



# GRAMPAW PETTIBONE

## How Hairy Can It Get?

The lad whose statement is quoted in part below was a member of a flight of four TV-1's on an authorized high altitude simulated gunnery flight.

"I was at 30,000 feet. I rolled my TV-1 over on its back and started into a 'split S' with about 75-80 percent power. As I went over on my back and started down, my head was pushing hard against the top of the canopy. I decided I was distinctly uncomfortable and rolled out. I eased the power off gently and hit the speed brakes.

"As the speed brakes extended, the nose of the aircraft raised upward as if it were pulling out, then suddenly whipped under in a violent tuck throwing my head up against the canopy. The plane continued to alternately tuck under and pullout, constantly throwing my head and shoulders against the canopy. I glanced at the airspeed needle and it was even with the mach needle. I didn't see the instruments clearly thereafter.

"The continuous whipping and tucking motion of the aircraft was beating me so I could hardly distinguish objects



in front of me. I decided to bail out and reached for the canopy ejection lever. I tried to hold my head down when I released the canopy, but the aircraft tucked under throwing me outward and my anti-buffer helmet was sucked off as the canopy actually released. The force of the slipstream forced my head out and against the back of the seat."

You haven't heard nothin' yet. Listen—

"The slipstream prevented me from getting my head back into the cockpit. From this position, I managed to raise the arm rests in order to arm the ejection seat (Air Force type ejection seat).



I released the control stick and placed both hands around the back of my neck, trying to pull my head back into the cockpit so that I could eject. This was unsuccessful and only resulted in my right arm being pulled out into the slipstream also. Due to the continued gyrations of the aircraft, I was unable to get my arm and head back into the cockpit to use the ejection seat. My face felt like it was being torn to pieces and finally I lost consciousness."



### Grampaw Pettibone Says:

Yipes! How hairy can it get! It seems that this is one of those days when the pilot should have stayed in bed. His problems started before he entered the cockpit. He was 6'3" tall and was using a para-raft. The thickness of the para-raft caused him to fly with his head bent forward in order to clear the canopy of his



TV-1. What happened when he rolled over on his back is already apparent.

Since the pilot was being shook up a little more than somewhat during the whipping and tucking motion of the aircraft, he was a little vague about what happened and unable to recall exactly what he did about trying to recover from the unusual attitudes. He probably got into an accelerated high speed stall and held it in this stalled condition trying to recover from this steep dive. As the airspeed increased, the acceleration stall increased in violence. The accelerometer in the plane registered 5.0 negative (maximum limit of the instrument) and 4.5 positive G's.

For your own protection, you boys who fly these high speed flying machines better be sure you know the flight characteristics of your airplane and the difference between a high speed stall and compressibility together with the recovery techniques.

Oh, incidentally, the pilot regained consciousness hanging on his safety belt inverted at 9,000 feet with the plane indicating about 250 knots. One eye was completely closed and he could just barely see out of the other but he says, "Everything was peaceful and quiet when I regained consciousness and I rolled over, returned to the field and landed without further incident." Well, that's one way of putting it!

## Poor Show All Around

The pilot of an F9F-5 made the routine preparations necessary to start his turbines. The APU was engaged and when the tachometer reached approximately 10%, the pilot set off the ignitors keeping the throttle in the off position for three or four seconds, then advanced it to the idle position. The tail pipe temperature soared rapidly to 800 degrees.

The pilot then retarded the throttle to the off position, thinking he had experienced a hot start. However, the tail pipe temperature remained in excess of 800 degrees and the tachometer continued to increase in percentage. The pilot, feeling that the engine was out of control and fearful of an explosion, abandoned the aircraft.

The aircraft jumped the chocks and proceeded at full throttle. After moving approximately 65 yards, the aircraft rammed into a second F9F-5 and locked on in piggy back fashion. Losing very little momentum the two aircraft rammed into a third pilotless F9F-5, locked together and created a three-plane wedge. These three planes con-



tinued in a wide arc to the right and after a 270 degree turn they plunged head on in between two more F9F-5's.

The three aircraft were finally stopped when a pilot in one of the latter aircraft locked his brakes. The engine of the first Panther was still turning up at 100%. After about 30 seconds, the pilot of a nearby aircraft not included in the accident, jumped to the wing of the runaway F9F-5 and cut the fuel master switch, stopping the engine.

Damage to the aircraft involved in this accident has been estimated at \$2,000,000. Two of the aircraft sustained strike damage, two sustained overhaul damage and one received substantial damage.

#### Grandpaw Pettibone Says:

Great Balls of Fire! This is the second accident in a period of five months in which the circumstances and cause factors are almost identical; each costing two million dollars or more. No tellin' how much damage would have occurred had there been a fire, and the ammunition in the planes started going off.

