

Rare work of art in the firmament: Mooney with a Porsche aircraft engine

19/03/2024 The PFM 3200-powered Mooney is legendary among aviators. They all want this 'Porsche of the skies' – and today there are only five that are airworthy anywhere in the world. We had the extraordinary opportunity to take a ride in one.

Oh, the boxer engine note is unmistakable. But what a different feeling it delivers in this setting! The three-bladed propeller cuts the air with a whirring sound, pulling from the front rather than pushing at the rear. With a long-legged and slightly swaying gait, we pull out of Paderborn Airport's Hangar II. Slowly at first, then ever faster, the Mooney M20L PFM (Porsche aircraft engine, or 'Porsche-Flugmotor' in the original German) rolls down the runway. At a mere 74 decibels, whisper-quiet for its class, the plane lifts off after just 400 metres – this is all it needs to get off the ground with a take-off weight of just under 900 kilograms, plus four occupants.

Pilot Max Schwarz looks relaxed. And it's no wonder, with ideal weather and the machine's perfect

handling, coupled with an ease of operation that's on par with driving a car. There is just one operating lever for three functions. Throttle, propeller adjustment and mixture control depending on altitude. In conventional planes of the same period, the pilot has to control each one separately.

The photographer's little piper has now approached. It's a moment every aviator dreams of: photographing a PFM-powered Mooney in an air-to-air setting. It's a day for the aviation history books, too, because only a few Mooney PFMs were ever built: just 40 all told. Most have long since been scrapped, with only about five of them worldwide still fit to fly. What was envisioned as Porsche's second mainstay in the 1990s, according to then Porsche development manager Heinz Dorsch, was over after just six years. The first PFM was certified for flight operations in 1984, followed by the first Mooney in 1988. It all came to an end in 1990. But the project's hard landing at the time was not due to miscues on the part of Porsche.

For his part, Schwarz brings us down gently. We disembark through the narrow door on the right, stepping down onto the wing and a step. Inside, this flying Porsche is about as spacious as a Mk2 VW Golf. But the seats are more comfortable, and the views are better. It's also surreal to look under the bonnet and see the curves of the cooling fan of a 911 engine in front of you.

Ulf Möller, a friend of the firm, designer, architect and Porsche enthusiast, is the man who made this appointment possible in the first place, convincing the amiable Dirk Sadlowski, owner of the Mooney and the founder of Hangar II at Paderborn Airport, to take part. Sadlowski is an entrepreneur and has worked in the furniture industry, but fulfilled a very specific dream years ago. No, not the dream of flying – though he's got that one ticked off too – but the one about building a Porsche.

Technical perfection paired with a classic look

He has loved Porsche cars since childhood. He would hunch down on the grass by the then newly built A44 motorway and wait for one to drive past. His company specialises in the restoration of classic Porsche models, as well as building bespoke vehicles for customers. Sadlowski likes technical perfection paired with classic style. But today we are going to talk about the PFM 3200, which – as befits a Porsche – is an absolute legend among aviation aficionados.

Sadlowski found his 1988 Mooney in Connecticut a few years ago and had it transported to Germany via Canada, Alaska, Greenland, Iceland, the Faroe Islands and Scotland. "I would have liked to do it myself, but I didn't have time," he sighs. But he has already brought many other historic planes to Europe via the same route.

Mooneys are designed from the ground up for speed, so they were a perfect match for Porsche. The famed 'flying tail' is an intriguing detail. The entire horizontal and vertical stabilisers move, not just some flaps. This means lower drag and higher speeds. A kind of flyline in the air, if you like. All that was required to install the PFM 3200 engine was an extension of the nose, which makes the whole aircraft look even sleeker. The result? A work of art in the sky!

The symbiosis with Mooney simply fitted

The PFM 3200 was not the first Porsche aircraft engine. That was the PFM 678, which was based on the 356 engine and delivered up to 75 PS. This was the entry-level model and a great success in the German Pützer Elster plane. From 1981, the 911 also took flight: in the SkyShip 500 and 600, known from the James Bond film 'A View to a Kill'. Engines from the Porsche 930 were used for propulsion in that. The PFM 3200 was developed in Weissach from 1981 and received its certification in 1984/85. Series production did not start until 1987, however – rather late in the day.

Yet everything might still have turned out well: the partnership with Mooney was compelling. Its fuel economy was certainly a selling point, as it used 38 litres of normal fuel per flight hour instead of more than 50 litres of aviation fuel – which was what you would get from the likes of competitor aircraft from Lycoming. But in the US, where the fuel was cheap, fuel efficiency was less of an issue. The quietness of the engine's operation was also irrelevant in the US. Instead, the competition pounced on one detail: the engine's ignition system. The argument was this: if the power were to fail, the plane would fall from the sky an hour later.

Alternators and ignition distributors had to hold their own against the conventional ignition magneto, which induces the current itself. Customers were scared off. Quite successfully so, alas. And yet the PFM 3200 had proven its reliability. In more than six months with 300 take-offs and landings and 600 flight hours, Michael Schultz and Hans Kampik had circumnavigated the world with it in 1985/86. On 16 January 1986, they landed their Mooney prototype safely at a small airfield in the German town of Donaueschingen. The 3.2-litre Porsche PFM 3200 aircraft engine had consumed 23,000 litres of premium gasoline and 30 litres of oil, defied heat and cold and travelled 100,000 kilometres without a hitch. And the ignition? Nothing to report.

Today, it's all water under the bridge. The aircraft market did not develop as rapidly as an entire industry had hoped. About 180 PFM 3200 aircraft engines were ultimately built, and about 80 aircraft took to the air with them. These included Cessnas and the French Robin DR400/RP, in addition to the Mooneys. There are still about 15 to 20 of them around, five of which are Mooneys. They are a dream for many aviators, a legend of the sky. And now one has been photographed once again in 2023 in the skies above Westphalia, and is kept in a hangar we had the privilege of visiting thanks to Ulf Möller. What a day!

Info

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