

HIGHLIGHTS OF MY LIFE AT THE PITTS AND HUSKY FACTORY

Although my primary role was in engineering I'll leave the aircraft design activities out of these notes and concentrate on the flying. Upon arrival at the factory my first step was to be checked out in the 260 hp Pitts S-2B and the Husky. I had already obtained an American CPL from the Salt Lake City office of the FAA after having a brief medical and filling in an application form. Greg was doing the test flying pending the recruitment of the new Marketing Manager/Chief Pilot. At the time Greg's full-time job was flying instructor but he is now flying aerobatic displays 100% of the time. My last flight with Greg covered all spin sequences - upright, inverted, normal, accelerated and flat - so I didn't want to be tossed around any more by Greg at the end of the session. He normally wants to show off one of his airshow manoeuvres so I said: "Don't show me Greg, tell me how to do it and I'll try it myself". When Peter arrived to take over the flight testing we both took check rides with the FAA to cover the production flight testing. Les was test pilot on the little Bede jet before he joined the FAA and the previous week he had been flying Boeing 737's around in wake turbulence - Les certainly gets around a bit. Talking to Les about the airlines over dinner one night he said that he would recommend aerobatics for every pilot to improve their ability in recovering from unusual attitudes. Peter did his check in an S-2B but they skipped the first flight sequence which includes manoeuvres to +6 and -3 g so that the wing fittings are bedded in to ensure the final rigging is maintained. I did my check in the Husky. The first part of the first flight focuses on engine operation. On one occasion Peter asked me to check a Husky that he would not accept because of the engine behaviour yet the mechanics said that it was normal. On the runup there was a flat spot at part throttle and otherwise it ran OK. I climbed to 10,000 ft above the airstrip and did the stall tests - straight and level, 30° banked turns - then did the dive to V_{NE} and the maximum level speed runs. Looking at my checklist I realised I was missing a couple of numbers from the stall speed tests so I climbed back up to repeat the power off stall. As I approached the stall the propeller stopped. I restarted the engine but it ran very rough and continuously backfired. I would do the occasional routine production test and also have a look at something special that disturbed Peter. Every now and then we would come across a Pitts that didn't want to be rigged and the final check point usually turned out to be the spin recovery. On one occasion Peter and I went up together so we had a portable intercom as well as a handheld radio (avionics was fitted after the production flight tests). Peter thought that it took a little bit longer to recover from a one turn spin than it should. We both wore parachutes and had agreed on a bail-out procedure and minimum height. We did some stalls, one turn spins and then entered a three turn spin. As I pushed opposite rudder the intercom started to slip off my leg and the distraction led to an inadvertent aileron application. I could see the hairs on the back of Peter's neck stand up as we went through two turns after starting the recovery action. It worked better the next time!

We took two modified Pitts S-2B's to Oshkosh in 1996. Mark took off first in the Curtis Pitts 50th Anniversary Special and I followed in the other. Due to low cloud we couldn't fly direct to Casper over the Wind River Ranges even though we still needed 11,000 ft to get out of the valley at a low point to the south of Afton. Departing

Casper it was my turn to lead but the tower ignored all of my transmissions so Mark handled the radio. He explained later that hearing me call Experimental 727 Papa Sierra they probably thought it was a Boeing on the wrong frequency.

On the last day of Oshkosh we gave some "VIP rides". The flights would typically last twenty minutes and most of the passengers were pilots so they took the opportunity to try some gentle aerobatics in the Pitts. I would ask about their flying experience during the short taxi to the holding point and hand over at about 500 feet. In answer to my question about previous aerobatic experience one of them told me he had 2000 hours. I said: "No, I meant how many hours of aerobatics?" and his response was: "I have 2000 hours of aerobatics and 20,000 hours of flying in the USAF." "Its all yours, I'll just sit back and watch." The S-2B is just so easy to fly through manoeuvres like the common garden loop. (The only problem is that you cannot do a really slow, slow roll because it runs out of fuel after two hours.) Anyway, he fell out of the first loop so I said I would talk him through the next one. The talking got to the stage where I finally said: "This is what we call an inverted flat spin." So much for all-through jet training.

After Oshkosh I flew down to Fond du Lac for the International Aerobatic Club's annual Championships. My job was to demonstrate the new Pitts, not fly in the competition but I did do some warm-up flights for the judges. This is where I met Rich, who was running the USAF's programme on G-LOC - g induced loss of consciousness in their fighter aircraft. Rich had a PPL and thought that the Air Force may learn something from the competition pilots. I took Rich through several sequences flying the manoeuvres that are known to cause low g blackouts. Eg I would fly three-quarters of an outside loop, going to minus 3 g, then pull hard to 6 g. When we landed he said he was nowhere near blacking out because he was using the USAF anti-g straining manoeuvre. The idea is to pressurise the upper torso to restrict the blood vessels and reduce the rate of blood flow from the head. A couple of days later I was becoming bored as I could not do many demo flights until the end of the contest so I invited Rich up for another flight. He had taught himself aerobatics, quite legal in the States, and asked me to help him with his hammerheads (stall turns) as well as teach him inverted spinning. We had a fairly hard session on inverted spinning and I wanted to show him the recovery from the vertical before we did anything else. I did one and then I said I would let him do the next one after I handed over to him in a vertical climb. I did a 360° clearing turn at 4 g, descending to build up speed, then maintained 4 g as I rolled out of the turn into a pull-up. Once established in a vertical climb I said "handing over" - there was no immediate response so I didn't completely release my grip on the stick. There was still no response a couple of seconds later when I made a more urgent instruction. Still later, I took some action as we entered a tailslide and returned to straight and level flight. On the ground and fully recovered Rich seemed quite excited that he had achieved something worthwhile on that flight. He said that it was clear to him now that high level competition aerobatic pilots operated on the threshold of G-LOC. I look forward to his publication on the subject.

