

# I learnt about (instrument) flying from that

## Falling oil pressure

Alan South recalls an apparently minor mechanical problem that could have ended in disaster,

It was one of those moments. I couldn't be sure, but it looked like the oil pressure gauge had dropped a needle's width since I last checked. It was also one of those moments when in the face of some demanding flying, my subconscious was starting frantically to assemble all the information collected during the day. A needle's width drop was significant, as the green arc was only 6mm wide. On the other hand, the wiring on this 1982 Mooney was a bit dubious, and most of the other gauges in the cluster had given problems in the past. For the moment, I flew on. I got out the POH to try and learn a bit more about the oil pressure indicating system. However, as soon as I saw the gauge drop another fraction of a needle's width, I knew it was time to check this out on the ground.

Here's how it all started, just a few hours earlier.

I was pre-flighting my group's Mooney 201, and I'd just dipped the oil. It was down at 4 quarts. As the engine was getting on a bit, we tried to keep the oil level at about 6-6½ quarts, as any higher, and it breathed a quart or so out over the belly. Nonetheless, by the time the level was at about 6 quarts, things would stabilise and we would get fairly low oil consumption. I checked the tech log, and found out that the Mooney had flown in the day before from Lyon-Bron, so maybe the pilot couldn't get any oil and had headed home with a low starting level. It had never happened before, but there's always a first time.

Anyway, I had to be getting on. My plan was to fly from Cambridge to Biggin to pick up a colleague, and then for both of us to head up to Liibeck for a business meeting the next day. Time was getting a little short, and the weather en route had a forecast of thunderstorms for much of the Low Countries and northern Germany. On days like this I always like to have plenty of time, fuel and daylight. I filled the tanks and put



in 3 litres of oil. On the run up there was a persistent mag drop on the "first click to the left". This set of plugs for some reason was always more prone to fouling than the others. Normally any fouling cleared after just a minute of running at 2000rpm, but this time it took some prolonged running at 2500rpm before the mags would check OK at 2000rpm. Credible, but odd. I kept to my schedule, and the quick hop over to Biggin went fine, though I'm sure the engine coughed on very short finals to runway 21. My colleague, Neil, was ready and we were soon airborne again on our IFR flight plan to Liibeck.

The weathermen were true to their word. As we approached the Belgian coast at FL90 there were huge build ups from about 5 miles inland, stretching as far as the eye could see. I heard one airliner ask for a 40-mile deviation "to avoid". We were in the clear as we routed up the coast, and there was nothing showing on the Stormscope. Still, it was hard not to be a little preoccupied by the weather as we soon had to turn inland to cross Holland. There was certainly the prospect of a rough ride, and always the possibility of a diversion. There was the added factor that our business meeting started at 9am the next morning.

**Dropping oil pressure** Somewhere across Holland, just as it was looking like we would have to start flying through some of the weather, I did a FREDA check. My habit was to carry out this check every 10 minutes, on the

10 minute points of the flight timer. As I got to the E for Engine, I noticed that the oil pressure gauge had dropped a needle's width. Five minutes later, the oil pressure indication had dropped another needle's width. Despite an overwhelming urge to disbelieve the gauge and to get to Liibeck, something clicked inside, which is where this story began. These "credible but odd" instances were somehow stacking up to tell me that this was a problem to be checked out on the ground. I decided it was best to turn away from the weather and requested a diversion into Rotterdam, about 10 minutes behind. During those 10 minutes, the oil pressure indication continued to fall, and by the time I got Rotterdam in sight, it had fallen through the green and was now at the bottom of the yellow arc. Also during those 10 minutes, I reflected on how Dutch fields tended to be very long and narrow, just like a runway in fact, but today they were orientated pretty much at 90 degrees to the wind that was gusting to 30 knots, and had