



# GRAMPAW PETTIBONE

## A Normal Descent?

At first glance you might think that some oversize mice had been at work on the tail of this F8F. Actually the damage occurred in flight. Here's what the pilot had to say about the maneuver that preceded the failure.

"I was cruising at 9000 feet indicating 190 knots, IFR 5 miles southwest of Tuscaloosa. . . . At 1015 I cancelled my IFR clearance as the weather was VFR. I then pushed over in about a 40 degree dive. I maintained this attitude carrying 2000 RPM and 30 inches of manifold pressure until I reached 3000 feet at which time I started a pull-out. Before I got level I felt the elevator go. I thought that I had hit compressibility, so I dropped my dive recovery brakes and the plane started in about a 25 degree climb. I think that I was indicating about 360 or 370 knots during the pull-out for when I last looked at the airspeed indicator at 3500 feet I was doing 350 knots."

The pilot tested the F8F-1 for stall characteristics with wheels and flaps down and found that he had fair control longitudinal at 80 knots and above. With this in mind, he prepared to land. The first approach was made high and at about 110 knots. When over the runway, the pilot cut power but was unable to get the nose up and started a series of bounces that got worse and worse. He added power and took a wave-off. He then came in fairly low at 95 knots, and the nose again dropped too much as he reduced power. After a couple of high bounces he took another wave-off. On this attempt he flew the plane down to the runway, touching down with power on at about 115 knots. He eased off the power, bounced lightly, and the rest of the landing was normal.



### Grampaw Pettibone Says:

Whew! Some folks can get away with anything. That series of wave-offs whitened a few more hairs in my beard.

This is one of those "either or" accidents. Either the pilot exceeded the stress limits of the plane in his dive recovery, or he didn't, and we'll never know for sure. The F8F showed no evidence of undue stress or strain, other than the clean break along both elevators. The metal ribs of the elevators showed no evidence of corrosion, and the fabric and dope appeared to have been in good condition. The elevators had been recovered six months prior to the



accident, so they were in good shape.

The pilot states that he felt no graying sensation during the pull-out and believes that he did not exceed 4½ g's. The accelerometer reading of plus 4.2 supports this opinion. However, the accident board wondered whether that reading was registered during the pull-out or on one of the hard bounces that preceded the wave-offs.

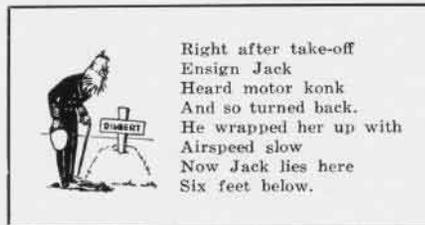
How well do you know the V-n diagram for your plane? Regardless of your conclusion as to the cause of this accident, wouldn't it be a good idea to re-digest the "facts-of-life" for your particular broomstick?

## Aircraft Handbooks

Did you know that the Handbooks and Erection and Maintenance Manuals for fleet aircraft are revised every 90 days? Squadron safety officers should make sure that their outfits are receiving the revised pages and that these books are being kept up to date.

If your squadron has been on the move and there is some doubt as to whether or not you have the latest revisions, use the order blanks provided in the back of the *Naval Aeronautic Publications Index* to make sure that you're on the mailing list.

If you feel that a particular paragraph or page in the handbook should be revised, send your ideas to the Technical Data Division, Bureau of Aeronautics. The handbooks and the revisions are prepared by the aircraft contractors, but TD-31 will see that your ideas get to the right people.



## Fatal Turns

### Case #1

F8F pilot took off with mixture control in auto lean. Spun while attempting to turn back to the field with engine popping. Strike damage, fire followed impact, pilot killed.

### Case #2

F6F—engine failure immediately after take-off. Pilot attempted to return to field, spun from approximately 500 feet. Aircraft demolished, pilot killed.



### Grampaw Pettibone Says:

These two cases occurred less than a half hour apart at the same field. Both pilots made the same fatal mistake.

Remember, there just isn't anything more important than *airspeed*. If you get in a jam right after takeoff, don't follow your natural inclination to wrap her up and try to get back to the field. Pick out the best available emergency landing spot that doesn't require a large turn. Tug on your shoulder straps, and set her down in a landing attitude. Plenty of pilots have walked away from such accidents. Mighty few survive when they lose airspeed and spin in.

## Dear Grampaw Pettibone:

As a former NATS pilot and All Weather Flight School instructor, I acquired a considerable amount of flight time up to a total of 4336.2 hours as of 1 February 1950. A change of orders in February found me transferred to the "Tailhook" Navy. Then in June, ACL 33-50 came out with paragraph 16(a) requiring all previous passenger time to be subtracted from total flight time.

According to the "Tailhook" boys in this squadron, I had too much logged flight time and conscientiously studied my log book to estimate all logged time not spent in the cockpit. It amounted to 934 hours which I subtracted from my total time. Since then I have seen a number of my NATS friends, all of whom are still in multi-engine squadrons, and I learned that they did not consider any of their logged time as passenger time.

Which interpretation is correct?

Sincerely yours,

Lieutenant, USN



### Grampaw Pettibone Says:

Your "Tailhook" friends put you on the right track—probably because they

have long been skeptical of the thousands of hours of total time logged by VR and VP pilots.

In computing total accumulated pilot time to date, ACL 33-50 directs that: "any passenger time heretofore included shall be deducted, by estimate if records are not available."

