

# GRAMPAW PETTIBONE

## Maintenance Behind 8-Ball

Just about a month ago an Ensign was cruising along smoothly in an F6F at 6,000 feet and 180 knots when suddenly the canopy collapsed in his face. The next few minutes were hectic ones because he found himself dazed, bleeding, and pinned to the back of his seat by a canopy brace around his neck. In spite of these conditions, he managed to retain control of his plane and return to his base. Descending at 150 knots he lost 4,500 feet of altitude and circled into the field. In the approach he lowered his flaps and landing gear, but because of excessive speed, the landing gear extended only halfway. Still groggy from the impact with the canopy, he dared not take a wave-off, and landed wheels up.

Investigation revealed that the pilot would not have been able to reach and actuate the emergency landing gear mechanism because of the position in which he was pinned to the back of the seat by the broken canopy frame. It further revealed that the starboard emergency canopy release pin had not been safety clipped permitting it to work loose in flight and that the port emergency release pin also had not been safety clipped, but had held the canopy to the plane with the aid of the pilot's neck.



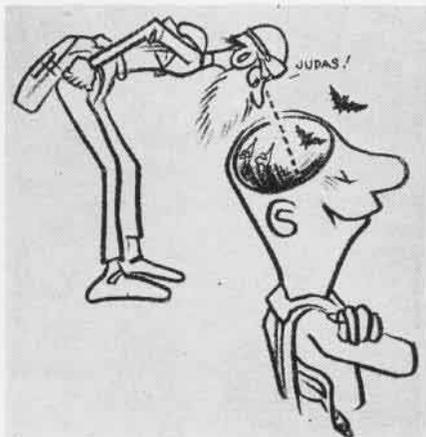
### Grampaw Pettibone Says:

You are a lucky boy—very lucky—in spite of several mistakes on the part of maintenance and line personnel and your failure to detect this negligence in your pre-flight check. First, maintenance failed when they put the plane up as available without safety wiring the emergency canopy release handles. Second, the plane captain, or the "line" failed to catch it on a pre-flight check. Third, you failed to check it yourself, and as a result, you got it—right in the neck.

Of course, we can appreciate your situation and your desire to land in a hurry. After all, flying at 150 knots with a canopy playing a tune on your esophagus is no fun. But just a minute. Suppose the F6F had flipped over with that brace still around your neck, the chances are that your accident would have been more serious—perhaps fatal.

Old Grampaw wonders how many pilots really pre-flight their planes, or even look at the emergency handles? Humph!

Still it looks like maintenance is behind the 8-ball in this case!



## Don't Forget Arrival Report

Several instances have occurred in the past few months in which Air/Sea Rescue and Associated Services have been alerted, and searches started, because pilots have not closed out their flight plans on arrival at bases other than their home station. Severe disciplinary action has been taken in these cases because of the very serious results which can arise from false alarms of this nature.

If the search and rescue facilities are called into play in an effort to locate an aircraft which has been tucked away in a hangar, they are not

immediately available should a real emergency arise.



### Grampaw Pettibone Says:

When a pilot neglects to close out his flight plan and make sure that the base from which he departed knows of his safe arrival, he is really courting trouble. The search facilities which are out looking for him are just about as useful as a fire truck that is on the other side of town answering a false alarm when a real fire breaks out.

Aviation Circular Letter 148-45 states very clearly the procedures by which a pilot should close out his flight plan. Mere acknowledgment by the tower operators of his landing *does not* relieve the pilot of these responsibilities.

(g) Upon arrival pilot completes arrival record and presents it to the line crewman at destination.

(h) Pilot presents duplicate (page 2) of clearance form to Operations Duty Officer or his representative at destination.

7. Original copies of clearance forms shall be retained in the operations office of the base of departure for a period of 90 days after which they may be destroyed. Duplicate copies of clearance forms turned in at operations offices at points of landing shall be retained by that office also for a period of 90 days."

## One Too Many

A pilot with lots of time, 2,700 hours, was picked to demonstrate acrobatics in conjunction with the Navy Day "Open House" at a Naval Air Station. Shortly after takeoff he flew over the field at 500 feet at estimated speed of 125 knots and attempted to slow roll his OY-1. After rolling the plane over to the inverted position, the nose dropped rapidly and the plane crashed, going almost straight in. The aircraft disintegrated on impact and the pilot was killed. All pre-flight checks revealed the plane had been in excellent condition. The pilot had 15 hours in type.

