

GRAMPAW PETTIBONE

Get Ready

Comes autumn, it's a wise idea for pilots and aviation ground personnel to prepare for winter. Cold weather flight operations have a large quota of extra hazards—ice, fog, snow, rain, sleet, frost and obstructed runways. But the "ole devil" of them all is *ice*.

Let's close the barn door this year before the winter accidents begin. Here are a few locks to put on the door.

► On the ground.

1. Don't attempt to take off with any frost on wings or tail surfaces. Rubber scrapers or waste rags should be used to remove frost.

2. Don't attempt take off with any loose snow on the wing or tail surfaces. It may be covering a hard ice formation caused by melted snow which has refrozen. Loose snow also may pack between the ailerons and wings. Wing covers and engine covers should be used, if available, when the plane is kept in the open. Give your airplane a thorough exterior line check subsequent to any precipitation during cold weather.

3. Don't taxi fast over pools of water when temperatures are near freezing. Splashed water may form ice on the wings or stabilizer or may ice up brakes, retracting mechanism or landing gear.

4. Don't take off without first testing all controls to insure that hinges have not frozen.

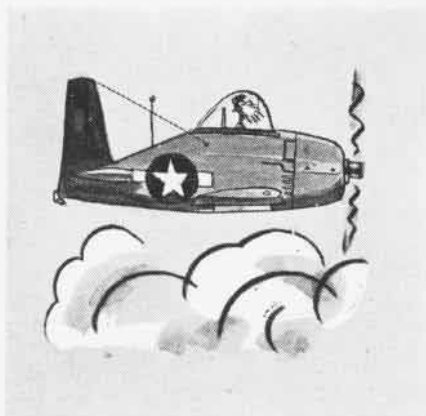
5. Don't warm the engine in a fog when temperature is near freezing. Ice may form on propeller and on wings and stabilizer in back of the prop blast.

6. Don't try to take off with any ice on the airplane or propeller.

7. Don't attempt to remove ice by applying hot water. It will freeze again and may produce a worse condition than before application. Snow and frost may be removed by throwing a rope or strip of canvas over the wing with a man on each end to "saw" off the snow.

8. Don't taxi fast on ice-coated runways or taxi strips.

9. Don't apply brakes suddenly on a runway that may be coated with ice. Use



the full effective runway. Check on runway conditions by radio before landing.

10. Don't take off during a wet snow condition.

11. Don't forget that in cold weather engines heat up less readily and are, therefore, more prone to foul. They should be thoroughly cleared immediately before take-off.

12. Don't take off into a known icing condition when the plane is not equipped with all modern de-icing and anti-icing fluids. Even though the craft is so equipped, flights should not be planned to go through continuous icing zones.

► In the air.

1. Don't continue to fly into a region of known icing conditions. Better to turn back than be sorry.

2. Don't fly through rain showers or wet snow when the temperature at flight level is near freezing.

3. Don't fly parallel to a front under icing conditions.

4. Don't fly into clouds at low altitude above crests of ridges or mountains. Four or five thousand feet above ridges should be maintained when flying on instruments through clouds at temperatures below freezing.

5. Don't fly into cumulus clouds at low temperatures. Heavy glaze ice may be encountered.

6. Don't forget to turn on the pitot tube heater when needed. These heaters can be checked only on the ground. Pitot tubes should be covered when planes are parked in the open.

7. Don't land with wing de-icers on. They act as spoilers if left on. Turn them off on base leg.

8. Don't make steep turns, practice stalls or spins, land with power off or try to climb too fast when ice has formed on the plane. Ice increases the stalling speed of an aircraft because of increased weight and drag as well as decreased lift.

9. Don't forget when flying under icing conditions that gasoline consumption is

greater than normal due to increased drag and additional power required.

10. Don't forget that turning on carburetor preheat or using alternate air intake, the latter *before* entering any weather where there is possibility of icing, may mean the difference between flying through to destination or being hauled there in the crash truck. And you can ice up even though you cannot see the moisture in the air. A large percentage of accidents resulting from induction system icing occur because of the many pilots who are woefully lacking in both general and specific knowledge on this subject. Most of the references listed below deal with this problem and should be reviewed carefully by all pilots at this time.

11. Don't attempt flight in the late fall or winter without first consulting the forecast as to expected icing conditions.

References: TN 84-45, TN 79-45, TN 36-41, Flight Safety Bulletin 10-44 and the article "Beware of Icing!" in the 15 October issue of NAVAL AVIATION NEWS.

Unfamiliarity Breeds Accidents

A pilot who was used to flying heavy, service-type aircraft made an administrative flight in a CH-3. His flight to destination was uneventful. In his landing, the main wheels hit slightly ahead of the tail wheel and the plane bounced and swerved left. In attempting to correct for this, the plane was nosed over.

The cause of this accident was listed as carelessness and poor technique on the part of the pilot. One of the underlying causes of the poor technique was believed to be the tendency of the experienced pilot (1000 hours) to over-control due to most of his recent experience having been in heavy, service-type aircraft.

All pilots again are warned, when going from heavy planes to light planes, of the relatively light control pressures found in the latter type of aircraft.

Catapult Launchings require plenty of know-how and split-second timing. Here the U.S.S. Randolph has just launched a Hellcat off its starboard catapult. Crewmen rush to retrieve bridle gear while another team, extreme left, stands by awaiting launching of plane on port catapult (not visible in photograph). A third plane is moved forward to take its place on the catapult just emptied. Training days off.

Helldiver Pilots!

