

GRAMPAW PETTIBONE

Disorientation on Takeoff

Case 1. Immediately after a night takeoff an R4D disappeared into a rain squall. A few seconds later local residents saw a blinding flash as the plane crashed into the water. The engines sounded as though they were operating normally.

Case 2. An FM took off in a very dark night. Altitude was gained in a normal climb until the plane reached about 400 feet. Then the lights were seen descending in a rather steep spiral. A violent explosion was observed as the aircraft crashed into the ground without any apparent effort to recover from the spiral. There was no evidence of material failure.

Case 3. A TBM flew into the ground approximately one-fourth mile beyond the end of the runway after taking off into a very dark night. At the time of the crash, the plane was in a shallow turn. The one surviving crewman recalls no indication of power plant malfunctioning.

Case 4. Following a night carrier takeoff, a fighter flew into the water. The pilot was recovered. He believes he may have lost orientation while looking for the switch to turn off his recognition lights.

All available evidence indicates that pilot disorientation was the cause of



these accidents. Disorientation during takeoff at night or other periods of reduced visibility continues to account for a large number of fatalities in aviation accidents. Nearly all cases are due to one of the following errors:

- (1) Failing to go on instruments immediately upon becoming airborne from runway or carrier.



- (2) Operating some switch or auxiliary control and unconsciously applying forward pressure on the elevator control.
- (3) Trying to fly part contact and part instruments.
- (4) Trying to fly by reference to a single light, the position and plane of which have not been definitely established.

On takeoff when the horizon is obscured by darkness or overcast, go on instruments immediately upon becoming airborne. Don't fool around, hoping that you will fly through the "stuff" before it is necessary to go on instruments. A lot of guys already have proven this a dangerous practice; the fatality files are full of such examples. The instant you leave the ground, go on instruments. Thereafter, *assume and maintain a safe rate of climb through instruments.* Do not make any unnecessary turns and do not operate any auxiliary controls, switches, radio, etc., until certain that you are at least 500 ft. above the terrain or water. Even then, care is necessary to prevent a dangerous attitude. It doesn't take much to change the sensitive balance of a heavily loaded aircraft. Altitude can be lost very quickly and you don't have much to spare on takeoff.

When suddenly you leave the carrier or field lights and fly smack into that "black stuff", it's easy to let things get away from you if you are not prepared. If it does happen to sneak up on you,

don't get panicky or try to fly part contact and part instruments; go completely on instruments immediately and you'll be O.K. Don't try to orient yourself by other lights unless their identities have been definitely established. They may be either on the ground or in the air.

[Flight Safety Bulletin 10-45 should be carefully read by all pilots.]

A Fine Example

After several unsuccessful attempts by the mechanic to spin the prop, the pilot (a Flight Safety Officer) got out of the *Cub* cockpit to show "how it was done". He left the switch on and the throttle open. His technique was so good that the engine caught on the first try and the plane leaped forward. Fortunately, he and the mech managed to side-step the little plane as it sped by them. A mad chase ensued, ending as the *Cub* crashed full tilt into a parked plane.

In writing up his report, the Flight Safety Officer suggested that such accidents could be avoided if chocks were placed under the wheels before starting engine.



Grampaw Pettibone says:

A noteworthy observation, my friend, but how about regulations already in effect? BuAer Manual, Art 11-101, states:

"Under no circumstances shall engines be started without a competent person at the controls. Wheels will be chocked."