In each case the throttle linkage had been disconnected at the upper cam in the port oxygen access space in order to remove the oxygen bottle and had not been reconnected prior to the plane being cleared for flight. Also, in each case the pilots reacted the same—abandoned the aircraft without using correct procedures for shutting down the runaway turbine or setting the brakes.

I just re-read Weekly Aviation Safety Bulletin 38-52 (October 1952). It has a mighty fine description of the first accident and was specifically designed to alert commanding officers to the dangers of inadequate indoctrination of pilots and the need for sound maintenance procedures. What really makes me want to blow my top is this statement of the Accident Board: "Unfortunately, the information on the preceding accident was not discovered until after the accident occurred." This is just

downright discouraging since the information had been available for four months. I wonder what kind of safety program is in effect?

This is the second accident of the same type that practically everybody and his brother had a hand in. In the first place, it isn't necessary to disconnect the throttle linkage to remove the oxygen bottle in the F9F-5 involved, but since the throttle linkage is located between the oxygen bottle and the exterior access panel, it does make the job a little easier if the throttle linkage is disconnected. The man removing the oxygen bottle didn't complete his job and the maintenance inspectors didn't catch the oversight.

Even after the initial mistakes were made, the accidents might have been prevented had the pilot hit the fuel master switch. Granted that the noise factor involved at the time of the runaway start plus the rapid departure of the line personnel in the vicinity would be a little disconcerting to the pilot, but he certainly used mighty poor judgment when he made no attempt to hold or lock the brakes or turn his fuel master switch to the "off" position prior to his precipitous ground bail-out.

However, it seems to me that one good way to eliminate the possibility of another repeat performance is a redesign to accomplish either a relocation of the oxygen bottle or a re-routing of the throttle control linkage in order that such vital control linkages need not be disconnected to perform frequently required services.

Further, it appears that an emergency "shut down" procedure should be included in the F9F Operational Training Syllabus to ensure, among other things, adequate indoctrination of pilots in the use of the fuel master switch. An ounce of prevention along these lines would certainly pay off in dollars, not to mention the odd cents.

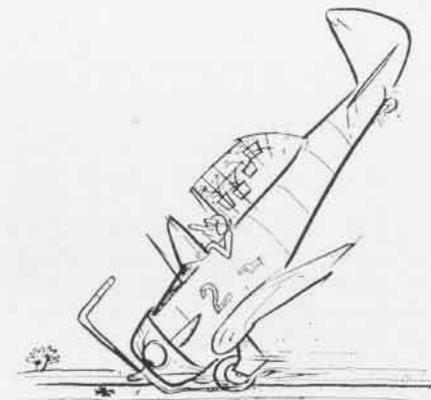
Well, at any rate it makes me feel good to know that there were a couple of people around who used the old bean—the pilot who locked his brakes, thereby stopping the movement of the "pack" of damaged aircraft, and the other who at great personal risk jumped up on the wing of the aircraft and secured the "runaway" engine.

## Same Technique—Poor

On 30 March 1953 a pilot took off on an authorized day familiarization hop in an SNJ-5. On returning to the field, he made a full flap, wheels landing.

During the landing rollout with the tail wheel still off the deck, brakes were applied to shorten the rollout and the aircraft continued on down the runway in a most unusual attitude for approximately 25 feet—on the main wheels, propeller and engine cowling.

The next day, just 15 hours later, the same pilot made the same type flight and in the same type aircraft (SNJ-6) had the same type accident, proceeded down the runway in the same unusual fashion and came to rest in approxi-



mately the same spot on the same runway. As a matter of fact, the accidents were so similar that it's difficult to tell the difference in the photographs of the two.

#### Grandpaw Pettibone Says:

All right, let's face it. At least this fellow is consistent. He used the same poor landing technique preceding both accidents—a touchdown on the main landing gear, application of brakes, nose over. He is scheduled to explain his technique before an aviator's disposition board.

Of interest is the pilot's recent flight experience which shows that he had flown only 15.3 hours in the past three months (8.5 in the SNJ with only three landings) and only 59.7 hours in the past year. In addition, he had failed to meet the annual flight requirements in fiscal year 1952.

You know, I can remember the time when a pilot learned something from an accident. At least he stayed on the ground until the reason for the accident was cleared up. I think a short grounding period is still a mighty good idea, particularly where the investigation of the accident reveals poor pilot technique as in this case. Under these circumstances, a little fatherly advice usually does the trick.

#### Grandpaw Pettibone Says:

He who turns around and lands at base, Will live to fly to some other place.