GRAMPAW PETTIBONE

High Altitude Errors

In the statement below the pilot of an F9F-2 gives a clear account of two mistakes which led to a forced landing. I wish that every pilot involved in an accident would give us such an honest, intelligent report:

"While on a project flight in an F9F-2, at about 38,000 feet over Baltimore, I experienced a flameout which eventually led to a dead-stick, forced landing at Andrews Air Force Base, Maryland. The flameout was self induced, as explained below, and I was fully responsible for the entire incident, which resulted finally in ruining the wheels, tires and brakes of the main landing gear.

"The purpose of the flight was to climb to 40,000 feet where I was to take readings of four pressure and four temperature gages installed in the plane for checking the generator. This was the first of the project flights to go to 40,000, and was my first flight of any kind above 35,000 feet. (I took a pressure chamber checkout to 43,000′ in July 1949).

"After about 40 minutes of climbing I had reached only about 37,500 and the plane was barely climbing. Power at full throttle had dropped off to about 94.5%. (We had just recently started using JP-3 fuel and this power drop-off, while using the 'normal' fuel system, is characteristic). It appeared that the plane never was going to reach 40,000′ as things were going.

"Then and there I decided that I must shift to the 'Emergency' fuel system to get 100% power so I could continue the climb. This decision was sound, but my technique in making the shift was faulty, in that I neglected to retract the throttle before flicking the fuel system selector switch from 'Normal' to 'Emergency'. This resulted in immediate drowning of the fire and total engine failure.

At the time, the airplane was at about 38,000′, and the cockpit altimeter showed cockpit pressure about 25,000′. As soon as the switch was thrown the engine stopped quite suddenly, and immediately the cockpit depressurized to the pressure of the plane's altitude. All noise ceased as the engine and pressure system quit, and the oxygen system automatically started forcing oxygen into my face under pressure.

"Under the influence of these various things happening simultaneously I became panicky, and my first thought was that I would not be able to get oxygen, and so had only a few seconds to act. I therefore put the flaps down and started to dive, thinking that I should try to get down to an altitude where oxygen wouldn't be so vital. By the time I got to 30,000′ I had gotten over the initial feeling of panic, and had determined that my oxygen system was OK, so I started thinking about an air start.

"I had in my knee pad, on a card, the

air start procedure, so I started going through that. After the first try with no result, I tried again. (All this time I was headed for Patuxent, which I had fixed under some scattered clouds ahead in the distance). After the second air start try with no success, I was at about 25,000′, south of Annapolis, and I noticed then on my card that the air start should be below 16,000′, so I knocked off and waited.

"About this time I began to entertain my first doubts about being able to get into Patuxent with no power. Andrews AFB was in sight fairly close to starboard, so I called Patuxent tower on VHF and told them I was in trouble with no power and might have to go into Andrews. Before Patuxent tower was able to complete its answering transmission my radio quit. That indicated battery failure, which was to be expected by now, so I gave up all hope of gliding to Patuxent, and virtually all hope of an air start, and headed for Andrews.

"At 16,000′ I resumed the air start efforts, but after two unsuccessful tries gave up at about 10,000′, and started to concentrate on landing at Andrews.

I was over the field at 8,000′, headed southwest. I made one very wide turn losing altitude rapidly and decided to shoot for the SSE runway, between the tower and the hangars. (It turned out to be about 170° mag. and the duty runway was on the western half of the field, about 220° mag.) I came on my downwind leg paralleling the runway I had chosen, about three miles wide of it, descending from about 4,000′ to about 2,000′.

"I turned into my base leg at about 2,000′, having successfully locked down my wheels, and still working on the flaps. My greatest fear was that I might misjudge my speed and altitude in such a way that on my final approach I would find myself without enough of either to make it, so for that reason I deliberately stayed high and fast on my base. My second great fear was that some other traffic might be making a final (I had no radio) at the same time to the same runway, so I was doing a lot of rubbernecking on the base and final; therefore I didn't do much on the final to adjust my speed and rate of descent. I was over the end of the runway at about 170 kts and 100′.

