

# GRAMPAW PETTIBONE

## Standpipe Trouble

Sometimes it takes an accident to bring to light the fact that a pilot has been flying a plane for some time with a misunderstanding of how the fuel system works.

In this case the pilot was a Reserve aviator transitioning from F6F to FG-1D type aircraft. He had completed a written examination on the FG-1D aircraft in which he had given the correct answers in regard to the fuel system. Nevertheless near the end of the transition syllabus in the F-1D, he flew the aircraft with the selector valve on MAIN until all the gasoline above the 50 gallon standpipe level was exhausted. At this time he was making an approach to a landing at NAS NEW ORLEANS. He had wheels and flaps down and was about 100 feet above the surface of Lake Pontchartrain when the engine cut out.

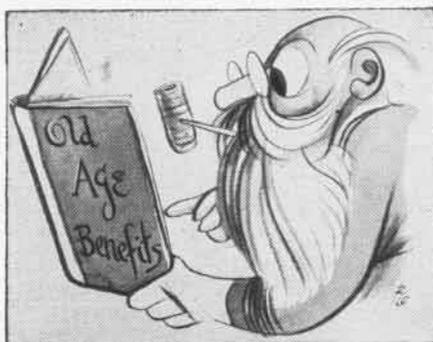
The pilot states that he pulled up his wheels, extended full flaps shifted the gas selector from MAIN to RESERVE and turned on the primer. Then in a moment of confusion, he shifted back to MAIN shortly before hitting the water. He was picked up by the station crash boat about six minutes after the ditching and suffered no injuries.

The *Corsair* was salvaged and examined. The gas selector valve was found on MAIN and approximately 50 gallons of gas was available had the selector been placed on RESERVE. Further questioning of the pilot by an Informal Aviator's Disposition Board revealed that he had always flown the FG-1D with the selector on MAIN and that he was not familiar with the fuel system and other information available in the FG-1D pilot's handbook. He also had ignored the check-off list which plainly states that landings and take-offs will be made with the gas selector on RESERVE.



*Grampaw Pettibone says:*

Just about everyone else has raised cain with this pilot and he's currently spending a year on probation—so I'd like to direct my remarks to the training officers. When pilots are flying at relatively infrequent intervals, it's a pretty good idea to operate on the basis that someone may not have gotten the word or got it but didn't retain the needed information. Even elementary facts concerning the fuel system should be reviewed during



briefings. You may be boring 95% of your audience, but if you correct a misconception on the part of just one pilot you may save an expensive airplane.

To bring the record up to date, I should mention that F4U-FG Service Change Number 366 issued on 10 April 1950 and effective 1 May 1950 eliminates this standpipe from the *Corsair* fuel system. This change is to be completed not later than the next 120-hour check on the airplanes and those in storage will be modified prior to issue to the service.

## Dear Grampaw Pettibone:

After a discussion concerning fuel requirements on a VFR flight plan and consulting ACL's, the question still remains unanswered. "How much fuel reserve is required on a VFR flight?"

I say it is a pilot's responsibility to determine that he has sufficient fuel to reach his destination and effect a safe landing.

Lt. ———, USN



*Grampaw Pettibone says:*

Slow down a minute, bub Your answer cuts the safety margin right down to zero. Would you say that a pilot had carried out his responsibility if he completed a three hour cross country flight, made a safe landing, and taxied up to the chocks just in time to hear his engine konk-out for want of fuel?

A lot of pilots have done this or come mighty close to it, and I know that it makes for good conversation around the bar, but let's take a look at the other side of the picture. Every month we have two or three fellows who figure their gasoline supply so closely that they DON'T arrive at the other end of the line. Almost invariably the accident is charged to—"Pilot Error, Negligence, and Poor Judgment."

