

A VOLKSPLANE REBORN



Christian Pichot prepares to unwrap the well-protected Evans VP-1 Volksplane he spent two years restoring.

Pleated and rolled prop covers complement a friendly spinner jacket.



For the last several years, during visits with my in-laws near Lyon, France, I have stopped in at the Aero Club de Villeurbanne, the flying club on Corbas airfield, to check on a sick friend: a dusty, neglected Evans Volksplane VP-1.

When I first went, the instructor at the A.C.V. was delighted that I even knew what a Volksplane was, and he assured me that a club member was planning to restore the plane, but I never saw much progress. Two years ago I didn't get to France, and last year the club was locked up for vacation when I went by, but this summer, on the day before my return to the States, I got a going-away present.

Entering the club lounge, I was greeted by Christian Pichot, a club member I had met briefly on a previous visit. Yes, as a matter of fact, the Volksplane had been restored and was flying, and he was the owner/restorer!

Looking Back

Volksplane VP-1 F-PYEQ—plans set No. 2251 of more than 6000 sold to date—was built by the late Marcel Perrein, also of the A.C.V., and it was completed and flown in 1979. In the years that followed, the plane accumulated only 45 hours before the owner/builder's ill health and some damage left it sitting in the club hangar with the wings removed.

Getting Started

In 1997, Pichot began a ground-up restoration of the Volksplane. No novice, he had already worked on the restorations of two Jodel D-9 Bébés and one Nicollier Ménéstrel—all Volkswagen-powered single-seaters. Two years and 1700 hours later, *Patou* (after Pichot's daughter Patricia) was back in the air. Pichot's goal when restoring F-PYEQ was "to remain faithful to the simple, rustic spirit of the design while at the same time

This VP-1 is back in the air.

By Matthew Long



doing a clean, neat job." His fine work offers many useful tips for Volksplaners, VW flyers and homebuilders in general.

Starting at the heart, F-PYEQ is powered by a 1500-cc Type 1 VW engine upgraded to 1677 cc and fitted with sodium-filled valves and new heads to allow safe use of 100LL or unleaded auto gas. As the aircraft was slightly tail-heavy, new, longer engine mounting spools and bolts were added. Ignition is via a single rear-mounted Eizsmazman magneto, and the fuel pump, chosen for its low profile, is from a Renault R14/Peugeot 104 compact car.

A fuel return outlet on the pump is piped to an all-important fuel pressure gauge in the cockpit. Carburetor icing in VWs being

Want to see the VW engine? The cowl comes off easily.

A homemade gauge helps check the fuel level.

There's storage space in the turtledeck.

a real concern for Pichot—he has even had icing problems in taxiing for take-off—a powerful carburetor heat system is fitted.

At the bottom of the firewall, a black hose brings warm air to a heat box at the pilot's feet. As Pichot says, an old French saying goes, "Warm feet, warm hands, warm all over!"

Some Major Changes

What Pichot calls his two major engine modifications are both oil-related. The first is an oil cooler from a Citroen GS car installed under the forward edge of the crankcase and fitted with an in-flight-adjustable rear shutter to control oil temperature in



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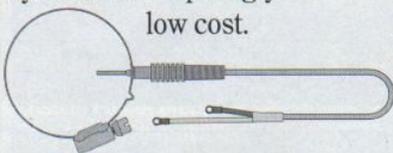


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varying ambient conditions.

The second is a cylindrical supplementary oil pan, machined from solid aluminum and finned for cooling, screwed into the oil drain plug hole. The oil pump pickup tube is extended to the bottom of this supplementary pan to ensure continuous oil flow in any normal flight condition.

On the nose is a three-blade, 48.5-inch, 31.5-inch-pitch Alain Léger wood propeller driven through a forced-on (no machined cone, no heating/shrinking) prop hub. The prop is powerful, requiring a new, longer pitot tube to get accurate air-speed readings outside the prop wash.

No engine electrical system is fitted, so hand propping is the norm, and Pichot dons a half-fingered leather cycling glove to protect his hand from the sharp trailing edge of the propping blade—and from the quick-following (120° instead of 180°!) leading edge of the next blade. While Pichot's first spinner was made from the conical headlight of a pre-WW-II Citroen Traction Avant car, the one on the plane now was made of sheet aluminum from scratch.

Pichot thought long and hard about how to cowl his engine. He knew that he wanted to see the engine cylinders, and he considered a Piper J-3-style nose bowl. Flipping through a classic car book late one night, however, he came across an inspiration: a Bugatti sports car. This cowling is all aluminum, including the rivets, and is quickly taken off in two pieces by simply removing a few lock pins. A black grill behind the prop and a VW radiator cap on top complete the sports car effect.



