



GRAMPAW PETTIBONE

Short Flight

At 0700 one bright frosty winter morning in the Midwest, a Naval aviator/recruiting officer, arrived at the local airport and met his passenger for a flight in a T-34B *Mentor*. The flight was to be a short orientation/indoctrination hop around the city.

Since the assigned plane captain had not yet arrived, the pilot untied the aircraft and performed his own pre-flight inspection. As he helped strap his passenger into the rear seat, he briefed him thoroughly on bailout and general emergency procedures. The pilot then completed the prestart checks but could not start the engine.

The two men then exited the cockpit, and the pilot proceeded to another T-34. Having no difficulty in starting up, he shut down and conducted a pre-flight inspection and again helped strap the passenger in. Climbing into the front cockpit, the pilot started the engine and, as they waited for it to warm up, read the checklist over the interphone to the passenger. When the oil temperature reached 40 degrees, they taxied out. The pilot, on noting the windsock dangling, decided to use the 2,400-foot sod runway with the fewest obstructions beyond the far

end. Actually the wind was four knots downwind.

Run-up and engine checks were normal, the takeoff checklist was completed and off they went. At 60 knots, the nose was raised and the *Mentor* lifted off but then settled back. After further acceleration, it became airborne again at 65 to 70 knots. At 10 to 15 feet altitude, the landing gear was retracted; at 20 to 30 feet, the left wing dropped to about 30 degrees of bank. The pilot immediately leveled the wings, thinking his passenger had inadvertently hit the stick. The wing dropped again and remained there momentarily. As the airspeed decreased and the nose

came up, the little plane started to settle and mush toward the ground.

Realizing that he was going down and suspecting a loss of power, the pilot concentrated on keeping the wings as level as possible. The right wing hit first, then the aft fuselage. The craft bounced once, then skidded to a halt on its belly on the frozen sod, 950 feet beyond the end of the runway.

Pilot and passenger quickly left the aircraft after securing the switches to prevent possible fire. The pilot's only comment, heard by witnesses as he walked away, was, "I don't know what happened."



Grampaw Pettibone says:

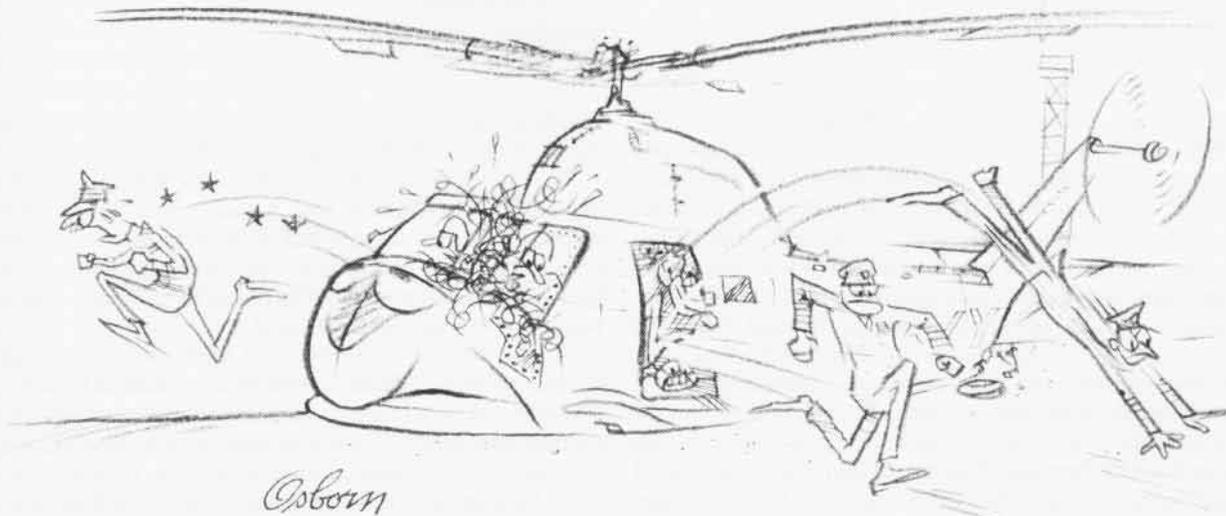
It happens *every* winter. Whether it be a T-34, S-2, T-33 or an F-9, the reason is always the same. Why? Don't they teach aerodynamics in preflight anymore? Even ol' Gramps is familiar with laminar and turbulent boundary layer air flow and lift versus drag. It would have taken only a few minutes to have swept the 1/8 to 3/16 inches of frost off the wing and tail surfaces before they climbed in, and, oh, how much better the plane would have flown. Less embarrassing, too, than an ignominious slide into the fence, or worse yet, a stall - spin.