Even on a day when the weather is CAVU all the way, it is wise to allow yourself an extra thirty or forty minutes of flight time when figuring range. You may hit unpredicted head winds, or you may happen to get a plane that burns a lot

more gas than the handbook indicates. You may get into the landing circle at your destination only to find that your wheel's won't come down. If this happens you'll need a little time to try various emergency methods of lowering them.

You won't find a hard and fast rule in ACL's or Flight Safety Bulletins which tells you just how much fuel reserve you should have for a VFR flight. The reason for this is simple. One rule just won't fit all conditions and all types of planes. Some jet, for example, burn about half of their total fuel supply in an hour of low level flight even with economical power settings. To require a one hour safety margin for these types would seriously restrict their usefulness.

Helicopters don't burn up their fuel supply nearly so rapidly and have the advantage of being able to land safely on almost any flat space, so they don't require an hour's safety margin over land. So far I don't believe that we've had a single helicopter accident caused by running out of gas.

On cross country flights, particularly over unfamiliar terrain, good judgment demands that you maintain a greater fuel reserve than would be necessary for a flight where you are constantly in sight of your home field. ACL 43-49 specifies that ferry flights shall be planned to arrive at destination with one hour's fuel reserve whenever practicable.

Circumstances may make it expedient for you to shade this rule on other types of VFR flights, but if you do, you'd better be darn sure that you can justify your decision in the event of an accident. Excuses such as "I thought I had enough," or "I had to go around a thunderstorm" or "My radio compass went out" won't keep you from being charged with negligence if you run out of gas.

## Props Reversed in the Air

In case any pilots are curious as to the effects of reversing propellor pitch while in the air, the following account of such an occurrence should discourage experimentation:

The P2V-4 was making a second GCA approach on the longest runway at NAS QUONSET POINT with a ceiling of 100 feet and visibility  $\frac{3}{8}$ ths of a mile. The plane was given a late wave-off on this approach due to being above the glide path as it came over the end of the runway.

The co-pilot who was riding in the left seat had been instructed by the pilot who was making the GCA approaches from the other side to take

over and land if they were contact at 100 feet or better. The plane broke through the overcast at an altitude of 75-100 feet slightly past the end of the runway. Speed was approximately 120 knots.

The co-pilot called out, "I've got it," to indicate that he could see the runway and throttled back for a landing. The pilot looked out at this time and saw that the plane was going to touch down well into the second half of the runway. He therefore decided to pull the reverse pitch levers rearward to position them for immediate use after landing. (Note: A solenoid lock is supposed to prevent rearward motion of the reversing throttles unless the weight of the airplane has compressed the main landing gear struts.)

However, at this moment the propellers went into flat pitch, nosing the plane down abruptly from an altitude of about 20-25 feet. The co-pilot pulled back on the yoke, but was unable to level the plane. The P2V-4 hit about midway down the runway in a 10 degree nose down attitude. The nose wheel carried away on the initial impact and both main tires were blown as the plane was braked to a stop 700 feet from the end of the runway. The pilot was unable to use reverse pitch during this 2000 foot slide as the props were hitting the runway. Pieces of the propeller blades cut through the fuselage and the initial impact buckled portions of the fuselage and wrinkled the center sections of both wings.

As a result this P2V-4 is a probable strike. (Cost \$1,090,246 less the salvage value of undamaged parts.)

 *Grampaw Pettibone says:*

Looks like a little money could have been saved here by taking that wave-off.

They set this plane up on jacks and conducted nearly 100 tests of the reverse pitch operation. It functioned normally in all configurations—gear down, simulated airborne, simulated on the deck, solenoid lock tripped and untripped. No failure of material could be discovered in these ground tests.

I think the commanding officer's statement in regard to this accident is worth quoting:

"It is difficult to reconcile the perfect performance check of the solenoid afterwards with its apparent failure in the air. It is possible that the solenoid latch was manually tripped in spite of the evidence available. Regardless of how the propellers got into reverse pitch a most expensive aircraft suffered severe damage. Fortunately no one was injured. It is therefore urged that this accident be given the widest publicity to forestall any possible curiosity on the part of any pilot as to the effects of using reverse pitch in the air."