Attention of all SB2C, SBW, SBF pilots is invited to the detailed analysis of accident hazards facing *Helldiver* pilots contained in the September issue of the *Naval Aviation Confidential Bulletin*, No. 9-45, CONAVAER-00-75-500.



Partial Anoxia

An outfit had several mid-air collisions under similar circumstances. All occurred during early morning gunnery runs at an altitude of approximately 10,000 feet. Fortunately, none was fatal.

After a careful consideration of all aspects of these cases, the local Safety Board issued the following bulletin to pilots:

Rather than adhere to the generalized description of "doping off after a rugged night," let's consider the physiological aspects of such an accident. Consider not the anoxia that causes unconsciousness, but that tricky, sneaking *partial anoxia* that destroys good vision, good judgment and split second reactions. At 10,000 feet, a tough "night before" is apt to affect you this way.



Grampaw Pettibone says:

I fully agree! The old rule used to be, "No drinks within 24 hours of a flight." It still holds good. Sure a lot of pilots have broken this rule and gotten away with it. But it's wiser to remember the many good ones—pilots better than either you or I—who aren't flying today because they thought the rule didn't apply to them.

There's an amusing sequel to this item. On another page of the bulletin quoted above there is a little "filler" which reads:

"If you drink, don't fly—

If you fly, don't drink—

If you don't drink, send us your chit book."

In the Fog

An R4D ran into unexpected fog immediately after take-off and shortly thereafter crashed into the top of a hill almost directly in line with the take-off runway. All 13 persons aboard were killed. The pilots (over 2000 hours each) were familiar with the airport and surrounding terrain and knew that they should make a left turn soon after becoming airborne in order to avoid high terrain on the right. The only logical explanation for the catastrophe seems to be that the sudden entry into the unexpected fog bank confused the pilots momentarily and in their concentrated effort to maintain control, they forgot to turn left to avoid the hill.

All night take-offs should be considered and planned as instrument take-offs in the sense that a pilot should depend primarily on instrument flying. If he does this consistently, he will not become panicky or confused should he suddenly fly into an unexpected cloud. (And this is not an isolated instance).

When there is a co-pilot, every take-off and landing in reduced visibility should be made with the pilot on instruments and the co-pilot on contact.



Grampaw Pettibone says:

Co-pilots aren't supposed to go along just for the ride. They are there to help the pilot fly the plane, remember that.



Not Tight

Control of this FM-2 was lost during landing due to slipstream from the plane ahead.

The pilot should not have been injured, but he was—seriously, when his head struck the gunsight.

His shoulder harness was *not* tight.

Survival Suicide

The following article is reprinted from the Ninth Marine Aircraft Wing, "Aviation Safety Digest."

A Marine pilot, upon reaching his destination, was instructed to report to a field a short distance away due to a closed-in condition. He had approximately 7 hours' fuel at this time (1700) but immediately got himself lost. A search was sent out early the following morning, after it was determined that the pilot neither contacted nor landed at any other fields. No trace was found for 16 days.

On the seventeenth day, the plane was spotted some 150 miles south of the field where he was to have landed. Investigat-

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. If grade 91/96 fuel is specified for your aircraft, 100/130 will provide more power. True or False?
2. At what RPM should supercharger shifts be made?
3. For landing, what signals does the pilot give to the co-pilot to lower wheels?
4. In landing approach, pilot should pump brake pedal several times to insure efficient operation. True or False?
5. If alternate air is used during take-off due to icing conditions, how will the take-off run be effected?

(Answers on page 40)

ing parties discovered he had made a good landing. The chute was spread out near the plane and numerous signs indicated the pilot had survived in good condition.

In the cockpit of the plane was a letter written to his mother stating that he had been at the plane for two days, had consumed all but half a can of five cans of water and was suffering from thirst already and that he planned to leave the plane. The letter was coherent, giving no indication that he had suffered from shock or concussion, but he neglected to mention the direction he intended taking.

The radar gear had not been destroyed, no oil had been drained from the engine to build fires for warmth or signaling.

Expert trackers were hired and started from the scene of the crash in search for the lost pilot. The trail followed revealed no fires had been built, no shelters made, no effort to catch fish or game. At one point it was found that he had wandered off to one side and found water, but he had not remained long enough to soak up much. Although his course carried him along the beach he apparently ignored clams, crab and surf fish.

After six days of aimless wandering he died from exhaustion and lack of food . . . killed from ignorance and fear. Had he observed the simplest rules of survival, conserved water and searched short distances for food, prepared smoke signals and fires and remained at the plane, he would be here now.

It is usually best to remain with your plane if you are lost. A plane is much easier to find than a man wandering aimlessly.

► *Comment*—The Army's series of "Land and Live" films contain excellent information on this general subject. Navy numbers of these films are: MA-2627 (Arctic), MA-3854 (Desert), MA-4206 (Jungle).

Is It Worth It?

After finishing the prescribed runs on a gunnery training flight, the instructor led his group of seven students at an unauthorized low altitude over the water. Everybody was having a good time *until something happened*. The last cadet failed to pull up enough when he passed over the shore line and dragged his wing in a tree. The plane crashed, killing the pilot.

An investigation into the crash revealed that flight discipline for the entire flight had been poor. The instructor was tried by GCM and found guilty.



Grampaw Pettibone says:

When flight discipline breaks down, you can expect trouble sooner or later.

An increasing number of flat-hatting reports are being received. You may be able to get away with breaking the "regs" for awhile, but stop and think about what would happen should something unforeseen, such as an accident, cause you to be caught outside the law. The punishments are rigid and will be even more so from here on.—Think it over seriously and decide: IS IT REALLY WORTH IT?