PILOT REPORT: FOURNIER RF-4D

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Flying and airplanes are most existential things. The meaning an airplane has depends on the aviator and the kind of flying he does. We put the essence of the machine into it. A Lockheed Orion was a fine, big wooden airplane with a large radial engine. But the dreamers and adventurers of the 1930s made it the Apollo of its day, what with its pioneering and record breaking flights. It became a symbol of the Golden Age of Flying. The plane was built with speed and range but the aviators combined with it their imagination to make it what it became. Of course some planes lend themselves more to one kind of response than another. It is difficult to be an aerobatic enthusiast with a 747 or a racer with a Cub. Obviously some planes fit some types of flying better than others.

I have a machine that is to me the ultimate magic carpet, the essence of all that is flying. It is a 600-pound single-

An airborne author, in his favorite airplane. Sleek little RF-4D shows its retractable landing wheel in the extended position.

seater made mostly of plants: wooden spars and ribs, plywood on the fuselage, and cotton cloth coverings. Some parts are like most other airplanes. The retractable single landing gear is made of blue mud (bauxite), and the engine of reddish crumbly rock (iron ore). It symbolizes the amen of World War II, having been designed by a Frenchman, Rene Founier, built by Germans, of the Sportavia Factory at Dahlemer Benz, and fitted with a German designed 1,192 cc Volkswagen engine remanufactured into an airplane powerplant in France, and shipped back to Germany for mounting.

The airframe is ever so delicate looking, with many tiny nuts and bolts where we are used to seeing a few big thick ones in American planes. Yet it all adds up to an 11 G load limit.

At 3,200 RPM the propeller drives enough air backward to pull the plane forward at 115 mph. At full speed of 3,500 rpm, I once flew from Catalina to Palos Verdes ten feet off the Pacific, reading a steady 124 mph. So little power is needed at 60 mph it is almost impossible to hear the engine as it passes over at 300 feet. Shut off the engine, pull the prop horizontal with the start lever and it slips through 20 miles of air for every mile of gravitational potential used. Once, with tailwinds, I went 450 miles from Buchanan Field, in the San Francisco Bay area, to Chino, California, on a tank of gasoline. Without tailwinds or soaring, I usually plan 340 miles between gas stops, which uses eight gallons for that distance and holds two gallons in reserve. I use low lead regular gas whenever I can. That

works out to 42.5 miles per gallon, or 2.2 gallons per hour.

At normal cruise, if it so pleases me, I can ease back the stick into a clean, round loop and continue on my way at the same speed and altitude a few seconds later. Or pull back on the effortlessly light stick and push full aileron and rudder and the horizon spins around quickly as the plane rolls. But enough of this rhapsodising. Let met tell you about how I got my plane and some of the adventures that have made this airplane the essence of aviation to me.

I have flown gliders a couple thousand hours and always considered competition soaring to be the greatest flying endeavor. Airplanes were boring, except as a means to get somewhere, or perhaps, landings. I had flown a Briegleb BC-12 sailplane extensively in contests and let my friend Charlie Weber fly it. He in turn let me fly his Libelle fiberglass glider. (An exceptional performer, it was 20 mph faster than the BG-12 at the same sink.) Later he sold it. Why? "To fly gliders you need a towplane, a crew and lift. I never seemed to have all three at any one time."

In 1968 a few Fournier RF-4Ds were imported. Charlie got one and let me try it. I had always admired the graceful looks and was surprised and delighted at its sporty handling. It was as maneuverable as a Schweizer 1-26 sailplane, but with ability to motorglide close to the ground in interesting places without the constant search for lift and the concern over outlandings of a pure glider. I flew up narrow canyons, circled some motorcycle riders, waved and flew back out.

Wow! What fun! I want one!

Charlie let me fly it a few times while I was building the replica Wright Flyer at Flabob, but as soon as I finished he put his RF-4 in Mac McRiley's hangar and recovered it; so it was out of action for six months. The BG-12 was not competitive with the new glass gliders, so Carl Ziler, the owner, had me sell it. A couple airline pilots got it for a weekend fun flier. I had nothing to fly now.