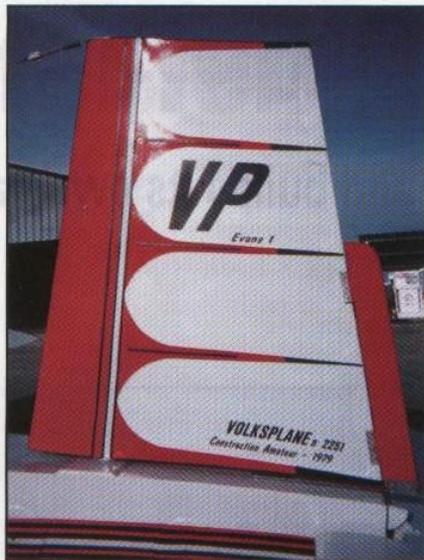
Behind the firewall, the forward fuselage decking—the only fiberglass component on the plane—hides a 9.5-gallon aluminum fuel tank with the usual wire-and-cork float. Pichot keeps a homemade fuel gauge on his key chain—a graduated aluminum bar marked in liters to correspond to the height of the float wire.

The landing gear is stock VP-1 but with doubled drag wires (of the single-wire size) and heavier fittings to reinforce a known Volksplane weakness. The complete wheel, axle and mechanical brake units are salvaged from an old Cessna, with the usual VP single hand lever brake operation. The 6.00x6 tires are kept at low pressure.

The Controls

In the cockpit, in-flight-adjustable rudder pedals salvaged from a Caudron C.800 glider allow changing positions on long flights. Side windows cut down on drafts while retaining the open-cockpit feel: The right one opens car-door

The all-moving vertical fin/rudder displays some of the airplane's history.



style, while the left includes a sliding hatch for access to the ignition and throttle during hand propping.

The usual instruments are fitted, all mechanically or pressure operated. Below the throttle, mixture and carb heat controls, a small silver quadrant operates the oil cooler shutter through a push-pull wire. Another wire control operates the pitch trim, a tiny tab on the stabilizer anti-servo tab. Pichot particularly appreciates having pitch trim on long finals, which allows him to get everything settled down and smooth despite the VP's feather-light, two-finger pitch response.

Behind the pilot, the headrest forms a door to the small baggage compartment (placarded for 5 kg [11 pounds] maximum weight) concealed in the wood-stringer-and-fabric turtledeck. Small solar panels on the turtledeck charge a tiny battery for the handheld-type navcom radio through a voltage regulator mounted above the pilot's left shoulder. A portable GPS receiver is also mounted on the panel, and external nav, com and GPS antennas are fitted.

Flying It

Pichot is pleased with the performance of his Volksplane, given here as IAS checked against the GPS. Cruising speed is 150 km/h or 93 mph at 3000 rpm; maximum speed is 195 km/h or 121 mph at 3400 rpm, and power-off stall speed is 70 km/h or 43 mph. Fuel consumption at cruising speed is 9 liters/hour or 2.4 gph, giving an endurance of about 3 hours with a 30-minute reserve and a range of 450 km or 279 miles.

Pichot is having a great time flying *Patou* as often as he can. Having accumulated 43 hours as of July 29, 1999, he will certainly put more time on F-PYEQ in one year than in all its previous 19!

His only complaint is the heavy ailerons, especially compared with the

light rudder and elevator, which can be particularly tiresome when landing in the gusty crosswind conditions common at Corbas. This winter, when open-cockpit flying gets too uncomfortable, he plans to install new, longer aileron control horns extending about 3 cm or 1½ inches above and below the wing. This will mean

installing small fairings around the cables where they exit the wing above and below the rear spar, but Pichot hopes the mechanical advantage gained by this arrangement will lighten the ailerons substantially.

Taking Care of Baby

Pichot is the proud papa of his adopted baby, and he takes good care of his plane. After replacing too many bent pitot tubes, he made a removable one using screw-on antenna or video jacks. A flagged, screw-on cap goes on in its place, and other Remove Before Flight covers go over the static port, air thermometer and fuel gauge/vent. Custom-made prop-and-spinner and canopy covers (he sews), old-fashioned wood-and-sheet-metal chocks, and cork-and-oiled-rag exhaust plugs complete the bedtime preparations. Overall, Pichot's care and hard work have turned a tired old bird into a bright young chick, and he has certainly succeeded in remaining faithful to the simple, rustic spirit of Bud Evans' enduring Volksplane. **KP**

FOR MORE INFORMATION on the Evans VP-1, contact Evans Aircraft, Box 744-K, La Jolla, CA 92038. Plans are contained in Bud Evans' \$44 book, "VP-1 Volksplane Plans and Pilot Handbook."

Builder Christian Pichot may be contacted at Chez Mlle. Juliette Barret, 41 Avenue Henri Barbusse, Villeurbanne 69100 France.

Information is also available in Volksplane News, a newsletter published by Keith Schindler at 1325 Princeton Ct., Denton, TX 76201. E-mail is keith_schindler@hotmail.com

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