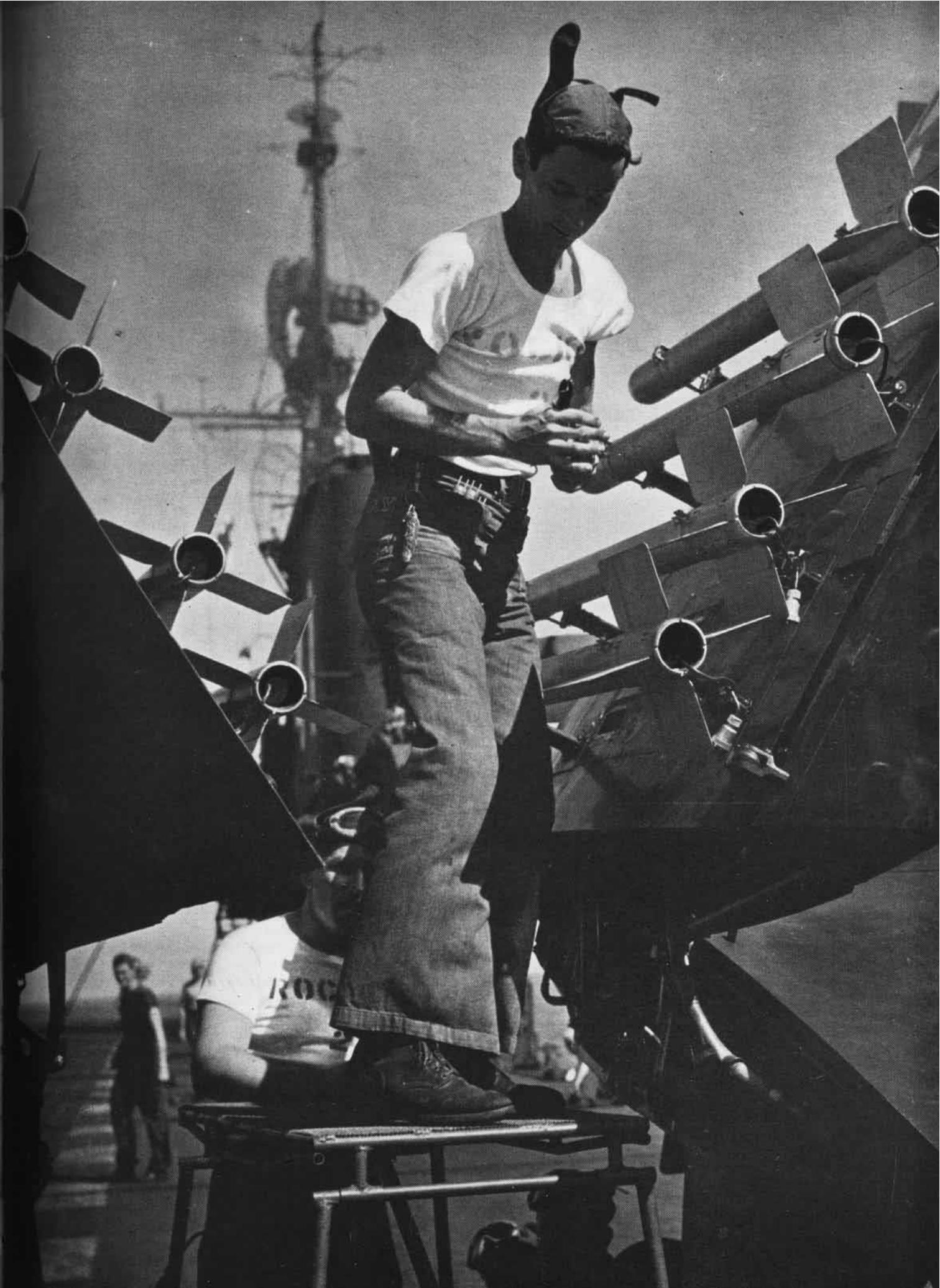
HELLCAT PILOTS!

Attention of all F6F pilots is invited to the detailed analysis of accident hazards facing *Hellcat* pilots contained in the January issue of the *Naval Aviation Confidential Bulletin*, No. 1-46, CONAVAER-00-75-500.

PILOTS CAN RELY ON THESE ROCKETS

THE FIGHTING war is over but know-how still counts when it comes to the servicing and maintenance of aviation ordnance equipment. Just before a training strike, an aviation ordnanceman aboard the U.S.S. Midway gives a final check to a Corsair's load of 3.5" rockets. Circuits are checked before rockets are loaded. When the two inboard pigtails are connected, the rocket load on

port wing will be ready for firing. Installation shown is an early modification of the Mk 5 aircraft rocket launcher. Later installations have been modified in accordance with Aircraft Armament Bulletin No. 45. Maintenance and operational techniques learned in Navy technical schools are kept up to date working with latest ordnance equipment at either Fleet or shore based activities.



Down and Locked

Just flicking the switch or shoving the lever down does not insure that your landing gear will extend and lock every time. Granted, it should; but it doesn't, as hundreds of pilots each year can testify. Occasionally a part gets out of adjustment due to poor maintenance, wear, or breakage, thus preventing the gear from lowering and locking.

In response to "Landing Gear Down" on your landing check-off list, don't just put the cockpit control in the "down" position and forget about it. ALWAYS CHECK to see that WHEELS are DOWN AND LOCKED!

Too Close

During a night three-plane formation training flight, the #3 plane, piloted by a student, apparently got "sucked in" behind the leader (instructor). The student lost control in the slip stream resulting in a collision and the death of two men. The Investigating Board attributed the underlying cause of the accident to insufficient interval on the part of the student.