A Revmaster sales engineer, Whitney Christensen, got a Fournier as a flying test bed for the VW airplane conversions they were going to make. After only 78 hours flying time his stockbroker smashed the ship by losing control during a porpoising bounce and getting out of synchronism with the oscillations. Then it sat in the hangar at Chino gathering dust and running up rent while various proposals for repairing it were considered. It was decided to sell the machine as it was. After several deals had fallen through and it was still for sale, I went out to look at the ship. From what I had heard it was very extensively damaged and would take at least a year to put back together. I thought I may as well take a look anyway.

I will never forget that moment when the hangar doors were pushed aside and I saw the dusty, forlorn little ship with its splintered, stubby propeller and broken gear sitting on a roller cart in the cobwebby hangar. It was so new even the rudder pedals had unworn paint. I was like the little kid who goes to the pet store and has a puppy lick his face. I never wanted anything so much in my life. I made an offer, had it accepted, and wrote a check on the spot, using the dusty wing as a desk. I drove away from the airport with a lump in my throat and tears of joy in my eyes. It was a dream

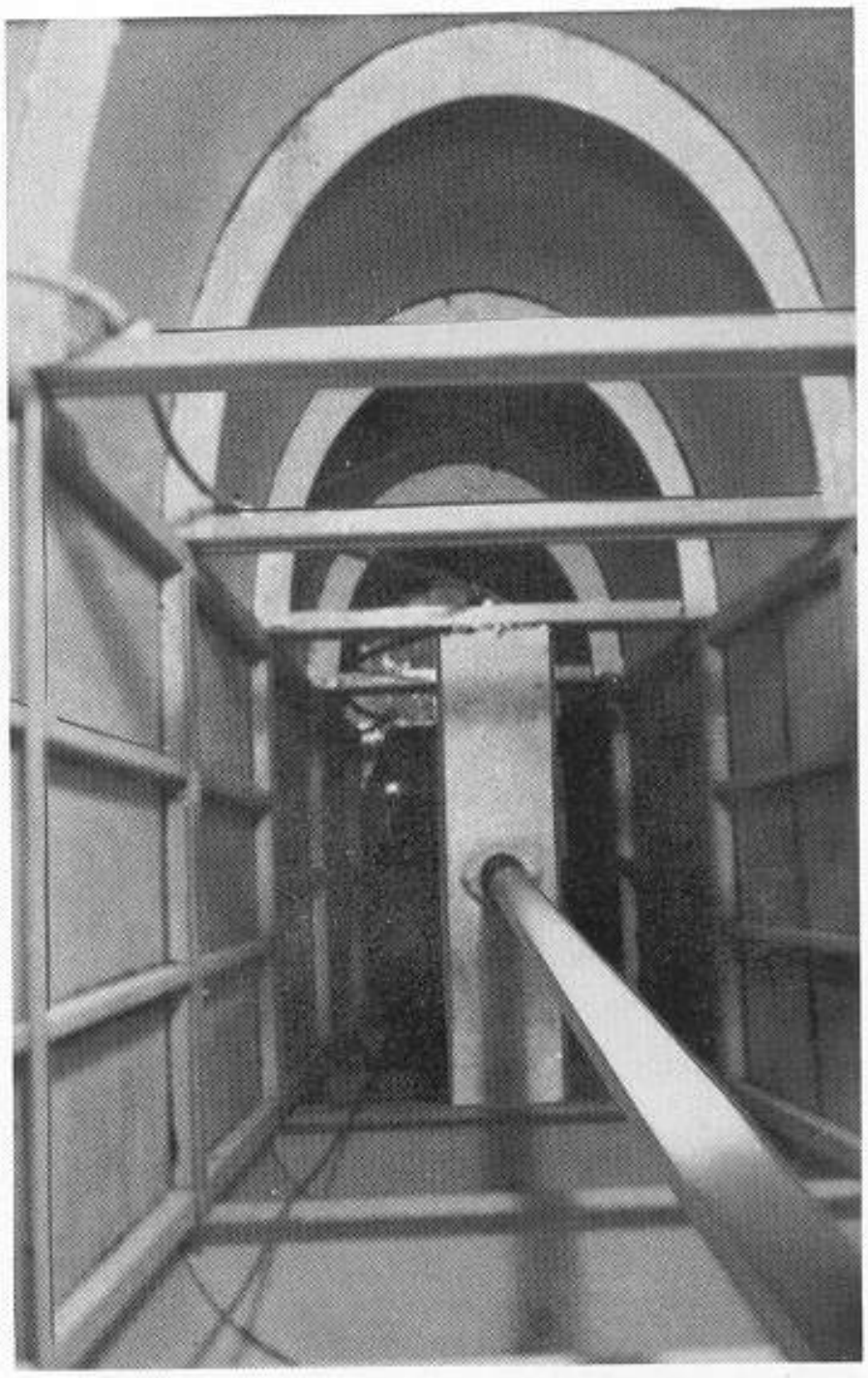
come true. I owned *a Fournier RF-4D . . . I have a motorglider!*

