

MAIN IMAGE: STEFAN DE SUTTER

RF47 recovery

Written off after an accident, a very special one-off Fournier is recovered from Belgium and brought to the UK ready for a second life

Words & photos: Bob Grimstead

I have owned nearly a dozen aeroplanes since buying my little red Turbulent G-ARRZ in 1983. Since then I have mostly maintained them myself. In 2014 and 2015 I repaired, re-covered and reassembled my wooden Fournier RF4D air display aeroplane RedHawk (as recounted recently in Pilot). The following year I re-engined and re-covered my Australian Fournier RF4D The Blue Angel. So, despite having only been trained as an airline pilot, I felt reasonably comfortable with my maintenance skills in respect to fabric-covered, Volkswagen-powered, wooden aeroplanes.

In November 2016, I was doing some voluntary proof reading on parts of the official English translation of René Fournier's autobiographical book, Mon rêve et mes combats (subsequently published as My Dream and My Aeroplanes). During this I learned about a Fournier design of which I had previously known little – the RF47. This, René's 'Ultimate Project', was a side-by-side, two-seat, nosewheel development of his strong and gracefully aerobatic RF4D of which I proudly owned two examples. Although I had previously been aware of the type, it hadn't really interested me because it had a nosewheel and was not aerobatic. As far as I knew, it was simply a lightweight basic trainer aimed at the French market. Few had been made, and none had been exported.

ABOVE: **sole all-wood RF47 prototype as it was in happier days of Belgium ownership...**

INSET: **... and the sad end to its last flight, after its VW engine failed**

When reading through René's account I was taken by surprise to discover that, while the production models with their carbon composite wing spars were indeed non-

aerobatic, the original wooden prototype F-PNDF was actually fully aerobatic and designed to the same +6/-3g limits as my RF4Ds, while it shared similarly long wings and graceful lines.

Since 1982 I had been displaying single-seat aeroplanes. Unfortunately this meant that most summer weekends saw me gadding off to air shows while my wife Karen was stuck at home. Yes, she could sometimes drive to the closer English ones, although driving far on Southern England's congested and potholed roads is an ordeal, but the more distant and Continental shows were just too much for her. Even the secondary design feature of my smoke pods being able to carry a bottle of Champagne back from French meetings did little to ameliorate the frustration of our summer weekend separations.

Suddenly here was a possible solution. This little aeroplane might be perfect for us.

Because it was essentially a side-by-side, two-seat version of my display Fourniers it should fly and aerobat similarly, and we could feasibly transit together in it to airshows. There I could fly my sequence while Karen sipped Prosecco, before we positioned home again. I wondered what had happened to it.

A little on-line research soon unearthed the amazing revelation that just a few days earlier F-PNDF had been force-landed in a field in Oordegem, East Flanders, having suffered failure of its recently-overhauled engine (a certified, Volkswagen-based, Sauer). Photographs showed the poor little thing on its back in a sandy field after the nosewheel dug into the soft ground on touchdown, but the damage appeared to be limited to a broken propeller, dented spinner, bent nose-leg, cracked cowlings, smashed canopy and snapped-off fin. Miraculously the most vital, complex and expensive component—its wing—appeared untouched.

Becoming increasingly excited, I mused on the issues. If I bought this broken aeroplane I would have to overhaul the engine properly. But it's only a Volkswagen. There are myriad variations on that theme, but I had worked on several of them and knew enough VW experts to forestall most potential problems. The airscrew? I would get a new one from my buddy Rupert's Hercules Propellers. Spinners are easy to obtain. Fibreglass cowlings are not difficult to repair. An RF4D's removable fin just bolts into place, so how hard could that be to fix?

The ninety-degree bent nose-leg could be more problematic and I would definitely need a new canopy, but from René's book I learned that both the canopy and cowlings had come directly from his earlier RF9, which had subsequently morphed into the Aeromot Ximango, so one should at least be available, even if it would probably be pricey. I scribbled out some estimated costs and came to the conclusion that if I could buy the aeroplane for £5,000 I could fix it myself for less than the roughly £20,000 that it should eventually be worth.