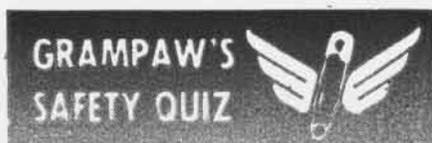


### Grampaw Pettibone Says:

No accidents on Navy Day—that's what I was hoping for, but I guess it was too much to expect.

I can talk till I'm blue in the face, still some of you will insist upon finding out for yourself. I've got stacks of files on deceased slow rollers to prove to you that such maneuvers at low altitudes do not pay. There's an old saying that's a favorite of mine and I'm passing it on to you.

"A wise man learns by his mistakes; a wiser man learns by observing the mistakes made by others." Savvy?



Almost every Naval Aviator flies an SNJ occasionally. This month's quiz is based on Technical Order 38-48 dealing with flight restrictions to be observed in operating SNJ's. How many questions can you answer?

1. What is the maximum permissible diving speed in smooth air?
2. What is the maximum permissible speed with landing gear lowered?
3. What is the maximum speed for operation or use of flaps?
4. What is the maximum speed at which full use may be made of the ailerons?
5. Regulations require the installation of accelerometers in all Model SNJ airplanes used in practice combat, dive, or glide bombing, or fixed gunnery (a) What is the maximum permissible positive acceleration? (b) Negative acceleration?

[Answers on Page 40]

## The Wrong River

The pilot of an SNJ left Atlanta, Ga., for Memphis, Tenn., with an ETA of plus two and a half hours. The weather was clear and unlimited and his radio was operating satisfactorily. The first half of the flight was uneventful, but after passing Muscle Shoals Radio Range, the half way mark, he experienced difficulty in tuning in the NW leg of the beam which he planned to ride until he could pick up the Memphis Range.

Allowing for a predicted wind of 20 knots from 340 degrees, he took up a heading of 310 degrees for Memphis and held this for 45 minutes. His radio was working satisfactorily for he picked up two other stations which he was unable to identify from his chart. Still unable to tune in on the Memphis Range, he sighted a large river running north and south and decided that it must be the Mississippi, so he turned north and began looking for Memphis on the east bank of the river.

After flying north for a short while without sighting any towns, he turned south. By this time his fuel was down to the 20 gallon reserve and he was looking for any suitable place to land. He sighted a town a few miles inland on the western side and turned towards it. There was a large dirt field northwest of the town and the pilot let down to minimum altitude and dragged the field. It was too soft for a safe wheels down landing, so he brought the plane around again and landed flaps down and wheels up and into the wind. He and his passenger climbed out uninjured.

A crowd collected around the plane. Of course, one of the first things that they wanted to know was why the pilot didn't use the local airfield. Then they told him that the large river wasn't the Mississippi. It was the Tennessee River which also runs north and south in this area but is nearly 100 miles further east. The town where he had made his forced landing was Paris, Tenn., 130 miles from Memphis.

