

GRAMPAW PETTIBONE

Mooring Technique

A recent RUDM reported the failure of four PB2B-2 mooring pendants and resultant damage to all four aircraft—one sank.

No details of the conditions existing and precautionary measures taken during the storm were given in the report; however, past experience of operating squadrons has shown that seaplanes will ride out severe storms when longer mooring lines are used. The following technique is recommended for use in heavy weather, whenever possible:

1. Secure mooring pendant to buoy with 50-75' of manila line which is approximately the same strength as the pendant cable.
2. Keep planes manned and turn up engines to ease strain on mooring, if wind and seas cause pitching and jerking.

Educate 'Em

Quite a number of recent accidents, some of which were fatal, have been attributed to jamming of controls by rags, tools, fittings and miscellaneous loose gear left adrift in aircraft. Extraneous material has been found lodged in control columns, wing panels, tail sections and at wing folds, as well as in the fuselage compartments.

Grampaw Pettibone says:

Burn my britches, if that isn't a dumb way to get rubbed out! Let's run this thing into its hole and stuff it full of salt.

First, there are the plane captain and pilot who sign the yellow sheet certifying that everything is O.K. Sure, jump all over them and insist on more thorough inspec-

Watson! we must keep our eyes open!



tions. In that connection, it should also be easy to get crews of multi-place planes vitally interested in such inspections.

Back of all this, however, is the mystery of how this junk originally gets into the planes. If we can stop that, we've got the thing whipped. The moving finger points, among others, to maintenance and service



personnel. There's no possible excuse for anyone who works on an airplane leaving any debris lying around in his wake. So jump up and down on the offenders in these groups, too. Of course, supervisory personnel also hold a big chunk of responsibility in this matter. Ultimate responsibility—as usual—rests with the commanding officers of the various personnel concerned.

It isn't enough to publish an order on this subject and then forget about it. You've got to conduct a drive and educate 'em. For example, we have a Be-Kind-To-Your-Pa-And-Other-Animals Week and a Clean-Up-Your-Alley Week. Let's start a Be-Kind-To-Your-Airplane-And-Clean-Up Week—and then let's celebrate it 52 weeks a year.

You can never relax on this sort of thing. Carelessness in aviation spells t-r-o-u-b-l-e and when it results in such a thing as loose material jamming flight controls, it is very apt to spell D-E-A-T-H.

Instrument Take-off

A PV-1 crashed into the water near the end of the runway, following a night take-off. The surviving pilot stated that the engine and instruments had functioned satisfactorily during the take-off run.

After becoming airborne, the pilot commenced a normal climb on instruments. Noting that the gyro horizon indicated the plane was in a nose-high right turn, the pilot raised the right

wing and lowered the nose slightly. When the horizon failed to indicate this correction, the pilot assumed the instrument to be inoperative.

He immediately referred to the turn and bank indicator which showed the plane to be in a left turn. The pilot stopped the turn by reference to this instrument, then raised the nose as he saw the airspeed starting to increase. At this instant he struck the water.

Accepting the fact that the gyro horizon had failed, the Accident Board was still of the opinion that the pilot was too dependent on the horizon as the main attitude instrument. They recommended that all pilots be cautioned against placing full dependence on the artificial horizon, particularly during critical maneuvers. They pointed out that at such times the full use of *all* rate and attitude instruments is essential.

The Board also reminded that it was necessary to maintain a constant power setting for a longer period on instrument take-off than at other times since power is basically connected with maintaining the correct flight attitude.

Grampaw Pettibone says:

All instrument and would-be instrument pilots will do well to take heed of the sound advice handed out by this Board.

The number of accidents which occur immediately after take-off makes me wonder whether some of them might not be due to *pilot-caused* instrument failures. For example, do you know that it takes approximately five minutes at four inches of vacuum for a gyro horizon to build up to speed so that it will register correctly? Before that, it will act sluggish and fail to indicate the correct attitude of the plane—*just like the one in this accident!*

Also, do you know how to properly test your instruments on the ground, so you will know *before* you get in the air whether they will indicate correctly? Better be darn sure you do before your next instrument flight!

I'm not going to tell you about these things here. It's all explained in the aviator's Bibles on this subject, specifically in Chapter 14 of *Instrument Flight* and in Chapter 2 of the recently issued *Flight Thru Instruments*.

Clear the flight deck! . . . an SB2C gets a wave-off and veers to one side as the LSO squints up the deck, impatient about a delay that makes him wave 'em off as they come in. Teamwork is absolutely necessary between deck crew, LSO and pilot in making carrier landings, when every second counts.

Restricted



Crash, Bang!

It was bad enough when one aviation cadet hit the aircraft ahead during his landing run-out because he had failed to determine whether his landing area was clear. The pay-off came two minutes later, however, when another cadet also neglected to check his landing area and ended up in the same heap.



Grampaw Pettibone says:

Thank heaven, they were able to drag these wrecks off the runway before the next cadet landed!

Navigate—or Else!

Two pilots, each with approximately 425 total hours flying time, recently were cleared for cross-country flights in SBD's. Due to poor navigation, they became lost and washed out both aircraft in needless forced landings.