Further investigation among my friends in Club Fournier International (CFI) established the owner's contact details, so I dashed off a quick e-mail: '…I hope you are fully recovered from any injuries and back flying again very soon… If you decide to sell your RF47 rather than repairing it, please contact me.' The initial reply was a quick but equivocal 'perhaps'. So I made some preparatory enquiries.

Knowing that inter-European transfer of aeroplanes and their certification can be a minefield, whatever the authorities try to persuade you, my immediate next contact was the LAA's Chief Engineer and friend of long standing, Francis Donaldson. He reassured me that, since this aeroplane was a prototype and had a restricted C of A under the French CNRA system, there should be no problem in putting it on to the British register and, far more importantly, enabling it to be certified with an LAA Permit to Fly – thus allowing me to undertake the repairs myself under LAA supervision and include a few necessary minor modifications for display flying, primarily fitting my wing-tip smoke system.

I also wrote to the 95 year-old René (on paper and in French, of course), telling him what I planned to do, and asking him if he could let me have copies of the original drawings. His reply was strangely ambivalent. He suggested that I forget the RF47 and buy an RF5 instead. Now although numerous, a lovely, →



ABOVE: **accident site snapshot shows the apparent extent of the damage to prop, nose leg, canopy and fin**

There should be no problem putting it on the British register

RIGHT: **photos emailed to Bob by the owner showed the fuselage and tailplane on a trailer...**

graceful aeroplane and as strong as the RF4D, the RF5's very long wings make it much less nimble. More importantly it has tandem seating which my wife does not like—and neither do most passengers. They prefer side-by-side seating, which the RF47 has. So I communicated this to René with a renewed request for drawings.

Sadly... the original drawings were destroyed

Thus a sad tale unfolded: The RF47 design was finalised in 1991, just as modern computerised CAD/CAM techniques were being developed and refined. René, then seventy years old, didn't want to use this system, staying with his trusted pencil and drawing board. In his words: 'All I had were a pocket calculator and a modest drawing board in the kitchen. I was not enthusiastic about the new process of computer-aided design, in which I found no particular attraction... As far as I was concerned, designing an aircraft is rather like painting a tableau: I need to hold the pencil like a brush. No, truly, a computer screen and a mouse do not inspire me.'



It seems that, when the RF47 prototype was ready to fly, somebody convinced René to get his drawings converted to CAD via a Dassault program. He accepted that this was a good idea because of their worn state and the many amendments that had been made over the RF47's gestation as his hobby project. Sadly, once this computerisation process had been completed, the original drawings were destroyed. Worse, he told me that the now-obsolete Dassault file could no longer be read or even accessed.

To finish this woeful tale René did however send me a CD containing all the CAD drawings for the production RF47. At first I was delighted. The drawings were sharp, clear and printed well. But the more I perused, the more I realised they were useless to me. The production RF47 had

BELOW: **... and the crucial single-piece wing in apparently undamaged condition at Grimbergen**



a longer, wider fuselage using different materials. The fin and rudder both had different numbers of ribs, set at dissimilar angles. The nose-leg was made differently. All hardware was American specification rather than the prototype's French specs and so on. They were no use at all, so I would have to 'reverse engineer' everything. My spirits sank.

Meanwhile Christmas had come and gone with no further information from Belgium except a photograph of the remains on a trailer that seemed to show there had been more fuselage damage than I had at first realised. On a positive note the owner Michel assured me that he had both a spare canopy and cowling, plus the moulds for the cowling and other fibreglass components. This having been a prototype, presumably these had been irrelevant to future production examples. This good news seemed to make up for the bad news of additional damage. Eventually I had to wait until some weeks into the New Year for a full reply, but when that came it was positively in the affirmative. Michel said I could have the entire remains for the insurance excess of €3,500. So I agreed to buy it.



ABOVE: **as Bob discovered in Belgium, the fin was not built as a separate component (cowl mould in the background)**

But now logistics were a problem. I was on our extended annual holiday in Australia, while this broken aeroplane was not far from Brussels, at Grimbergen airfield. So I sent e-mails and made phone calls to people who either had or were able to borrow a glider trailer to recover it. I actually had an open one myself, but no towball, plus I didn't feel competent to load and drag that little lot halfway across Europe with a right-hand-drive car.

