EURO REPORT

New developments from the old country

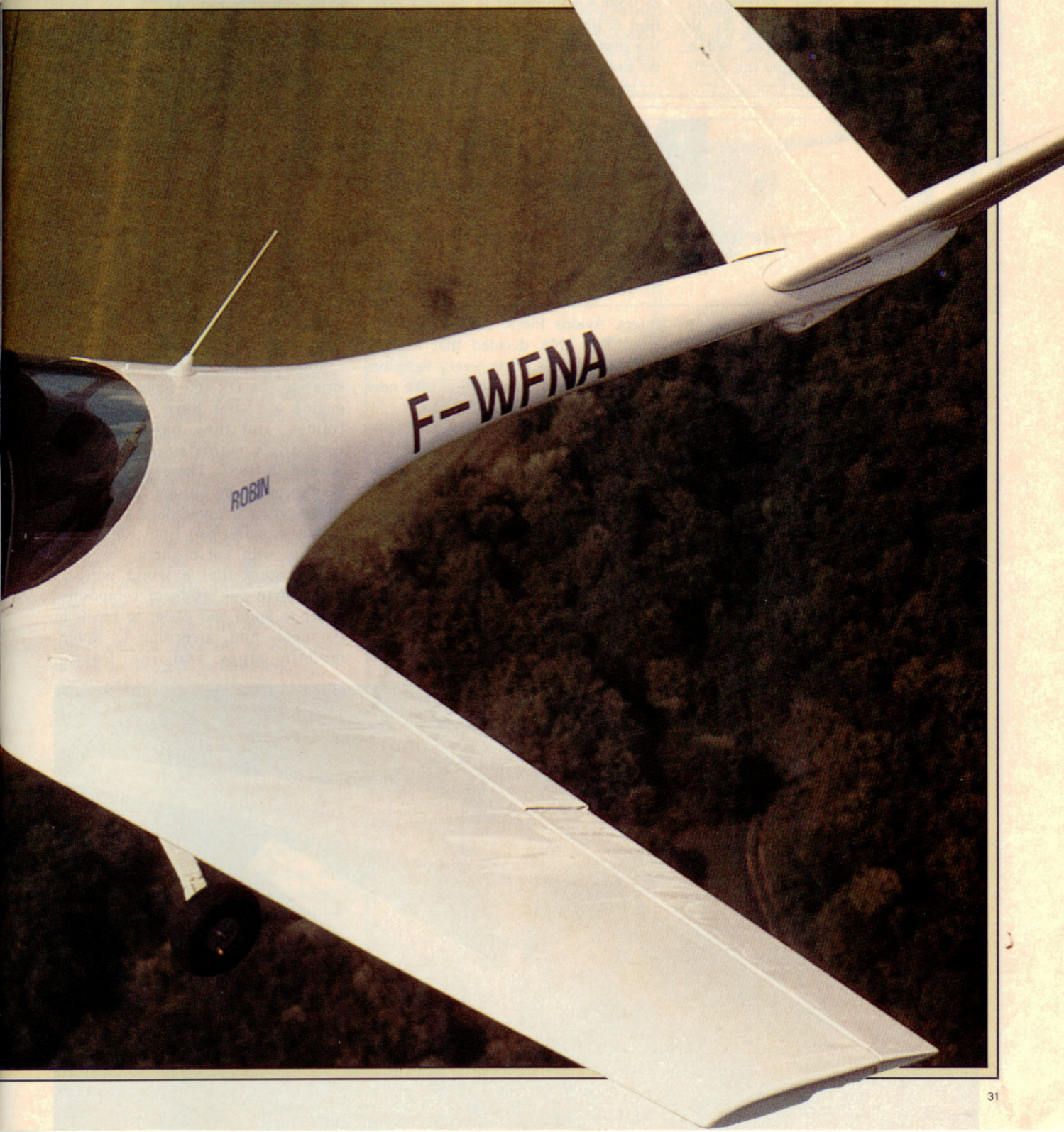
Robin ATL

PHOTOGRAPHY BY THOMAS A. HORNE

The breadth of interest and the range of activities that constitute general aviation are so varied that even a seemingly simple task, such as reporting on general aviation developments in Europe, requires explanation.

For every member—and each industry representative—who feels AOPA is too critical of the manufacturers or acts in ways that are inimical to industry interests, there is a member who accuses AOPA of toadying to those very companies. For each member who is interested in developments in other countries, there is one who thinks such coverage encourages the destruction of our domestic manufacturers. In other words, the attitudes and interests of the members of AOPA are as diverse as the types of aircraft they fly and the ways in which they use them.