By the end of 1996 Aviat had developed an Emergency Manoeuvre Training Course and was promoting the Pitts with the larger flying schools. So, in October I took the demo Pitts across the Rockies and north-east to Grand Forks in North Dakota. I have very clear memories of my arrival there. Having taken the aeroplane away from Afton,

Wyoming at an elevation of 6200 ft down closer to sea level the engine idle speed had increased by 300 RPM - enough to float much of the way down the mile long runway. The second thing was the number of aeroplanes. The University of North Dakota claims to be the biggest civilian flying school in the world and there were about one hundred aeroplanes, mainly Warriors, parked on the ramp. Finally, and the one thing that started to worry me about Grand Forks - the thick ropes would not fit through the tie-downs on the Pitts. The next day, after adjusting the idle, I flew with some of their instructors. All the flights followed the same programme - I took the front, passenger seat and did the first take-off, we did some upper air work as nominated by the instructor and then I did the first landing. The instructor then flew a complete circuit. All of the instructors did a perfect landing on their first attempt - the later model Pitts S-2B is certainly easier to land than the S-2A's we have at Moorabbin. I had briefed each instructor before their flight, particularly on the sensitivity of the controls by comparison with the Decathlon which they used at the school (the CPL course offered a 10 hour aerobatic option). One instructor really liked the way the Pitts rolled. After four or five gentle rolls he decided to try a maximum performance roll - full aileron deflection from straight and level at about 145 kts. I was too slow to prevent him hitting full forward stick at the same time and our headsets were soon floating around the cockpit. The g meter showed minus 5 g! My last flight was with some-one who had recently moved to the States from Russia and had been flying Migs with their Air Force. Once I handed over to him we were rarely upright. By the end of the flight he had done just about everything including a vertically upward flick roll. He even flew the downwind leg on knife-edge.

The Husky was a good aeroplane to fly around Wyoming - particularly in winter. A number of times I found I couldn't get over the Rockies due to what the FAA called "cloud obscuration" so I would follow the road up the valley. I also found the FAA to be very helpful wherever I went and the sectional charts are a great advance on the combination of charts that we use in Australia. On the other hand the Pitts had some limitations during a Wyoming winter - it has no heater for one thing. In January this year I flew up to Jackson to meet Rocky who was flying in from Texas on a Delta 757. I had rung him the previous day and told him to bring his gloves and a warm jacket - it looked like a nice day so I would bring the Pitts as he had been in the Husky before. It was a bright sunny day but a crisp minus 15°C on the ground - Jackson has an elevation of 6400 ft. As I got in the Pitts I reminded Rocky about the gloves and he said he had them with him in the front. It wasn't until later that I discovered that he had left them in his bag which he couldn't reach in flight. As we climbed to 12,000 ft I asked Rocky if he was OK?

"My hands and feet are starting to get a bit cold"

"Don't worry Rocky, we'll be on the ground again in half an hour"

Five minutes later

"I'm getting colder, David"

"We'll be on the ground soon"

Five minutes later

"David, can you check if you have the heater turned all the way up?"

"Can't hear you Rocky"

Melbourne will never be cold for me again. In January it seemed that I would go to work every day and announce that it was the coldest day of my life, then Kevin would

tell me the temperature - sometimes minus 40°F. (The thermometer I had bought for myself didn't go that low!) The maximum temperature would never even get anywhere near freezing.

At that time we also had the 300 hp experimental single seater back in the factory to look at modifications for the next year's competition. This was the nicest flying of all of Curtis Pitts' creations and even flying from an elevation of 6200 ft the performance was unbelievable. At sea level it was measured at 4100 feet/minute in a normal climb and it could almost hover.

My last flights in the Pitts at Afton were to check out one of the new staff members. Afton has a nice long runway but even in late February and early March the surface is still a mixture of packed snow and ice and the narrow strip is bordered by snow drifts four to six feet high. I wanted to take Nick to Jackson where the airliners keep the runway warm but the forecast said IFR conditions later in the day. My second choice was Bear Lake but the NOTAM said that the main runway was closed and the other runway was no better than at Afton. So, we departed to the North following the road to Idaho Falls. I preferred not to fly direct routes in winter. As we approached Alpine it was obviously clear farther north - OK in Jackson Hole but closing in around Yellowstone and not the best to the East at Idaho Falls. We ended up doing six or seven circuits at Jackson then stopping to warm ourselves by the wood fire at the FBO. Another session of circuits then back to Afton, barrel rolling down Star Valley. I wanted to do the landing at Afton - my last in the USA. Downwind at 800 ft AGL with the wingtip lined up on the runway centreline. With the wingtip only 2.5m away, it is a very tight circuit. Abeam the piano keys close the throttle and begin a descending turn at 100 mph. Belly check for traffic on straight final. Cross the fence, still turning, at 95 mph. Finish the turn over the piano keys and three point it on, stopping at the first taxi-way. The standard Pitts "carrier" style approach.