So it was that a month after the BG-12 glider was sold, I had a "combination" aircraft. I wrote the factory about my needs in a letter with a check, and in only 10 days all the parts for the retractable landing gear arrived. Les Trigg made a new prop. In January, 1972, the FAA inspector licensed the machine in experimental exhibition. My brother Mark and I had an exciting afternoon flying it around and around, practicing landings with the touchy bird.

It was fun to go out on a weekday morning and fly anywhere I pleased. Looking out through the canopy at the sky above and all over the ground was delightful. Thinking how human beings had made such a streamlined creation that so exactly suited my concept of an airplane totally reassured my faith in man.

One morning I took off from Flabob (near Riverside, California) and winged to the condor country near Lake Piru. Having made many ground trips to the condor preserve lookout points in the past years, and having seen one bird fairly close and three far away was the only result of those many hours of anticipation.

I found a thermal over one of the campground lookouts and circled carefully and and slowly. A big raven moved in with me and we shared the lift with the understanding that all birds must feel for air creatures doing the same thing. Below I suddenly noticed another bird circling in the thermal. Immense black wings with a white stripe faintly and occasionally showing through. A California condor!



Looking back into the tailcone of the Fournier shows its all-wood construction. As author says, it's mostly made of plants and minerals.

I eased out of the thermal by making wider circles, bade goodbye to my raven and watched the *Gymnogyps* come up to me. My engine was shut off and he moved up quickly; soon we swung together, circling tightly. The creature is not just a big vulture. It has a unique, ancient, scraggly look all its own. The long slim pinions spread floppily at the end of the giant, squarish wings. The pink head looked at me, nonchalant and disdainful. A condor with me in the same thermal, circling together; one of my dreams was being lived!

The bird flexed and pulled his wings in to half their normal area and he glided away to the ridge north of us; I followed easily. The condor's glide ratio must be much less than that for the RF-4D. We worked

little slope thermals to the top of the ridges and moved on west. The bird didn't work each one to its ultimate height which, for me, was not conducive to comfort in the unlandable country below so, when I hit a 900 fpm thermal, I stayed with it and climbed to 12,000 feet, while twisting my head around to keep the condor in sight. I lost him.

After hours of soaring that day and 123 miles of motor gliding, looking for condors, I headed back to Flabob at full speed to get home before sunset. On the way back I did some joyous rolls and loops and turned off the engine coming up on the last loop for a leisurely glide to the airport. I had used only 6 gallons of fuel during the eight-hour flight.

But, you might ask, what does one do with a single-place airplane? But, let's face it—sport flying is, and can only be, a personal experience. I would intensely dislike riding with a passenger. The greatest joy of flying is its almost absolute freedom.

Coming back from the Watsonville, California, Antique Airshow that same year, I was cutting across the mountains, twisting and turning at my whim, just looking over valleys and following roads to see where they went. I couldn't resist soaring with hawks and eagles here and there, as I spied them circling in thermals. South of Coalinga the bare, buff desert invited me to skim along the ground watching the rush of sand, stones, and rocks slide under me. I saw a group of weathered gray buildings ahead, pulled up and circled, letting the speed drop off to 60 mph. It was an abandoned ranch. Down went the gear and a careful landing was made on the pebbly desert.

