GRAMPAW PETTIBONE

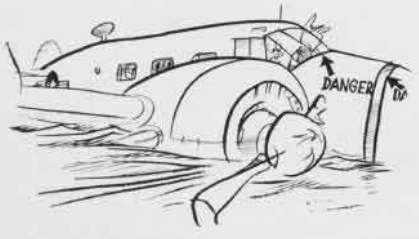
The Margin for Error

An SNB-5P departed a local air station at 1105 on a scheduled photographic mission. Owing to the configuration of the aircraft, only the two main tanks carried fuel. The pilot, a lieutenant commander with over 13,000 hours flight experience (200 in type), was aware of this and planned his flight accordingly. After photo run at 300-400 feet for about one and a half hours, the pilot decided to climb to 10,000 feet and take pictures of the air station. Upon reaching 10,000 feet, we take up his statement:

"Flew around about 40 minutes burning right tank down to one-tenth. Had between two and three-tenths in left tank for letdown. Commenced letdown and entered traffic circle at 1500 feet—stayed in traffic circle at all times. Was entering final at 500 feet when had complete engine failure. Was flying on left main tank which showed two-tenths full. Gear and flaps down, props in full forward position and holding 27″ manifold pressure.

"Had co-pilot hit wobble pump—got about two revolutions out of engines and then stopped. Lifted landing gear—depressed nose to build up flight speed and headed for open water. Gave emergency call over radio. Told passengers to tighten belts and took plane in for water landing. Pulled master engine switch just before hitting water. Plane landed in water with slight jar and came to stop. No injuries, all crew members acted with coolness and obeyed all orders. Time about 1345.

"What can be done to prevent this



type of accident? (1) Have closer check on fuel gages and have correction chart in plane attached to panel over fuel gages. (2) Have pilots mark on trouble sheets when gages are not functioning properly. These gages are just as important as pressure, suction, or any other instrument. (3) In refueling this type aircraft a shield should be put over the gas nozzle or inserted in tank to make it impossible for gassing crew to injure gages with end on nozzle while fueling the aircraft."

Grampaw Pettibone Says:

Now let's just hold on a minute, Bub! I've heard some pretty good ones in my time, but this one really takes the cake. Trying to pin the blame on that poor fuel gage will get you just about as far as a wooden nickel would on the subway from King's Highway to Coney Island. It just ain't being done these days.

There is a little matter of starting a letdown from 10,000 feet with the left tank indicating approximately .25, which cannot be laid to the fuel gage even though the actual amount remaining was one-tenth less. A normal letdown from 10,000 feet to landing would take at least 10 gallons of fuel. This would have left one-tenth remaining in the tank, certainly not enough for such contingencies as fuel gage error, wave-offs, or holding in traffic pattern due to heavy traffic. Even if you had switched to the right tank at the first sign of a pressure drop, there was no margin for error in case of a wave-off. I can see your statement now in such a case:

"Pressure dropped, switched with dexterity to starboard tank. Not a blurp. Hit the final in good shape. Tower gave wave-off. Some dope had nosed up in middle of runway. Crash trucks all over the place. Took wave-off upwind end of runway, engines quit. Don't know why. Tanks read empty, but they never read right anyway. Made it the last six times. Nosed over to stretch glide. Kept cool. Passengers cool too. In fact frozen stiff. No place to land. Railroad yards below, supply buildings up ahead. No choice. Hit side of large building. Time approximately 1350. What can be done to prevent this type of accident. (1) Move all airfields out on the prairie. (2) Don't allow wave-offs when you're in good shape. (3) Don't allow pilots to fly who aren't cool."

We are all mighty thankful that you

did a good job of ditching in shallow water and no one got hurt. A little of that headwork a half hour sooner would have saved an airplane. You are looking for trouble when you don't allow yourself enough fuel to take a few wave-offs and still get on deck safely.

The margin for error is the margin you still have when you get on deck, not one that you use up before entering the traffic circle. A fella said once, "Squeezing the margin for error is like squeezing a grapefruit. If you squeeze it too hard you get it.....right in the eye."

MEMO FROM GRAMP:

An airplane is like a woman. Let it get the upper hand, and you'll find yourself in a situation that may affect your entire future, not to mention the present.

Batten the Breeze

An F2H-2 pilot signed off the "yellow sheet" and departed the line shack for his aircraft. From here on we'll let the pilot tell it.

"On making a pre-flight inspection of the plane I taxied out to the duty runway for take-off. After I started rolling on take-off, I noticed a strong tendency for the nose to lift off the deck about 80 knots. Thinking it was too much nose-up trim that was causing my trouble, I immediately started using the trim tabs. It wasn't long before I

was airborne with both hands on the stick pushing forward with every ounce of strength that I had. It was then that I realized that something was radically wrong.