What I didn't consider at that time was using a specialist aircraft recovery concern, assuming that these operators generally worked for insurance companies and mostly dealt with airliners, military machines or commercial aircraft, and would thus be eye-wateringly expensive. But when the quotes started trickling in from those glider repair organisations and individuals I began a re-think. It was clear that each of these would require two vehicles for the additional manpower needed to complete the work, plus hotel accommodation, meals and other sundries. Adding these to the cross-Channel ferry fares in every case pushed their estimates up above £5,000. That was a full third of my total rebuild budget!

I puzzled and pondered. Maybe I would be better off paying to have a towball fitted to my car, rustling up a few friends and going over to get it myself. Except that my two best friends had recently died. And the thought of doing this in mid-winter rather dismayed me, so I eventually took the advice of my old mate, Britain's 'Mr Fournier', Dave Bland of Lima Zulu Aviation, and called Recovair, a specialist aircraft transportation company.

I stressed to them that this was a cheap and light little aeroplane and my budget was extremely restricted while asking if they might be interested in the task. To my amazement, their quote of just over £3,000 including VAT was significantly less that of any of the other folks I had approached. Furthermore they were prepared to take the RF47's wing to my Dunsfold hangar and then drop its fuselage and other major components at my home. Just as importantly it meant I wouldn't have to do any of the physical work myself. I could just leave everything to these experts.

Of course, they made it clear that their main business was with small airliners and big, expensive helicopters, so I would have to accept that my little job would be fitted in between their more important work, but that was no problem. The tentatively planned dates did in fact change a couple of times but →

I booked myself a return ferry ticket...

finally consolidated, so I booked myself a return ferry ticket between Dover and Dunkerque. Very aware that I was alone, no longer young, and completely unfamiliar with French and Belgian winter driving conditions, and neither did I really know where I was going, I made sure to allow a full day to get there and another complete day to drive home again.

So a murky March morning in 2017 found me navigating the grim, grey, gritty streets of drab Dover, past innumerable striped orange cones and forbidding concrete barriers towards its vast ferry terminal. When I drove as directed on to the upper deck of my ferry, I suddenly spotted a long flat-bed articulated lorry with 'Recovair' on its door passing below me on to the lower level. Half an hour later, once we had set sail but before we were out of mobile phone coverage, I called the company boss Tim Wakeman, and then met him in the lounge. I was surprised to find him alone. I presumed there would be at least two guys to do all the lifting and packing, but he assured me that with his truck's hydraulic crane he could easily do the whole job himself.

The following morning I followed my iPad's map straight to the airfield where I met Michel, whom I already knew spoke excellent English. With no sign yet of Tim and his truck, Michel took me to the hangar on the airfield's far side where his poor, broken aeroplane's remains



BELOW: **damage caused in recovering the wrecked aircraft from the accident site**

The recovery specialist

Tim Wakeman is a big, cheery and very practical chap with a huge fund of aviation anecdotes. He is also a pilot, formerly of helicopters but soon converting to fixed-wing. After a wide variety of jobs including some years with the REME (Royal Electrical and Mechanical Engineers) during which he gained valuable experience operating heavy cranes, one day he saw a minimally-damaged Bell Jet Ranger being ruined by a clueless driver over-zealously ratchet-strapping its boom to his truck before taking it off for repair. As Tim remarked to his brother at the time, "There has got to be a better way."

Tim had been voluntary ground crew at the fondly-remembered Biggin Hill Air Fairs and subsequently helped out with recovery of a number of forced-landed aircraft by using his crane driving skills. This was when he realised there was a need in this field for an expert who really did know what he was doing. "Time and time again I see serious damage done by well-meaning amateurs trying to save money on their aircraft transportation. Rule One of aircraft recovery is stop, look and assess the damage before starting. And don't try to right an overturned light aeroplane without first removing its wing and/or engine".

So, twenty years ago in 1999 Tim set up Recovair, his dedicated airframe

were stored. I have to admit that sight was sobering. Only now did I realise what additional damage had been done, both during the recovery and subsequently. Not only had huge, ragged gashes been punched in both sides of the rear fuselage, but it appeared that somebody, presumably assuming the aeroplane to be scrap, had roughly cut out the engine, instrument panel and radios without tagging any of the multitude of identical white wires. Nevertheless, I paid Michel and took ownership.