I walked through the piles of sagebrush and explored the dusty barn, half full of dried out haybales, the tool shed with varied and odd tools and farm parts on the workbench, and the sand drifted floor. The house still had furniture, some clothes, old newspapers and magazines from 12 years past. I spent a quiet half hour sitting on the front porch, watching the sun sink lower and thinking about the ranch and the people that must have worked so hard trying to make it go in the dry climate. I felt uniquely privileged to be able to stop here at such an isolated place of calm beauty.

The Fournier is not the best plane for this kind of activity. The little engine doesn't give enough drive to go storming out of short, rough fields. But once I ease it into the air, gently and carefully, it will keep on accelerating slowly to a speed comparable to planes of four times the horsepower. This stop made me too late to get back to Flabob for a daylight landing so I landed at a mountain airport, prepared to spend the night in a sleeping bag. An old pilot living there drove up and took me home for a steak dinner and an evening of aviation talk, and insisted on giving me a couple gallons of his tractor gas before I left in the morning. I soared with two more condors on the way, before getting home.

To me it was a wonderful and delightful adventure that weekend, but it would not have been with a passenger. Who would put up with such whimsy? Many of my flight decisions would have been predicated on my passenger's fears, wishes and schedules. A passenger sometimes makes flight less free. Happily, the RF-4 is such a unique machine that there is little problem trading airplanes with owners of

multiplace types for trips and together-type adventures.

Despite the faster sinking speed and lower glide angle of the Fournier, I have soared many conditions I simply would never have experienced in a pure glider such as good standing waves over the L.A. Basin in winter, right through the Sierras, and cliff soaring along the beautiful coastlines. On New Years Eve over the big mountains near San Felipe, B.C., Mexico,

1968 FOURNIER RF-4D

Price:
Used, average condition, $6,000-7,000.

Dimensions:

Wingspan	36.9 ft.
Wing area	110 sq. ft.
Length	20 ft.
Seats	1

Weights and Loadings:

Empty weight	600 lb.
Gross weight	860 lb.
Useful load	260 lb.
Payload (full fuel)	200 lb.
Power loading	23.9 lb./hp
Wing loading	7.8 lb./sq. ft.
Fuel capacity	10 gal.
Fuel weight	60 lb.

Power Unit:
Converted Volkswagen 1190 cc, 4-cyl. opposed, air-cooled; 36 hp at 3,600 rpm.

Performance:

Maximum speed, sea level	124 mph
Cruise speed, 75% power	115 mph
Economy cruise, 45% power	60 mph
Stall, gear down, spoilers out	46 mph
Rate of climb, sea level	600 fpm
Glide ratio (L/D)	20:1
Service ceiling (powered)	19,000 ft.
Takeoff ground roll	426 ft.
Takeoff distance over 50 ft. obstacle	885 ft.
Landing ground roll	330 ft.
Landing distance over 50 ft. obstacle	755 ft.
Range, maximum cruise, 45 min. reserve	340 sm
Range, economy cruise, no reserve	500 sm

I soared to over 14,000 feet in an unsuspected wave. It was dead calm on the ground that day and I'll not forget the 35-mile glide back to the Sea of Cortez and 20 minutes of quiet circling over the blue water before landing. Yet, going back to Mexicali, we flew most of the way at 15 feet and had just as much fun looking closely at the desert.

A sailplane/airplane is the most practical fun machine ever created. You can pick a place and go there, soaring in any interesting lift on the way. Or you can simply loiter around interesting places at 60 mph with the engine almost silent, burning one gallon an hour of car gas. It performs right along with a Cessna 150 at less than one-third of the Cessna's power.

The Fournier RF-4D is a happy Franco-Prussian contribution to flight. It's a practical airplane that soars, a truly magic machine—the best airplane in the world.