"The plane was in about a 60° nose high attitude, and the air speed indicator showed 110 knots. In desperation to get the nose below the horizon, I put the plane in a steep turn. I succeeded in getting the nose down, but upon leveling the wings, the nose pitched up violently again. Holding an airspeed of 100 knots all the way around and unable to climb or obtain a more comfortable air speed without losing control completely, I tried to get in position to make the runway.

"On three occasions I thought I was going in when the plane started to settle badly. By adding power, the plane stopped settling, but the nose would start pitching upward. I tried to make the runway but overshot due to the limited amount of bank that could be used without stalling.

"On trying to turn back the plane stalled and settled in about 200 yards short of the runway and slid about 100 yards before stopping. I vacated the cockpit in a hurry and ran about 50 yards where I was picked up by one of our linemen in a jeep.

"Upon learning that the cause of having no elevator control was an elevator batten, I was dumbfounded as I have never seen or heard of the use of elevator battens in this squadron. (The battens could be seen much easier on the pre-flight if a red streamer were attached to attract the pilot's notice)."

Grampaw Pettibone Says:

Great Jumpin' Jehosaphat! Talk about a hairy experience!! This lad could almost qualify for first money at the Calgary Stampede. That is, providing he made sure the cinch was tight enough so the saddle wouldn't slip.

What gets me is how in blazes he could miss the batten in the first place. A pilot who thinks anything of his life, not to mention his aircraft, is certainly going to walk completely around his plane checking the control surfaces, landing gear, brake discs, oleos, etc., before he gets into it. He will make sure there are no wrinkles in the fuselage or other signs of overstress.

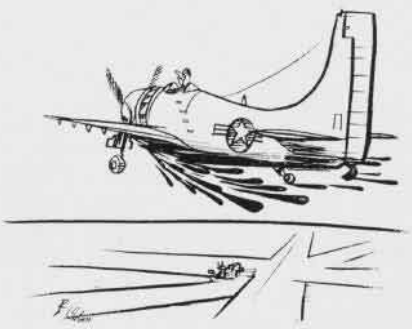
This is not just common sense, it's mandatory. When he gets in the cockpit, one item on the check-off list is to check the controls for full throw. Another item is to set tabs for normal take-off. If this is all done properly and the plane still acts up during the take-off run, he'll abort the take-off.

Son, I'm afraid you asked for this one. You don't just HAPPEN to overlook something as dangerous to flight as a batten even if it comes as a surprise that battens are being used. You overlook it because you have developed some bad flying habits. That's why check-off lists are put in airplanes, to keep pilots from doing things from memory. As you well know by now, memory can be mighty faulty at times.

Well, I can say one thing for you. You did a whale of a job turning an impossible situation into an improbable one. Your grandchildren just ain't gonna believe it.

Git Her Down!

An AD-2 pilot experienced a loss of power prior to a dive bombing run and noticed that his oil temperature was high. As he was only eight miles north of the field and at an altitude of 12,500 feet, he thought he had better make a bee-line for home. The oil pressure



dropped slightly, and the engine started to run a little rough. By throttling back to 17 inches of manifold pressure, he was able to smooth out the engine.

The pilot called the tower and requested an emergency landing on Runway 6. He was cleared, but upon reaching the field, he found he still had 4,000 feet of altitude so he thought he would try for runway 28. At the 180 position on runway 28, the engine froze and the pilot found himself short on power, altitude, and runway. He stalled into a ravine trying to stretch his glide and the aircraft burst into flames on contact with the ground.

The pilot luckily managed to escape before the aircraft was completely demolished. He sustained B injuries.

Grampaw Pettibone Says:

Well, if that doesn't take the rag off the bush! This lad made one big mistake and it almost proved fatal. Rather than trying for the closest runway with a dead stick approach, using what little power he had for a possible undershoot, he tried to bring it around to the duty runway. It's my guess he wouldn't let himself believe he was having an emergency.

Just because that old fan is still ticking over doesn't mean you can take your time, especially when the oil gage starts to fluctuate. When the oil pressure starts down you are not GOING to have an emergency, you are HAVING one and the idea is to see which hits bottom first, the oil pressure or the airplane.

If the handwriting on the wall says "Git her down!", my advice, Bub, is to git her down. The only thing you can stretch in this flying racket and get away with is a sea story.

MEMO FROM GRAMP:

Close ones are only good when playing horseshoes or pitching pennies.