



GRAMPAW PETTIBONE

Patent Pattern

An F9F-5 pilot completed his third run on a bombing target and started a pull-up. He advanced the throttle full forward, but found he was getting only 75% power. Sensing something wrong, he called his section leader and asked for advice. The section leader suggested he switch to emergency fuel system, but the pilot was reluctant to do this as he thought there was a possibility of a flame-out.

Converting his speed into altitude, he set a course for the nearest base and arrived over the field with 5,000 feet of altitude and 75% power. He lowered his landing gear and opened his speed brakes, as he arrived at the 180° position of the landing runway at 4,000 feet, speed 175 knots and power still at 75%. Here he decided to lower full flaps. With power available and excessive altitude, he also decided to extend his downwind leg. On the cross leg he had 2,000 feet of altitude and 155 knots airspeed. Turning final, the engine flamed out.

The pilot immediately switched to emergency fuel system, raised gear and flaps and landed—in the woods short of the runway. The aircraft was completely demolished, but the pilot managed to escape with a few lacerations.

His summation of the accident was, "There are several things that I probably could have done to prevent this accident, such as taking the advice of my section leader by switching to the emergency fuel control system at the time he suggested. But the most important thing that I have derived from this accident is that I had been taught



flame-out approaches simulating full flame-outs, but not partial flame-outs. Had I known that the engine was going to flame out, I would not have extended my downwind leg so far causing me to land short of the runway.

"This accident is peculiar in the fact that there was partial power failure which was stabilized to the extent that I made this pattern with this power setting, but when the power failed altogether, the pattern was not so set up as to put me over the end of the runway."



Grampaw Pettibone Says:

Great Jumpin' Jehosaphat! With such a line of reasoning this lad is a candidate for another accident looking for a place to happen! He reminds me of the fella who ran off the end of a 10,000 foot runway on his first jet landing. His prize statement was, "If I had known my brakes weren't going to work, I'd have slowed it down another 30 knots and landed closer to the end of the runway."

It's beyond me how a pilot can bring a plane 30 miles on partial power and expect it to hold up while he executes anything but a flame-out approach. Lady Luck can be mighty forgiving when it comes to one or two mistakes. But she gets all bent out of shape when you try to stretch her too far. This lad not only did not attempt a flame-out approach, he also failed

to get his plane into a landing configuration at the start, so he could establish a standard rate of glide. Any power remaining in the final would have been gravy in case of an undershoot.

After committing himself to a power-on approach, he found he wasn't going to make it so he pulled up his gear and flaps. It's no wonder the plane dropped out from under him. Pulling up the flaps at slow speed is like pulling the stopper out of a bathtub. What doesn't go down isn't worth mentioning. Well, in spite of his mistakes, he managed to get out of the crash with minor injuries, for which we are mighty thankful.

The reason for the loss of power in the first place was the failure of one of the high pressure fuel pumps resulting in contamination of the "Primary" portion of the fuel control system. If he had taken the advice of his section leader, he'd have switched to emergency fuel system and bypassed the primary system, thereby regaining full power. One week prior to the accident the pilot had attended the latest of a series of lectures on the subject. It's my guess he'll be an expert on the emergency fuel system come the next lecture.

The Trap

A pilot of an AD-6 returned to the field from a routine tactics flight and broke for a landing. His approach was normal until he turned on final at which time the aircraft was observed to be in a slow, left wing down attitude. The aircraft appeared to stall a few feet above the runway and strike the deck on the port wing tip. The force of this contact was great enough to knock 11 inches off the tip of the port wing.

The aircraft then swerved about 30 to 40 degrees to port at which time the pilot applied full throttle. The aircraft climbed to an altitude of approximately 40 feet, rolled over, and crashed inverted into the ground on the side of the runway. The pilot was fatally injured, and the aircraft completely demolished by fire and explosion.





Grampaw Pettibone Says:

The Board assessed this accident as pilot error in that he failed to maintain a safe airspeed and attitude during his landing approach. Further, that he decided to take a wave-off after striking the deck with his port wing. Well, I must admit the Board is correct as to the cause of the accident. But let's look at it from an abstract viewpoint.

At the moment of the initial stall, the pilot was faced with an unexpected situation which called for reflex action. One moment he was flying along and the next moment the aircraft was completely out of control. By the time he realized what had happened, the port wing was on the runway.

The first thing that entered his mind was to get out of this situation and save the plane. Right rudder, right brake, and right aileron were ineffective. What was left? The throttle, of course! Power will straighten the airplane out! Before the pilot had time to weigh the consequences, his left hand pushed the throttle up to the stop. He had fallen into a trap.

