Fly

When Matthew Hill went to VW Heritage to buy a new engine the staff were in for a real shock

Words: James Peene **Photos:** Dan Pullen (static), Anna Richardson (in flight)

In this shot you can see the Zenith carburettor. The engine uses 20W/50 oil, the same as any air-cooled Beetle or Bus. How cool is that?

BEHIND THE STICK

Matthew Hill has been a professional display pilot for over 30 years and flown countless aircraft. Of the RF4D he says, "It's a delight to fly. It does everything you want, and you can go anywhere in it, get off the ground in short spaces, fly in reasonably strong winds and it's comfortable. People always come up and say how much they love flying them and all those who've owned them say they wish they kept them." That's another thing our VWs have in common! ■

^ Oil cooler is mounted via an adapter plate but other than that it has standard oiling. Gravity keeps the oil in the sump when maneuvering and in the top of the engine when it's upside down!

> That's a single laminate wing keeping Matt aloft. An RF4D is the smallest aircraft to have flown across the North Atlantic. How far would you trust to go in your VW?

Matthew's office. Not a bud vase insight

being reliable?) The pilot couldn't re-start the engine so performed a landing that badly damaged the wing.

By this time the factory had stopped production and spares were hard to come by. As a result, the fuselage was placed in the corner of a hangar. The years passed, it was logged as destroyed by the Civil Aviation Authority, lost its certificate of airworthiness and sold on, until finally being bought and re-registered to Matthew in 2003.

It was re-assembled using the wing from another aircraft recovered from long-term storage and rebuilt in late 2009.

When the time came to sort the engine Matthew headed to VW Heritage, who supplied the crankcase, cylinders and other crucial components. John Maher also threw in some key ingredients and Matthew's mechanic, Bobby, put it all together. Surprisingly, it's pretty darn close to the beating heart of most Beetles. Okay, so there's a propeller where the front pulley would ordinarily go, and a single Zenith tractor carb, but it's still running points and a condenser!

Thanks to the frugal VW engine the RF4D will fly for 300 miles on a tank of fuel and cruise at 105mph with a maximum speed of 155mph at 3100rpm.

It appears some things are as reliable as a Volkswagen. ■

What do all these contraptions have in common? VW Heritage supplied all of their engines

I admit this might seem a trifle odd, an aeroplane in *VolksWorld*, but take a gander at the engine shot to the right of these words and you'll begin to understand how this nifty little machine slots rather comfortably into our normally quite insular world.

Okay, I'll admit, if you've been raised on a diet of leaky, unreliable, blow up and leave you on the side of the motorway Volkswagens, the idea of a VW-powered aeroplane like this is sure to fill you with horror. However, spend a couple of minutes talking to its current custodian and pilot, Matthew Hill, and he'll be only too happy to point out the error of your ways. You see, in the world of aviation, where failing to adhere to your service interval won't just spoil your day out but can be a matter of life and death, VW-powered aircraft have an enviable reputation for dependability. Much as your air-cooled VW once had a reputation for reliability when it was new and properly maintained by people who knew what they were doing, so to does the flat four-powered aircraft you see before you.

"Often dubbed the poor man's Spitfire"

But what of this aeroplane? How did it come to be here? Suprisingly, its story is much the same as many we've covered. It was, well, whilst not exactly a barn find, but a hangar find of sorts. But I think we need to a go a little further back to really set the scene.

Often dubbed the poor man's Spitfire by those who've flown it, due to its beautiful handling, this is the RF4D.

The design was the brainchild of French aeronautical engineer René Fournier, which explains where the RF moniker comes in. The first example was the RF1, built in 1960, and this being the fourth variation, is understandably known as the RF4D.

Technically speaking, it's not actually an aeroplane, but a motorglider, the importance of which will become clear in a minute or so.

Fournier wanted to spend his time aloft gliding. He came up with the RF because by fitting a small, low cost, reliable engine to a glider (in the first instance a 25hp flat four) he could fly to where the thermals were strongest, spend his days whirling around with the birds, and then fly home again. As with anything, necessity is the mother of invention, and it's the simple ideas that always work the best.

When fellow birdmen saw his invention, they wanted in on the action and production moved out of the abandoned laundry building in Cannes where Fournier had hand built his first prototype to a factory in Dijon where the RF2 was born.

In 1963 Fornier formed Société Alpavia with Comte Antoine d'Assche and built 89 production RF3s. The feeling was the RF3's handling and strength could be improved, so they came up with the stronger (as in it could take more G-force) RF4D. However, they couldn't cope with mass production, so went in with the German company Alfons Pützer KG to incorporate Sportavia-Pützer GmbH at Dahlemer Binz and built the RF4D (the D stands for Deutschland). Much sought after today, 155 RF4Ds were built and tend to change hands among enthusiasts so are rarely sold on the open market.

TECH INFO

ENGINE: 1200 with 1400 cylinders, points and condenser ignition, Zenith tractor carb

AIRFRAME: Built in 1968, wingspan of 37ft 6", maximum take off weight of 390 kilos

INTERIOR: Minimal

Almost went for a burton

Because it's actually classed as a motorglider, it's not required by aviation law to have a twin ignition system like a regular aeroplane. That's because as a glider, if the single ignition fails the RF4D should be capable of gliding safely back to earth. Well, that's the theory anyway, and a good one when an RF is in the hands of a capable and experienced pilot.

Sadly, that wasn't the case with this example in 1972. Built in 1968 and operating out of Biggin Hill, this RF4D was being aerobatted by its then pilot when the engine cut out during a stall turn because of the lack of an inverted fuel system. (What was it we said about VWs