"I pushed the plane down onto the runway, but couldn't hold her there and she bounced off. I pushed her down again and she stayed, with about half of the 6,000′ runway gone. I made a conscious effort to stay off the brakes as long as I could (later I came to the conclusion that I must have tapped them right after landing). When I started working the brakes, they seemed to have no effect. With the grass coming up ahead I pulled the emergency brake handle. This too seemed to have no effect and I rolled (it turned out that I was actually sliding and only the nose wheel was rolling) about 20 feet into the grass at the end of the runway.

"I was surrounded almost immediately by fire and crash trucks. When I got out I found that I had been spitting smoke and fire all the way down the runway, and the white concrete runway showed two black tire marks down the entire last half, caused by my brakes having been locked since right after touching down. Inspection of the plane revealed that the wheels, tires, and brakes on both main gear had been scraped so that each unit looked somewhat like a capital D.

"Further inspection showed that the generator brushes had completely crumbled (probably before my emergency commenced), and that the battery was dead. No other damage was sustained. By that night the Navy crew brought up from Patuxent had the plane ready to go and it was flown back by me the next day."

Dear Grampaw Pettibone:

I was delighted to read in the January issue that at least one squadron is practicing the exercises laid down for their benefit in USF-52. I would like to invite your attention to the training exercise on page 15-10 of this publication, since your article, "How About the Tab," sounded as if Old Grampaw had just come up with a brand new idea and particularly since you invited comment. I wrote up this exercise back in 1946 on the basis of an incident that occurred off Okinawa. Here's a brief account of the case in point:

The pilot was killed, the co-pilot knocked unconscious, and the elevator cables of a PBM were carried away by enemy fire. The plane immediately started diving but the navigator, despite being badly injured, had the presence of mind to crawl forward and roll back

on the elevator tab just before the plane reached the water. Although not even qualified as a PP1P, he managed to fly the plane back to base and make a tab landing in the rough waters of Kerama Retto.

CDR, USN

Grampaw Pettibone says:

Thanks for bringing this exercise to my attention and for the interesting story that led to its being written. You'll be glad to know that a number of other multi-engine pilots called and wrote to say that they had practiced simulated tab landings and felt that a safe landing could have been made in the PV-2 using the elevator tab in place of the yoke.

Dear Grampaw Pettibone,

I believe the following tale will be of interest:

Loaded 4 magnetrons (that's a mighty important tube to radar gadgeteers) into the nose compartment of a JRB to take to Quonset the other day. Conditions were contact after taking off on the #1 runway. I leaned over a bit so I could read that magnetic compass with the thought in mind of correcting the gyro accordingly. Was I surprised as thoughts of Corrigan, etc. flashed about like lights of a pin-ball machine in my mind? 190°—wow! A quick glance at the shore lines assured me that my heading had to be near 035° or as the gyro said, 040°, but not so, said the compass: it's 190°.

You've guessed by now the moral of this bit of modulation but anyway, here goes. I didn't check the compass on the ground—I set the gyro by bird sense, I guess, and I plumb forgot about those powerful magnets in the magnetrons so close to that compass.

Upon stopping at Chincoteague, the compass read 220°. Upon removal of magnetrons, it swung to 280° and upon reloading in after part of the JRB, no change was noted. Only had 4 passengers so they didn't ruin W. & B.

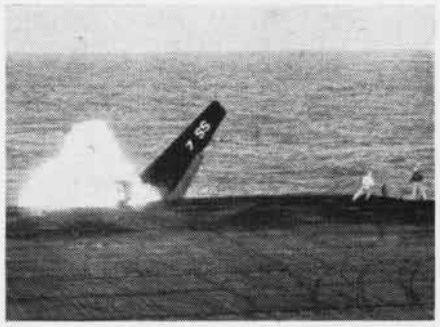
LCDR, USN

P. S. On this same trip, the question of cross feed "on" or "off" at take-off arose. Seems like someone out California way say he's seen an order about "off," but we can't find it hereabouts. What's the dope?