Pending Tim's arrival we started pulling everything out of the hangar. The fuselage on a trailer was still smeared with dust and sand from the crash. I asked Michel how he escaped from the upturned aeroplane. He told me he had to burrow out through the sharp edges of the broken canopy using shards of Perspex to scoop away the dirt. He is a big guy. That would have taken a long time. Wasn't he afraid of fire? "No. The engine was dead and cold."

With a couple of friends Michel brought out the wing on an old, wheeled engine hoist and balanced it on a wooden crate. Fortunately I was able to confirm that it was completely untouched. Then I carried out the sad and crumpled remains of the various tail components, which were in much worse condition. This is when I discovered that the RF47's fin is not a bolt-on job like those of other Fourniers, but an integral part of the rear fuselage. Although now it was not any more, so repairing that was going to be a bigger job than I had foreseen. Fortunately →



Someone had hacked out the panel with no thought that one day the wiring might be reconnected



Expert in recovering aircraft without damage, Tim Wakeman arrives at Grimbergen with his flatbed truck

transportation service. They will organise movement of any aircraft in any condition from anywhere to virtually anywhere else in the world. Recent ventures have included bringing a broken Diamond DA42 back from Alderney, transporting five Westland Sea Kings and seven support loads to the docks at the same time, and recovering a damaged Saratoga from Fair Isle.

Recovair has three dedicated lorries, two of which incorporate cranes, and three more vans of assorted sizes plus a Telehandler, a remote controlled forklift truck, trollies, dollies, air bags and other lifting and shifting equipment. Thanks to a haulage partnership they also have access to another 1,009 trucks around Britain and northern Europe. The biggest aircraft (to date) they have been involved with was taking to Farnborough the undercarriage of the British Airways Boeing 777 that crashed just short of Heathrow's Runway 27L after ice blocked its fuel heater matrices.

Recovair's main base is at Thruxton. With a full-time staff of five (soon to expand to six) and his wife Kim running the office, their proud boast is that they provide a go anywhere, at any time rescue and recovery service and can manage and secure on and off airport crash sites. For more information see: *www.recovair.com*

Michel's business is in packaging so he had already boxed up the engine and sundry smaller components into a large, slatted packing case, which he pulled out with a manual pallet truck.

Tim had difficulty negotiating local roadworks in his exceptionally long truck, but soon arrived. Before loading it, he reinforced the slightly floppy rear fuselage by wrapping its damaged area in cling-film-like black plastic sheeting. Then the hydraulic crane behind his cab made short work of getting this on to the forward, upper part of his stepped trailer, although there was a brief hiatus when it became apparent that the now right-angled nose leg got in the way of it lying flat and securely. Tim removed that leg, but not without some difficulty because even the part within its fixed casting was bent. More work for me later!

On Tim's truck were a big crate full of useful tools and equipment plus several plastic boxes with numerous straps and tarpaulins, so he was able to secure that fuselage against everything, including the forecast rain. Next he hoisted up the ten-metre long wing. This extended beyond the back of the flat-bed by perhaps a metre and a half, but more importantly, with the main undercarriage legs still attached it couldn't be laid flat, so it was balanced at a 45-degree angle. Nevertheless Tim was able to secure it before hoisting up the engine crate and fibreglass moulds. While he did this Michel went and got lunch



ABOVE: **hydraulic crane makes loading a single-handed job**

BELOW: **typical Belgian lunch for all – the seller's treat on the day**



for everybody. To my delight this was the Belgian classic of chips with mayonnaise.

Eventually Tim drove his truck out of the gates and, having shaken Michel's hand and thanked him profusely, I strode towards my car, keen to follow Tim closely towards Dunkerque, when Michel called out after me, "Oh and the three-point gear is in that box."

"Sorry, I don't quite understand."

"It was planned to be a kitplane, so it could have the small wheel at the front or the back. The fittings for the alternative undercarriage are in the big box."

Wow! So this pretty little aeroplane, with its mangled nose-leg could be a tailwheeler instead? What wonderful news! Not only would I no longer need to find somebody to manufacture a new nose leg for me without any drawings to work from, but the aeroplane could have a much lighter, more fun and less draggy tailwheel undercarriage instead. I drove home cock-a-hoop.





Loading the ten-metre single piece wing – again made easy with the built-in crane – and Bob's purchase, safely wrapped and secured for departure