It looks to me as though you have done a conscientious job of subtracting sack-time, passenger time, and time logged as chief-coffee-maker, navigator, observer, etc.

St. Peter's yeoman probably has a gold star beside your name with the notation: "Exceptionally Honest Naval Aviator."

### Dear Grampaw Pettibone:

In the January issue you wrote a story of an F9F-2 pilot who bailed out over the Dismal swamp when he went into a spin during his third or fourth attempt to get an air-start while on instruments.

The pilot mentions in his statement that he turned off his master fuel switch during the descent from 35,000 to an altitude where he could attempt an air-start. Down here at Cherry Point, we think that this caused him a lot of grief.

This switch cuts off the fuel at the bottom of the main tank and cuts off the power to the low fuel boost pump. Since the two high pressure pumps are positive displacement pumps and get their lubrication from the fuel they pump, one or both of the following failures would have occurred:

- (1) The fuel lines between the high pressure pumps and the tank were collapsed.
- (2) The pressure pumps were burned out due to lack of lubrication.

In either event, he would have been unable to get an air-start. You didn't mention these possibilities in your analysis of the accident. How about it?

Sincerely

1st Lieut., USMC



#### Grampaw Pettibone Says:

Neither did the F9F pilots who prepared the accident report, although they did list under pilot errors the item: "Turned off fuel master switch."

In reading the pilots statement I noticed that he turned this switch on again before attempting to get an air-start, and figured that no harm had been done by leaving it off for a few minutes.

After getting your letter, I checked with one of the Power Plant experts in BuAer, and he agrees 100% with your analysis. He also pointed out that the second edition of the F9F handbook carries this warning in the section dealing with flame-out procedures:

"CAUTION: Do not set the fuel master switch to 'OFF' as the fuel system will become airlocked when the engine is windmilling and a re-start will be impossible."

Many thanks for your letter. Let's hope that by now all F9F pilots have the word.



### Turn-Up Trouble

This AD-3 acquired its "tired look" as the result of a turn-up accident.

The pilot who flew the plane on the flight prior to the accident reported that he was unable to reduce manifold pressure below 41 inches even with the throttle fully retarded. During his landing approach he secured the engine by moving the mixture control to the idle cut-off position.

A successful landing was made and the plane was towed to the hangar. The night check crew removed portions of the cowling and checked throttle linkage and the manifold pressure regulator index pointer. They were unable to discover any discrepancies. Controls from the cockpit to manifold pressure regulator and carburetor appeared to be in normal working order.

A decision was made to turn-up the aircraft for a ground check. When this was done the engine caught immediately. It produced sufficient manifold pressure and RPM to nose the plane over before the engine was secured by cutting the magneto switch. The propeller disintegrated and all six lord mount assemblies were broken. The engine is hanging from the mount by various control rods and accessories binding against the airframe.



#### Grampaw Pettibone Says:

Charge this one up to short cuts! Many air stations require that all planes be tied down when turned-up by maintenance personnel. In this case since the pilot had been unable to reduce power below 41 Hg. and the check crew had been unable to discover the discrepancy, it certainly would have been a darn good idea to have had the plane tied down prior to the turn-up.

Incidentally, the investigators were unable to determine exactly what caused the malfunction of the automatic manifold pressure regulator and carburetor in the first place. Both of these parts were bench checked after the accident and appeared to be functioning normally. It is assumed

#### FOOD FOR THOUGHT

If you skip the check-off list and save 40 seconds in this world, you may arrive 40 years too early in the next.

that the vibration which these parts received when the propeller struck the ground jarred loose any jammed parts of the mechanism.

### Dear Grampaw Pettibone:

I've been a steady reader of your column for the past six years and I intend to keep right on reading it. However, I have one small gripe, and it's one that I've heard other pilots mention.

In addition to writing about accidents and their causes, I think that you ought to devote more space to close calls or so called "near accidents." I'll bet that there are hundreds of such cases every year that never get the wide publicity that you give to an individual accident.

Actually the "near accident" contains just as much of a safety lesson as the accident that killed everyone aboard . . . probably more since you can get a clear account of what happened and what was done to prevent the accident by interviewing the crew. In really bad accidents, you much have to do a certain amount of guessing as to the actual cause.

Yours for more stories where the pilot got in a jam . . . did everything right and came out with a whole skin.

Sincerely,

CDR., USN.



#### Grampaw Pettibone Says:

Amen! The only reason that I don't write more stories of "near accidents" is that the pilots involved are too darn modest or reticent to sit down and write an account of what happened and what they did to prevent a major calamity.

On the other hand, if an accident does occur, and the pilot survives, he has to fill out a detailed statement. I get a look at about 180 to 200 such accounts every month!

If you've learned a trick or two as the result of a close call, this information may save some other pilot's life, but not if you're too modest, too busy, or (perish the thought) too lazy to sit down and write a short letter telling about it.

If you pulled a bad boner and came close to killing yourself, write about that too. If you don't, some other pilot may pull the same stunt and not be lucky enough to survive. Names are never used on this page, so you don't have to worry about unfavorable advertising.

Don't hoard any safety tips that you picked up the hard way. Break out your fountain pen and you may save a life.

#### FREE ADVICE DEPARTMENT

FLATHATTING: Remember you're not the first guy to have the urge, but a lot of the others are six-feet-under. A flat-hatter can't tell how low he can go with safety. He just goes as low as he dares. Next time round—why not a little lower? After all, he can never be too low until it is too late.