In his forwarding endorsement on the reports of these two accidents, the immediate superior in command said:

In recent months numerous accidents of this type have occurred due initially to faulty overland navigation. It is felt that this is caused by limited or complete lack of experience in map reading and radio aids.

Action has been taken by this command to prevent cross-country clearances being given pilots not qualified for such flights.

► *Comment*—Attention of all commanding officers is invited to their responsibilities in this matter.

Paragraph 8 of SecNav letter serial 61134 of 19 July 1944 (reprinted in Aviation Circular Letter #111-44) states: "Commanding officers shall permit *only* those persons to pilot aircraft whom they consider competent to do so." A pilot who is not qualified to carry out the particular flight mission assigned, evidently can not be considered "competent."

Factors that must be considered in deciding whether a pilot is qualified to ferry naval aircraft are contained in Aviation Circular Letter #73-44. The following is quoted from this reference: "Responsibility for the assignment of properly qualified pilot . . . rests with the commanding officer of the ferrying activity and all such officers shall ensure that pilots and crews are in all respects qualified for the duty for which assigned."

Night Strafing Accident

During night strafing practice a TBM pilot (500 hours) pushed over at 2000 feet and commenced a run on a single float light. He failed to begin his pull-out in time to avoid flying into the water.

This accident was believed to have occurred mainly as a result of the pilot becoming disorientated. Evidently, he neglected to check his altimeter.

In an effort to prevent other accidents of this nature, the ISIC prohibited units of his command from night straf-

ing, glide bombing, etc., on float lights, unless a minimum of two lights were visible.

Comment—This order is considered sound and is recommended for adoption in other commands. At least two lights are required to establish a plane of reference. Depth perception will be lost and disorientation is apt to occur where only one light is visible.

The "Hurry-Up" Boys

When the engine of an SB2C-4 momentarily cut out immediately after take-off, the plane settled back on the runway. However, instead of landing on its wheels, as it should have, it settled on its belly because the pilot



already had retracted his landing gear. The plane required a major overhaul before it could be flown again.

The accident board reported that although all pilots had been advised and instructed not to retract wheels until they were sure that a landing could not be made on the same field, there was a noticeable tendency among pilots to pull up wheels as soon as planes became airborne.



Grampaw Pettibone says:

Let's look at the record. It confirms the board's observation about pilots raising their gear prematurely—to the ex-

tent of approximately 100 accidents a year. Taking into account the strikes, overhauls and repairs involved, it is estimated these accidents cost the Navy an average of \$25,000 each. Add that up on your abacus!

The parade of alibis explaining these embarrassing exhibitions includes everything from slipstreams and bumpy runways to misinterpretation of signals by flight crews. Needless to say, none ever satisfactorily explained the necessity for such ultra-snappy raising of the landing gear.

Some pilots evidently don't take kindly to the "instruction and advice" referred to by the board. It shouldn't be too hard, however, to find a cure for this sort of foolishness. All that is necessary is for commanding officers to convince themselves that there is absolutely no reason for raising the landing gear the instant planes become airborne (which is practically self-evident); then to issue a one-sentence order on the subject; and then to dish out the right kind of medicine to make it effective. And don't wait until you have one of these accidents in your squadron before taking action.

Since this sort of thing takes place only at landing fields, it shouldn't be too hard to spot offenders. Tower personnel could help. To stop all argument as to whether or not a pilot raises his gear while he still has a chance to re-land on the field, particularly if tower personnel are directed to report offenders, it will be necessary to set arbitrary limits for raising wheels, such as a definite altitude or a position with relation to the field boundary.

To all pilots: I'm not double-crossing you on this—it's for your own good. It hurts me worse than it does you. Get smart and make this standard procedure for yourself before the order comes out.

Fuel Economy

During a gunnery flight, a fighter pilot (400 hours) suddenly noticed he had only 45 gallons of fuel remaining. He immediately headed for the base but ran out of gas and was forced to crash land just short of the field.

The following comments are taken from the accident board's analysis of the underlying causes of this accident: "A large majority of pilots reporting to this command, including even ex-instructors, have little or no knowledge of the principles of economical cruising and no experience in applying these principles, to conserve fuel."



Grampaw Pettibone says:

Do you know how to fly your airplane to get maximum range? maximum endurance? If not, you better put that at the top of your list, Mister; when fuel is low and salt water plentiful, you'll be mighty glad you bothered to find out.

Fuel consciousness is largely a matter of habit and is particularly important in the combat zone. Any pilot who doesn't know how to operate his plane at maximum fuel economy and who doesn't habitually check his fuel gages and his rate of consumption—believe me, that guy is flying straight into trouble!

GRAMPAW'S SAFETY QUIZ



ALL AVIATORS should know the answers to these questions. In the air, the penalty for not knowing may prove fatal. If you miss an answer on the ground, penalize yourself by looking up the reference.

1. In what order do the following aircraft have right-of-way in flight: (a) airplanes, including rotoplanes, (b) gliders, (c) balloons, fixed or free, (d) airships?
2. Do regulations prohibit the execution of steep climbing turns on take-off?
3. Why is it necessary to be adept in flying "partial panel"?
4. Is it necessary to taxi at a high RPM in order to avoid fouling your engine?
5. When complete fuel consumption from any tank is necessary what procedure should be followed?

Answers on Page 48