That puts an additional requirement on us to make what we do and why as clear as possible. Quite simply, in the following section, we are reporting on European light-aviation developments that may have applications in North America. We



are not "taking a swipe" at U.S. manufacturers, and we are not making purchase recommendations. Nor do we think the encouraging efforts we have observed herald a revolution, for reasons that senior editor Thomas A. Horne makes clear in the following articles.

Aviation is as it has always been: international. Companies—indeed, nations—work to sell their products wherever possible. Quite frequently, bad feelings are created, particularly where national governments try to support domestic companies. When economic times are tough, the competition and the criticism intensify.

In the March issue, I wrote a short feature about the Socata TB 20 Trinidad ("Pilot Précis: Socata Trinidad," p. 115). The chief executive of one airframe manufacturer objected that we were trying to damage further the domestic general aviation industry. That patently is untrue.

One of the missions of AOPA is to provide information, including information about products. The area of least development in general aviation is light piston airplanes. Part of the reason for this is that the domestic manufacturers have concentrated their research and development efforts and funds on top of the line, principally turbine, aircraft. This emphasis is the result of a perfectly normal business decision. However, one of the results has been basically no development in personal and small business aircraft, particularly in the under-$100,000 price range.

The long-term effect of this will be a shrinking market for those very models on which the companies have concentrated. AOPA has been saying this for years. It is interesting to see that this concern is being expressed by an increasing number of

ROBIN ATL

The winner of France's primary aircraft competition

BY THOMAS A. HORNE

While we Americans have been toying with the idea of a low-cost category of FAA-certificated lightplane—the Primary Aircraft—the French have done something about it. French sales of single-engine lightplanes have been depressed for years, and France's political administration decided to do something about it. The Ministry of Transport, through the FNA (Federation Nationale Aeronautique—a private, national association that represents flying clubs), held a contest.

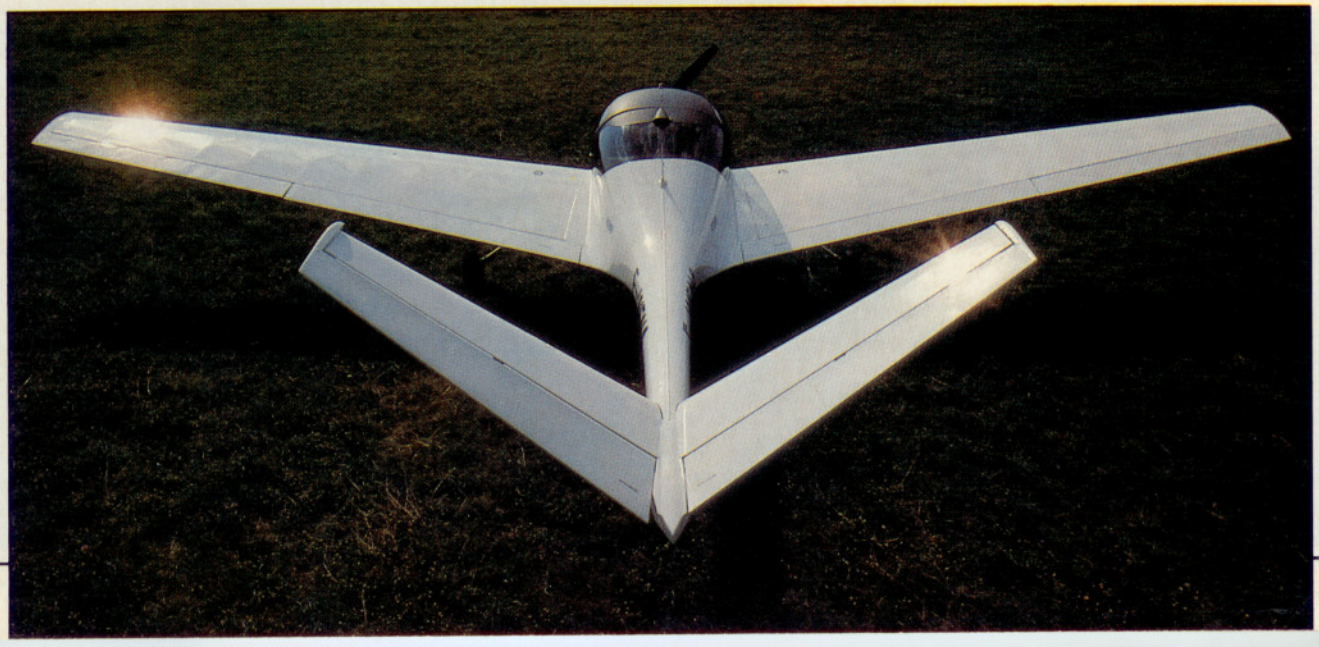
The competition was to elicit a new two-place design that would halve the current cost of instructional and recreational flying. Of the French manufacturers, Avions Pierre Robin, of Dijon, won. The FNA decided that Robin's ATL (Avion Très Léger—very light airplane) will be the flagship to take new cadres of French pilots to the air.