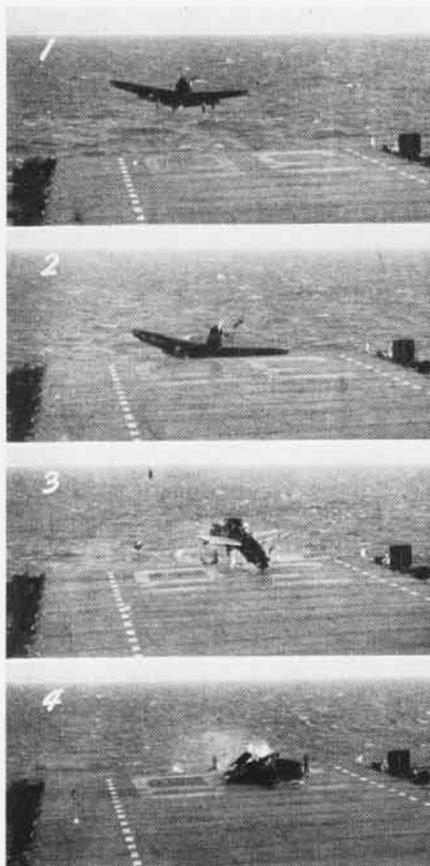
It was found that this particular instructor had requested his students to fly a close formation at night. Apparently it was his idea that night formations were to be flown closer than day formations.

● The Board recommended: "That more emphasis be placed on comprehensive briefing of both instructors and students to insure compliance with night syllabi, rules and regulations."

● The Convening Authority said:

"It is evident that this accident was caused primarily by the formation getting too closed up. As a result of experience in the training command, the standard formation distance has recently been increased from fifty to seventy-five feet. Had this distance been observed, with any error being

on the side of greater distance rather than less, as was the case here, the likelihood of such an accident would have been materially lessened. . . ."



These striking pictures show what happened when an SB2C pilot got low and slow in the groove and failed to respond properly and promptly to the LSO's signals. A last second burst of throttle pulled the plane almost up on deck where it crashed the ramp in the manner shown.

Believe it or not, the pilot was not injured: another example of the life-saving value of the shoulder harness.

Follow Me

While leading an aircraft to the parking area, "a follow me" jeep experienced engine failure. The driver stopped his vehicle on the runway directly in front of the oncoming airplane and out of the pilot's line of vision. Leaving the jeep, the driver ran toward the plane, holding the emergency stop signal. Upon suddenly coming into view of the signal, the pilot immediately applied brakes, nosing the plane up.

To reduce the likelihood of other similar accidents in this squadron, the Executive Officer promulgated the following instructions:

"1. When intercepting an oncoming aircraft to lead it either in or out, the driver will make a 'U' turn in the nearest and most convenient hardstand. If there is no hardstand available, make the turn 400 feet ahead of the plane

and in such a manner that you never lose sight of the pilot. Then allow the aircraft to catch up with the taxi jeep. Never let the jeep get out of the pilot's vision.

"2. Aircraft are not to be led at a speed greater than 20 miles per hour. Any plane that insists upon taxiing faster than 20 miles per hour shall be reported to the operations officer.

"3. All new or inexperienced taxi jeep drivers shall be checked out in all phases of their job by the Operations Officer himself, before taking it over."

► **Comment:** Drivers of automotive equipment, unless specifically indoctrinated as to the limitations of aircraft on the ground, cannot be expected to know these limitations. They do not realize how poor the visibility is from the cockpit, the lack of maneuverability on the ground, or the distance needed to stop an aircraft on the ground. It is the responsibility of the Operations Officers and their assistants to insure that these drivers are instructed.

All PILOTS are cautioned to remember the limitations of the drivers of "follow me" jeeps bearing in mind that all drivers may not yet be indoctrinated with the foregoing instructions.

Flight Safety Bulletin 16-45 contains a comprehensive breakdown of the causes of most taxiing accidents and should be read by all pilots and plane directors.

This collision resulted when a pilot failed to check visually the traffic and tower before taxiing onto the runway. It happened like this:

The GH pilot was cleared by tower radio to land. In his turn into the groove, the GH pilot saw the Taylor-



craft "holding" on the taxiway at the upwind end of the runway. The GH then landed.

In the meantime, the Taylorcraft pilot proceeded onto the right side of the runway and began taxiing downwind toward the take-off position. He apparently did not see the approaching GH nor the red light being given him by the tower. The Taylorcraft was not equipped with radio. Neither pilot saw the other aircraft until an instant before the collision when the GH was in the last stage of its landing runout. The Taylorcraft pilot was killed. The cause was assigned as 100% pilot error on the part of the deceased.

GRAMPAW'S SAFETY QUIZ



1. Ground checking of magnetos should be made with the propeller pitch control set in what position?
2. When should alternate air be used?
3. In a dive or glide bombing run is it necessary to start a pullout immediately after release?
4. Are check-off lists required in all Navy planes?
5. Do regulations make the wearing of shoulder harness mandatory?

(Answers on Page 40)