defroster
Ventilator Adjustable, 2 Place
Heating System

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 Fixes

Propeller Spinner

Air Filter

Oil Filter

Oil And Water Coolers

Carburetor Heat With Manual Control

Thermostat Valves Oil And Water

PRODUCT SUPPORT/DOCUMENTS

Manufacturer Full Two Year Limited Warranty

Pilots Operation Handbook

Maintenance Manual

Parts Catalog

Aircraft Log Book

Engine Log Book

STANDARD GARMIN AVIONIC PACKAGE

GMA 340 Audio Panel

GNC 255A COM/NAV

GTX 335 Transponder ADS-B OUT

ELT 406 Mhz KANNAD

Antennas:

- Transponder
- VHF
- VOR
- Marker Beacon
- ELT

Speakers

Microphone

Stick Push-To-Talk Switch-Pilot/Copilot

Mic & Phone Jacks-Pilot/Copilot



AVIONICS OPTIONS

STANDARD AVIONICS



STANDARD GARMIN AVIONIC PACKAGE

- GMA 340 Audio Panel
- GNC 255A COM/NAV
- GTX 335 Transponder ADS-B OUT
- ELT 406 Mhz KANNAD
- Antennas:
 - Transponder
 - VHF
 - VOR
 - Marker Beacon
 - ELT
- Speakers
- Microphone
- Stick Push-To-Talk Switch-Pilot/Copilot
- Mic & Phone Jacks-Pilot/Copilot

AVIONICS OPTION 1



VFR NIGHT VERSION

Includes the following equipment:

- Heated Pitot
- GILL 25A Battery
- Instrument Light
- Map Light
- Dimmer
- Aux Alternator

Non-Additive. Replaces all Standard Avionics

AVIONICS OPTION 2



GLASS COCKPIT G500

Includes the following equipment:

- GARMIN G500 PFD
- GTN 650 Com/Nav/Gps with Antennas and inst. - exchange GNC225A
- Airspeed Ind. And Altimeter Back up TSO
- Aux Alternator

Non-Additive. Replaces all Standard Avionics.

AVIONICS OPTION 3



GLASS COCKPIT G500 + VFR NIGHT

Includes the following equipment:

- GARMIN G500 PFD
- GTN 650 Com/Nav/Gps with Antennas and inst. - exchange GNC225A
- Airspeed Ind. And Altimeter Back up TSO
- Heated Pitot
- GILL 25A Battery
- Instrument Light
- Map Light
- Dimmer
- Aux Alternator

Non-Additive. Replaces all Standard Avionics.

Empty Weight 399 kg

VP OPTION 1



P2002 JF VP CS/VLA

Includes the following equipment:

- Rotax 912 S3 100 hp Engine with Governor
- Central Quadrant with single throttle and pitch level
- Hoffmann Variable Pitch Propeller
- Manifold Pressure Indicator
- Attitude and Directional Electric

Non-Additive. Replaces all Standard Avionics.

PAINT SCHEMES

Standard



St1.1 __ Color Stripes



521 INTENSE BLUE
546 SILVER
521 INTENSE BLUE

St1.2 __ Color Stripes



502 BLACK
546 SILVER
547 GOLD

St1.3 __ Color Stripes



519 MEDIUM RED
546 SILVER
502 BLACK



St2.1 __ Color Stripes



528 INTENSE BLUE
546 SILVER
519 RED

St2.2 __ Color Stripes



502 BLACK
547 GOLD
546 SILVER

St2.3 __ Color Stripes



519 RED
502 BLACK
546 SILVER

Special Paints



Sp1.1 __ Paints __ Stripes



LIGHT GRAY 502 BLACK
547 GOLD

Sp1.2 __ Paints __ Stripes



RED 528 VIVID BLUE
546 SILVER

Sp1.3 __ Paints __ Stripes



NAVY BLUE 547 GOLD
546 SILVER



Sp2.1 __ Paints __ Stripes



LIGHT GRAY 502 BLACK

Sp2.2 __ Paints __ Stripes



RED 502 BLACK

Sp2.3 __ Paints __ Stripes



NAVY BLUE 546 SILVER

OPTIONS

Code	Description
SPECIAL CONTROLS	
1006	Rudder, throttle and brakes hand controls
INSTRUMENTS	
114/A	Turn & Slip Ind. 2"1/4
RADIO & NAVIGATION EQUIPMENTS	
GARMIN-COM/NAV/GPS	
120/A	GTR225 COM 25 Mhz with Antenna and Inst.
120/B	GTR225A COM 8.33 KHz with Antenna and Inst.
119	MD200 VOR Indicator Only for GNC255A (requires optional# 118/A)
121	GTN 650 Com/Nav/Gps with Antennas, Triplex and inst. With GI106A Ind.
121/A	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.
122/A	GTN 750 Com/Nav/Gps with Antennas, Triplex & inst. With GI106A Ind.(Exch for Std. GNC255A)
RADIO & NAVIGATION EQUIPMENT	
GARMIN-GPS	
128	AERA 500 with Antenna, Panel Support and Inst.
132	795 with Antenna, Panel Support and Inst.
BENDIX KING	
137	KR 87 ADF with KI227 Indicator
139	DME KN63-14 with KDI 572 Indicator
OTHERS	
157	Head Sets, Two
157/A	BOSE A 20 Head Sets, Two

Code	Description
AIRCRAFT EQUIPMENT	
174	Tinted Windows
176	Toe Brakes (see note # 1)
178	Central Quadrant with single throttle level
182	Fuselage Cover
185	Battery Gill G25 (Exchange for standard battery)
209	Control Locker
210	Towing Bar
EXTERIOR	
201/A (JF)	Special Paint Two Colors
ENGINE and PROPELLER EQUIPMENT	
187	Aux. Alternator

#1 - 176 TOE BRAKES

includes:

- New Pedals
- 4 Brakes Pump
- Parking Brake Selector



P2002-JF trainer for Argentinian Air Force

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