Embarrassed Squat

The lieutenant and the J.G. conscientiously prepared their UH-2A for a scheduled 0700 VIP passenger flight returning the Flag and his staff to the flagship berthed at a nearby seaport. The pilot had carefully calculated the weight of fuel and passengers to be within the operational envelope of the aircraft for takeoff, flight, and landing.

After an uneventful takeoff and short flight, the pilot contacted the ship five miles from touchdown and received word that winds were variable at three to five knots. The J.G. began the landing checklist and, when the pilot asked for landing gear at one mile, reported the checklist complete.





Owing to multiple obstacles around the landing area, the lieutenant elected to execute a precision approach into the wind across the fantail of the ship to the helo pad on the pier alongside which the ship was berthed.

As the flight reached 150 feet altitude and 25 to 30 knots airspeed, the pilot noted that there were many people on the pier and that a truck was parked up the pier from the landing pad. At 60 feet altitude, roughly over the ship, the pilot added power to slow his rate of descent. The copilot reported an rpm drop, but the pilot elected to continue the approach as the rate of descent had slowed. Rpm stabilized at 96% and, at 30 feet over the helo pad, the pilot added power for a transition to a landing.

Suddenly there was an abrupt unexplained power loss. The lieutenant immediately lowered the nose to gain airspeed in order to shallow his approach angle for a minimum power, maximum gross weight type landing. He regarded a waveoff impossible at this point owing to the power loss, the obstructions present, and the fact that the truck had driven into the intended waveoff route.

The copilot, interpreting the dropping of the nose as the commencement of a waveoff, raised the landing gear because he felt they would have diffi-

culty clearing a 15-inch curb in their waveoff path. This was done without the pilot's knowledge or permission, nor did the copilot inform the pilot.

At an altitude of 10-15 feet, the pilot flared the aircraft to stop forward speed and, assuming the landing gear was extended, touched down on the tail wheel first to cushion the main landing gear. By the time the copilot realized that they were about to land, there was insufficient time to re-extend the gear.

As the aircraft fell through and settled onto the cargo hook, the pilot became aware that the landing gear was retracted. With extreme difficulty, he managed to maintain the *Seasprite* in an upright level attitude. Smelling fuel fumes from what he believed was a ruptured fuel tank, he became concerned about possible fire and asked the passengers to get out.

As soon as they were safely clear of the area and sufficient rpm had built up, he raised the aircraft and lowered the landing gear. A normal landing followed after the gear pins were in place.

Upon the pilot's being informed that there was no fuel leakage evident, the aircraft was shut down. As the rotor came to a stop, the helicopter swerved 40-50 degrees owing to a broken tail wheel locking pin.



Grampaw Pettibone says:

Jumpin' Jehosaphat! If you can't trust your copilot, who can you trust? Of course, the aircraft commander sets the standards, and if he trained his copilot to raise the gear without signal, he just reaped his own harvest.

In spite of those passengers being VIP's, they should'a been wearin' proper flight gear. If that bird had turned over, there would'a been some badly injured people. The very minimum gear to be worn by *all* helicopter passengers should be life jackets for over-water flights and protective helmets.

Considering the many obstructions in his path and the personnel and equipment on the pier, the pilot's margin of safety was very thin when he started. Couple that with the partial power loss and poor crew coordination and there you are.

The aircraft accident board made some pertinent comments on the situation: "The vertical maneuvering capability of the helicopter can lull even experienced personnel into a false sense of security concerning the capabilities of the aircraft. This can lead to commitment of men and machines to situations of marginal safety. In the past, pilots have been encouraged to commit themselves and their aircraft to missions where their margin of safety was nil. Operational commanders would do well to acquaint themselves with the limitations of the aircraft and crews under their jurisdiction and ensure that they are not over-extended."

'This accident could have been avoided if someone had reminded me to put the wheels down.'