The ATL is a composite airplane. The fuselage is molded fiberglass with plies sandwiched together in an epoxy matrix. The cabin area is reinforced with bulkheads of Nomex honeycomb, also laid up in a combination of fiberglass and epoxy.

The wing and tail spars and ribs are made of wood—Oregon spruce, to be exact. Dacron covers the wing and tail surfaces aft of the leading-edge D-cells, topped off with a layer of dope and a coat of paint. The ailerons, flaps and ruddervators are aluminum.

Robin is experienced in wood construction. Its DR-400 series of single-engine airplanes have wooden airframes, and they have been the company's mainstay since Robin opened in 1957. These airplanes are very popular in Europe, as trainers, passenger aircraft and glider tugs.

Why wood? Apart from Robin's familiarity with the medium, the company argues that a wood wing is lighter than one made of composites, easier to build and easier to repair in the field. And, according to Robin, modern glues and the Dacron



people, including those with strong ties to turbine, professionally flown, general aviation aircraft. This spreading concern should help.

In the meantime, we search for potential alternatives. There has been a great deal of speculation about the possibility that at least one major U.S. airframe manufacturer—Cessna Aircraft Company—has undertaken a project to modernize light single-engine aircraft. We hope this is so and that others will follow. New products that represented the application of available technology would generate excitement and sales.

The joint project that AOPA and EAA have been leading, to create a new certification category for noncommercial use aircraft, almost has reached the point of a formal petition to the Federal Aviation Administration. It is hoped that this new Primary Aircraft category will stimulate the design, testing and approval of new products.

The only light-aircraft development that has taken place in this country in the past several years is in the Experimental category, which restricts those airplanes to the small number of people who can and who wish to be their own constructors.

There probably is no single solution that will make the foundation of the aviation market expand and provide modern light aircraft. That the market exists has been demonstrated time and again.

What follows are some commercial products that have been certificated or are in the process of obtaining certification. The variety indicates that the interest in light aircraft has had more vitality in Europe than in the United States. We hope the vigorous pursuit can be transported here.

—Edward G. Tripp

coverings help eliminate the traditional problems of wooden airframes—trapped moisture and wood rot.

The prototype ATL's first engine was a König two-stroke, 47-hp, three-cylinder radial. This was not reliable enough to meet Robin's satisfaction, however, and it was exchanged for a JPX-modified, 50-hp Volkswagen Beetle engine. The JPX has a single-ignition system, powered by a single magneto and four coils. Each cylinder has its own coil, which, according to Robin, provides redundancy equal to that of a dual ignition system (a system having two independent magneto ignition systems, each wired to one of two spark plugs for each cylinder).

The ATL's engine evolution is still incomplete. In anticipation of stricter noise regulations in 1985, the JPX/VW is scheduled to receive a gear train that will produce fewer propeller revolutions. The current engine turns 2,600 rpm at full power. The future engine will produce a maximum of 2,300 rpm as well as weigh 33 pounds less.

The ATL's flight testing has a way to go. As of July 1984, the airplane had accumulated 100 hours, and a full stall and spin test program had yet to be finished. Company officials said that a good deal of the prototype's flying time had been spent with visiting journalists, eager to report on this promising new development.

My flight in the ATL included all the maneuvers that attend pattern work, steep turns, glides, power-off stalls and takeoffs and landings. The airplane behaved well and handled as one might expect: like a cross between an ultralight and a Tomahawk trainer. Power is adequate for most field lengths.

There was pronounced buffeting at

Avions Pierre Robin
Robin ATL
Specifications

Engine	JPX/Volkswagen, 4-cyl, 50-hp @ 2,600 rpm
Propeller	Hoffmann, wooden, fixed pitch, 60-in dia
Wingspan	33 ft
Length	23 ft
Height	6 ft 7 in
Wing area	129.1 sq ft
Wing loading	9.2 lb/sq ft
Power loading	23.7 lb/hp
Seats	2
Empty weight	704 lb
Useful load	484 lb
Payload w/full fuel	406 lb
Gross weight	1,188 lb
Fuel capacity	13 gal
Performance	
Takeoff distance over 50-ft obst	726 ft
Rate of climb	570 fpm
Maximum level speed (sea level)	97 kt
Cruise speed @ 75% power	89 kt
Cruise speed @ 50% power	73 kt
Fuel consumption @ 50% power	2.2 gph
Range @ 50% cruise, no rsv	430 nm
Service ceiling	13,500 ft
Stall speed, power off	40 kt
Landing distance over 50-ft obst	792 ft