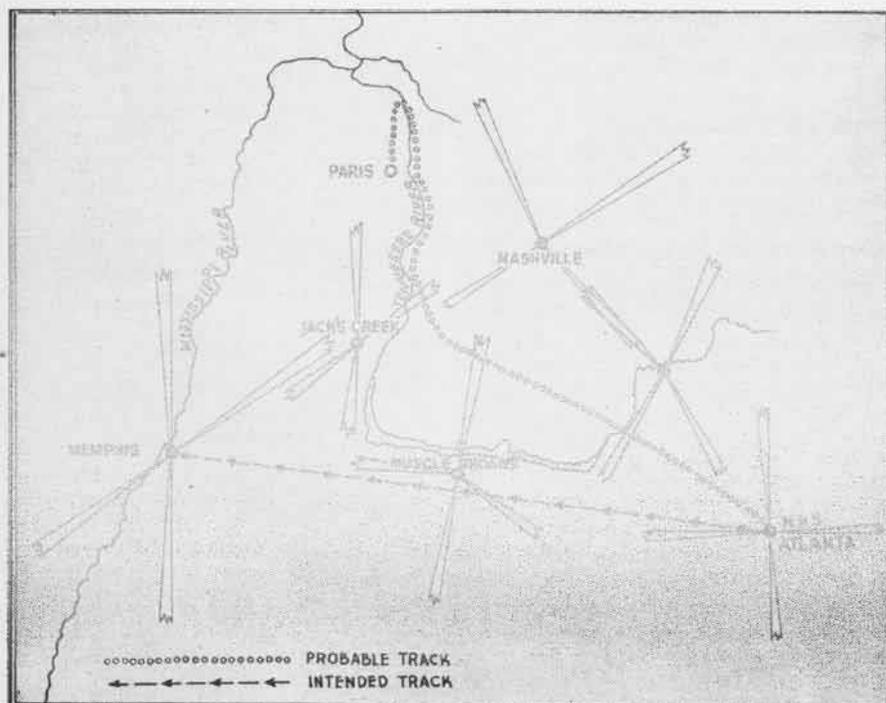


*Grampaw Pettibone Says:*

Mr. Wrong-way Corrigan didn't have you beat by much, son. I read it in the A.A.R. and I read it in your statement, but I still find it hard to believe. If the weather had been bad and your radio receiver out of commission, I could understand your wandering track. But when you said that the weather was clear and unlimited and that you were hearing beams that you couldn't identify, that put you in a class all by yourself. I had to break out my charts and try to figure out where you went. In the little sketch below I've tried to picture where you must have flown in the three hours and fifty minutes before you made your emergency landing. My guess is that the beams which you couldn't identify were: Jacks Creek "JK" and Nashville "NA." If I'm wrong, let me know.

In any event, I think that you will agree with me, that you could not have flown fifty miles past Muscle Shoals Radio Range and then flown an additional 45 minutes on a heading of 310 degrees and then have crossed the Tennessee River. That feat would require a sky hook.

When flying cross-country over unfamiliar territory, it's always a good idea to lay out your course with a light pencil line across the charts. Then estimate your ground speed based on the predicted winds and mark off your estimated position for each ten minutes of flight.



## More Dope on Tachometers

Last month Grampaw Pettibone printed a correction to an erroneous answer in the October Safety Quiz dealing with propellers and tachometers. The letter below is printed for the benefit of those who did not catch the correction and because of the interesting additional information which it contains.

"Dear Grampaw Pettibone,

It would appear that you had a pretty hard week-end before you sat down to write out the questions and answers to the October Safety Quiz. Question 1 with its answer implies that the tachometer in an aircraft indicates propeller speed. This answer will hold true only if the engine is of the direct drive type. For engines which have a reduction gearing between the engine crankshaft and the propeller, Grampaw's answer is definitely incorrect.

Maybe it was just a typographical error, but in case you wish an argument, here are two reasons why a tachometer in our present day aircraft does not indicate propeller r.p.m.

a. Propeller efficiency drops off rapidly as blade speed approaches the speed of sound, which is 1,087 feet per second in air (32°F.). As a concrete example of the fallacy of your answer, the F4U-4 has a propeller diameter of 13 feet, 2 inches, which is geared .45 to 1 on the engine. At 2,800 r.p.m. (recommended for take-off) the tip speed of this propeller would approach 1,930 feet per second if the tachometer is reading propeller r.p.m. This is approximately 900 feet per second faster than the speed of sound. It is feared that serious difficulty would be encountered with tip speed concatenation and the vague laws of compressibility. Therefore I argue that 2,800 is the engine r.p.m. and the propeller is turning only 1,260 r.p.m. with a tip speed of 868.5 feet per second.

b. All power charts which set forth the relationship existing between brake horsepower, manifold pressure, fuel consumption, etc., are based on engine r.p.m. This is the r.p.m. in which the pilot is primarily interested and therefore is shown on the tachometer. Actually he is not particularly concerned with the r.p.m. of his propeller, assuming of course that it functions in a normal manner and was properly designed for the engine on which used.

It is interesting to note that out of approximately 20 naval aviators who were questioned regarding tachometer readings, 25% agreed with your answer, 50% said you were wrong, and 25% admitted that they were confused after thinking about it for some time.

Commander \_\_\_\_\_ USN



*Grampaw Pettibone Says:*

Many thanks for your scholarly rebuttal. As you can imagine, our phone was very busy and the mail basket full of letters soon after the error appeared. Let's hope that by now all pilots realize that the tachometer measures engine r.p.m.