## Dear Grampaw Pettibone:

I thought you might be interested in the enclosed picture of a Corsair with



a badly chewed tail. The pilot taxiing directly behind this plane was occupied with retracting flaps, opening coolers and adjusting his radio volume. He failed to notice that the plane ahead had stopped to avoid crossing the duty runway where a plane was just taking off.

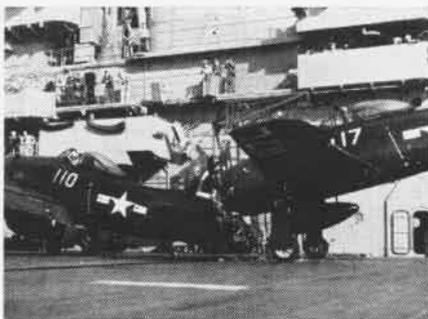
The impact caused strike damage to the plane in the picture and D damage to the other aircraft.

 *Grampaw Pettibone says:*

That's a downright sad looking fighter plane. If that Corsair could talk, I'll bet it would say something like this:

Oh, once I was happy,  
Now look at my rear.  
A fine way to end  
A Corsair's career!  
The Pilots I always  
Endeavored to please;  
Now look how my poor tail  
Waves in the breeze.  
They should get the pilot  
Who chewed my behind  
A seeing eye dog, cause  
I'm quite sure he's blind  
Oh, my flight days are over  
I'm done for they say  
FOR MY TAIL HAS BEEN NIB-  
BLED AWAY!

P. S. The same type of accident happens on carriers too. The plane in the picture below isn't landing, as you might think, from its altitude. It has been taxied out of the gear and right into the plane ahead.



## One Jerk Too Many

After a flight of about 60 minutes the pilot of an AD-1 discovered dark brown smoke coming from the rear of his plane. The smoke had an acrid odor and began to fill the cockpit. The pilot cut all electric switches including battery and radio, but the smoke increased in intensity. He then throttled back and put the AD-1 in a glide at about 120 knots. Smoke filled the cockpit, making it difficult for the pilot to see. He headed for a straight, level, stretch of beach for an emergency landing, but as he got down low he saw a number of people in this area. With his shoulder straps tight, seat lowered, flaps down, he ditched the plane parallel to the beach.

Investigation of the salvaged plane by O&R engineers showed that the fire had started at the external power receptacle and was caused by a shorting of the terminals when the insulating block broke apart.

As a result of this accident, Commander Fleet Air Quonset Point issued a safety bulletin, a portion of which is quoted below:

"Observation of line operations reveals that after an engine has been started with the assistance of an auxiliary power unit, the APU power plug is usually disconnected from the aircraft by standing clear of the prop wash and tugging on the cable. This tugging causes cracking of the external power receptacle insulating block at the mounting screws.

"Vibration during flight extends the cracks until a rupture occurs and permits the terminals to short together. Since the terminals of the receptacle are connected directly to the battery in most aircraft, they are always 'hot' and there is no way in which the pilot can remove power from the circuit when a short occurs. RESULT—An electrical fire, and in one case, the ditching of an aircraft in salt water.

"It is necessary that APU's be disconnected by applying an even pull on the plug in a straight line out from the receptacle; and in the interest of conservation of aircraft and pilots, it is recommended that external power receptacles of all aircraft be periodically inspected for cracks and replaced if necessary. It is further recommended that this bulletin be brought to the attention of all line-crewmembers, and that all personnel using APU's be thoroughly indoctrinated in the proper removal of the power plug from the aircraft."



"Oh, once he was happy, but now he's forlorn.  
Looks mighty sad since those gold wings were shorn.  
He valued the orders, which once read "DUFLY"  
But one day forgot — his FUEL SUPPLY!"