All specifications are based on manufacturer's calculations. Information is incomplete because flight testing is unfinished. For more information, contact Avions Pierre Robin, Aerodrome de Dijon-Val Suzon, Darois, 21121 Fontaine-les-Dijon, France; telephone 33 (80) 356101.

continued

low power settings. This condition, a Robin test pilot said, was caused by the resonance of the idling engine. Future modifications are supposed to correct this. The stall was an uncomplicated affair, just a bob of the nose, followed by a mushing descent.

As for landings and takeoffs, the ATL is one of the least bothersome that *AOPA Pilot* has ever flown. Even with a 15-mph direct crosswind, there was no problem.

The airplane seems ergonomically correct. The deep cut of the hinged canopy lets you step into the cockpit with more grace than any other light single-engine airplane, and visibility is excellent. The new-found French passion for auto-style cockpit interiors is continued in the ATL: bucket seats and a center console. Since the seats are not adjustable, Robin provides a hand crank that moves the rudder pedals fore and aft to suit the pilot's stature.

Robin believes that testing will be completed by early 1985. French certification should soon follow. Then, the ATL will go on sale for an estimated Fr211,000 (about $25,000). In hopes of stimulating the growth of the French pilot population as well as ATL sales, the FNA will help finance French purchases. If a French flying club (approximately 60 percent of French private flying is through flying clubs) buys an ATL, the requirement as now proposed is for a down payment of 20 percent. The FNA will finance the rest.

Americans will have to wait. Certification to Federal Aviation Regulations Part 23 standards is expected sometime in 1986. The projected American sales price has yet to be determined, but it should be well under the asking price of currently produced two-seat certificated American singles.

Robin believes that ATL sales may someday top the 1,500 mark. But whether the ATL is the long-awaited primary aircraft of the future remains to be seen. If the airplane is to spur the masses to take up flying, then simplified pilot certification requirements will be needed.

The French have an edge on us in this department, too. Their *brevet elementaire* (elementary diploma—a sort of French recreational pilot certificate) allows beginning pilots solo privileges after a minimum amount of instruction, provided they fly within a 50-mile radius of homebase. America's proposed recreational pilot certificate—a concept advanced by AOPA—is still frozen in the talking stage.

Perhaps the Robin ATL will be the catalyst to help boost sagging lightplane sales and student pilot starts. The airplane is a flash of optimism in an otherwise dreary landscape.

Stay tuned. We will be hearing more from Robin and will keep you informed of the ATL's evolution. □

Mattsies is a small village in south central West Germany. The town is a sleepy place. Its airport is not. The Mattsies airport is home to Burkhart Grob Flugzeugbau, manufacturers of two new general aviation lightplanes: the Grob motorglider G109B and an experimental prototype, the Grob G112. Grob also is conducting flight tests of a Porsche aircraft engine at Mattsies (see "Porsche Power," p. 41).

Pilot reported on the G109B's predecessor, the G109, in the October 1982 issue (p. 36). The G109's big attraction was its fresh design, its novelty as a newly certificated motorglider and its competitive price. Though the G109 was no world-beater in the American market (total United States sales, 41), Europeans like them. Some 228 G109s were sold to European customers, many of them Germans.

The G109B brings with it some major improvements. Gone is the 109's 80-hp Limbach-Volkswagen engine. Grob learned that most pilots used the 109 more as a conventional lightplane than as the motorglider it was intended to be. The Limbach was supposed to fulfill only two functions: propel the craft into the air and fly the pilot out of descending air masses when a soaring flight went sour. As it turned out, more pilots flew their 109s engine-on than engine-off.

The Limbach-VW produced a less-than-inspiring climb rate (530 fpm) and plodding true airspeeds (103 KTAS at 75-percent power). So Grob dropped it in favor of a more powerful engine of its own design, the 90-hp Grob G2500. It looks virtually identical to the Limbach-VW. Climb rate is up 120 fpm, cruise speed is approximately the same (as is fuel consumption), and takeoff distances are way down, compared to the original 109.

Maximum rpm on the Grob powerplant is 3,000 rpm—high, but not as high as the Limbach's 3,400-rpm redline. This, together with a new constant-speed propeller that Grob plans to introduce, means a significant noise reduction from the original Grob motorglider.

Grob's propeller, now undergoing tests, does not use engine oil pressure

BURKHART GROB FLUGZEUGBAU