There are a lot of horses under the cowl of an AD and the quickest way to stampede them is to lay the whip on hard. The airplane didn't straighten out, it jumped back into the air on sheer power. The airspeed was already below stalling speed, the plane was moving to the left, and the power had carried the nose above the horizon. The jaws of the trap closed and there was no way out. To chop the throttle would mean another stall and probably a fatal crash. The only choice was to leave the power on and hope. But conventional airplanes just aren't built to fly 40 feet in the air, below stalling speed, even with full power. A torque-roll is inevitable.

Four days prior to this accident the pilot had attended a lecture on stall-spin, torque characteristics, and recovery technique of the AD-6 aircraft, given by a factory test pilot. I'll bet my bottom dollar he didn't associate any part of the lecture with the predicament he found himself in. It's my guess he was trying to recover from a potential ground loop to the left.

Naturally, the accident could have been prevented had he maintained a safe airspeed and attitude during the approach. By the same token pilots wouldn't fly into the side of mountains if they flew over them. Fatal accidents during landings are not going to be prevented by correctly analyzing the cause and then telling all pilots that they shouldn't get low and slow in the groove.

The fact must be drilled into them that if they stall out too high and start a ground loop to the left, power will only AGGRAVATE the situation. Judicious use of throttle can prevent a ground-loop to the right as torque is then working FOR the pilot, not against him. The trap is set the moment a pilot decides that power is the only thing that will save his airplane, when it starts a left groundloop. The trap is sprung when the throttle hand is allowed to put the throttle on, especially with a high powered engine sitting in his

lap. Even if he doesn't become airborne, he is not slowing the airplane down by adding power.

It's all right to say, "Don't stall out too high on a landing," and hope that all pilots will heed the warning. But that is not enough. Let's add, "And if you do stall too high and she drops off on the left wing, keep your meat hooks OFF that throttle!"

We can patch up airplanes and groan at the expense, but we can't replace the loss experienced by the families the pilots left behind.

Too Close for Comfort

A pilot of a P2V asked for clearance to taxi out to the duty runway for take-off. The tower instructed him to proceed South on the runway he was on, turn right on the Northeast-Southwest runway, and right again on the taxi strip leading to Runway 11R. Being unfamiliar with the field, the pilot made the first turn correctly, but overshot the next turn and continued on down the Northeast-Southwest runway. The co-pilot was preoccupied in performing taxi checks, such as cycling the flaps, checking fuel system, etc.

Just as the plane commenced crossing the duty runway the co-pilot happened to glance out his side of the cockpit. Bearing down on them was a jet, which had just landed on the duty runway. The co-pilot just had time to blurt out, "Look out, here comes a jet!" and the jet passed from view behind the tail of the P2V.

This was the jet pilots' story:

"Touchdown was made 900 feet down the runway, and shortly thereafter I saw a P2V taxiing South approaching Runway 11R. I started an easy application of my brakes and continued to watch the P2V. I was rolling about 100 knots when it appeared to

me that the other plane wasn't going to stop. I applied brakes up to the skidding point and, as he broke out in front of me, I applied left brake harder to steer behind him. With full left brake on my aircraft veered enough to miss his tail by about four feet.

"My left tire blew, but I was able to keep control and rolled on down Runway 11R. The P2V had taxied up to Runway 11R and appeared to me to remain at a constant speed, never slowed down, never accelerated. Luckily, the aircraft wasn't slowed down once it started across the runway. If it had been, they'd be picking up the pieces with a spoon."



Grampaw Pettibone Says:

It beats me the things some people get away with! This is one case where head up and locked and eye-balls caged averted an accident. Although not the recommended procedure, I guess if you can blunder out of a situation as easy as you can blunder into it, it must have some merit.

It is understandable that a pilot may be confused as to the taxiway he is on. But there is absolutely no excuse for crossing an intersection of two runways without tower clearance or, if he has that, without a visual check on both sides.

This reminds me of the farmer who was galloping a team of mules down a country road. When they reached an intersection, the mules stopped. About the time the driver reached for the whip to take some of the obstinacy out of the mules, a car went whizzing by in a cloud of dust. The farmer set the whip down, wiped his brow and said, "Girls, if it wasn't for them big ears of yours, we'd all be in the glue factory."

One of the mules winked at the other and whispered, "Ya know, a guy like that oughta be driving one a them infernal flying machines. They ain't no intersections up there."