Grampaw Pettibone says:

Thank you for this story. We've had several reports of similar compass troubles in the JRB when magnetic material is loaded in the nose compartment, including one case where a Beechcraft was forced down some 300 miles off course as a result of this error.

The latest dope on the cross-feed is that it should be OFF at all times except in an emergency. This was covered in a revision to the pilot's handbook dated 29 July 1948, but apparently there are still a lot of uncorrected books still out in circulation.



TBM Flies into CVB Ramp

The TBM pictured above was piloted by a Lieutenant Commander with 5400 hours of flight experience. The approach appeared normal in every respect until the plane was in the "groove." About 100 feet astern of the carrier, the pilot apparently eased throttle and began to settle rapidly. He was given frantic "come-on" signals by the LSO which he did not or could not answer. The plane settled and hit the ramp on its engine in a nose high right bank. The engine broke off and the plane and engine fell to the fantail enveloped in flames.

Grampaw Pettibone says:

Since the pilot did not survive this accident, we have no way of knowing whether he was having some engine difficulty or whether he simply made the critical error of easing throttle in the groove.

This picture should serve as a warning to all pilots not to ease throttle in the groove except in response to a fast signal from the LSO.

VFR Cloud Jockey

The pilot of an F4U took off from a field in Alabama in a routine ferry flight to Dallas, Texas. He was on a VRF clearance, but encountered adverse weather about 30 minutes after take-off. Here's what the pilot had to say:

"I was informed that there were scattered showers in the area and was directed to circumnavigate the showers and areas of low ceilings.

"Immediately after take-off I climbed to approximately 1500-1800 feet and leveled off below a layer of broken clouds. After passing Selma, Alabama, the layer of broken clouds above me became 4-5 tenths broken. There was another layer of thin broken to overcast at about 7,000′.

"When I began to see showers ahead, I elected to go over them since I could still maintain contact with the ground.

"After leveling off at 6,000′, I flew around to the north of one large build-up, then back on course. There were several heavy clouds ahead of me, the tops of which I was unable to see because of the stratified layer above me. With clouds on both sides, I waited for an opening to alter course again in order to go back down to 1500′.

"I flew almost up to the cloud directly in front of me without seeing space between clouds. At that point I went into a steep left turn in an attempt to fly out the way I had come in. Before completing the turn I flew into a cloud. The turbulence was light, so I came out of my turn on a heading of about 150 degrees. After holding that heading for a few minutes, the rain increased and turbulence became severe.

"The aircraft was being thrown up and down through several thousand feet. It became very difficult to maintain attitude and airspeed. I was losing airspeed with the nose down and was gaining altitude at the same time.

"The airspeed reading went down to 120 knots and then to 100 and finally down to 80 knots, which I believed to be an incorrect reading. I started to turn to the heading I had been trying to hold, when I felt the airplane stall and begin to spin. I placed the controls with the spin, after one turn tried a recovery by full positive reversal of elevator and rudder. The rotation did not stop with full opposite rudder held in, and I felt almost no pressure on the elevator.

"The altimeter was reading approximately 4,000′ and unwinding very rapidly. I opened the canopy, unbuckled my straps and tried to go out the right side of the cockpit. The force straightened me upright, but I pulled myself down and made another try at it. That time I went out the right side very low but was dragged backwards and to the left leaving the cockpit almost at the top.

"When I thought I was clear I pulled the rip-cord, the chute opened quickly without fouling. The rain was very heavy and at times I think I was gaining altitude in the chute. I drifted down out of the cloud. I could not see where the aircraft had crashed, because of low visibility. Close to the ground I was able to stop the oscillation and slip away from some trees. I landed very easily in an open field.

"After making my way to a farm house, I reported the accident to Flight Service by telephone."

Grampaw Pettibone says:

Regulations for the ferrying of naval aircraft specify that such flights will be under VFR conditions. This fellow should have turned around long before he got so far down that one way canyon of clouds.

When the accident board got through writing up this crash about the only kind things they had to say concerning the pilot was that "under the existing circumstances the pilot bailed out at the right time."