GRAMPAW PETTIBONE

Loop the Loop

A CH-46D *Sea Knight* left the Marine Corps air station one morning at 0810 and proceeded to an outlying field for landing practice on a local VFR NATOPS evaluation flight. The pilot made the first approach followed by the copilot who took over and made the next four landings. The pilot then assumed control, on the runway, and made a normal takeoff. At 300 feet he transitioned to level flight at 80 knots and checked to locate another CH-46 which was also in the pattern. While still over the runway, both pilots felt a bump as if they had encountered some turbulence. All instruments were checked normal; then there was another slight bump, and the nose of the aircraft pitched rapidly upward. The pilot immediately applied full forward cyclic with no apparent effect or response. The nose continued to rise and the copilot came on the controls with still no effect. The helo continued over to the inverted position in an almost perfect loop.

As the *Sea Knight* came on around, slightly left wing low, it headed for the ground, extremely nose low. Approximately 15 to 20 feet off the ground, the nose again came up, and the aft pylon area hit the ground. The *Sea Knight* continued in a left skid, rolling onto its left side, and came to rest 66 feet further on.

Both pilots exited up and out the right side through the pilot's escape hatch. The crew chief climbed out through the aft area. Although no switches were secured, and both fuel cells were torn from the aircraft, there was no fire. No one was injured. However, the aircraft was damaged beyond repair.

A material failure in the aft rotor system had caused it to go to flat pitch resulting in the unprogrammed acrobatics.

Grampaw Pettibone says:

Thunderation! The *Sea Knight* waren't built to do loop de loops. Pure thoughts and all that. How can these helo drivers face the daily risk of crash and fire without being adequately protected from burns? Fire is the single biggest hazard in helicopter mishaps. The pilot of this twirly wasn't wearing gloves, the crew chief wasn't strapped in, and the copilot didn't have his helmet fastened, so it came off on impact. Does that add up? Not in my book!

Better fire suppression capabilities in helicopters are under development as well as an airborne escape system, but they're still a long way down the pike. Meanwhile, the only chance crewmen have is to be properly strapped in and to wear complete and adequate flight clothing. Reminds me of an epitaph I once read. "Here lie the bones of Ensign Wright. He forgot to pull his shoulder straps tight." Or the one, "He now wears a MK 8 gunsight where he used to wear a face." These guys have probably learned a lesson, but what about the rest of you aviators?

Comedy of Errors

Carrier qualifications are always a trying time for pilots, and this was no exception. A group of replacement pilots had spent several days aboard the carrier, cocked and ready in their F-8 *Crusaders,* but it was not to be their time. The last night aboard was spent standing by in the ready room until 0500 when qual ops were finally cancelled, and the lieutenant and his flight leader, a lieutenant commander, were scheduled for launch to the beach.

The flight to the coastal air station was not uneventful. Weather was mostly instruments, and the lieutenant experienced broken UHF reception. His IFF didn't work, and the Tacan distance measuring equipment (DME) wouldn't lock on while tracking outbound. The addition of a little vertigo didn't help matters any, but the flight was successfully terminated and the aircraft refueled while the lieutenant discussed his problems with the flight leader.

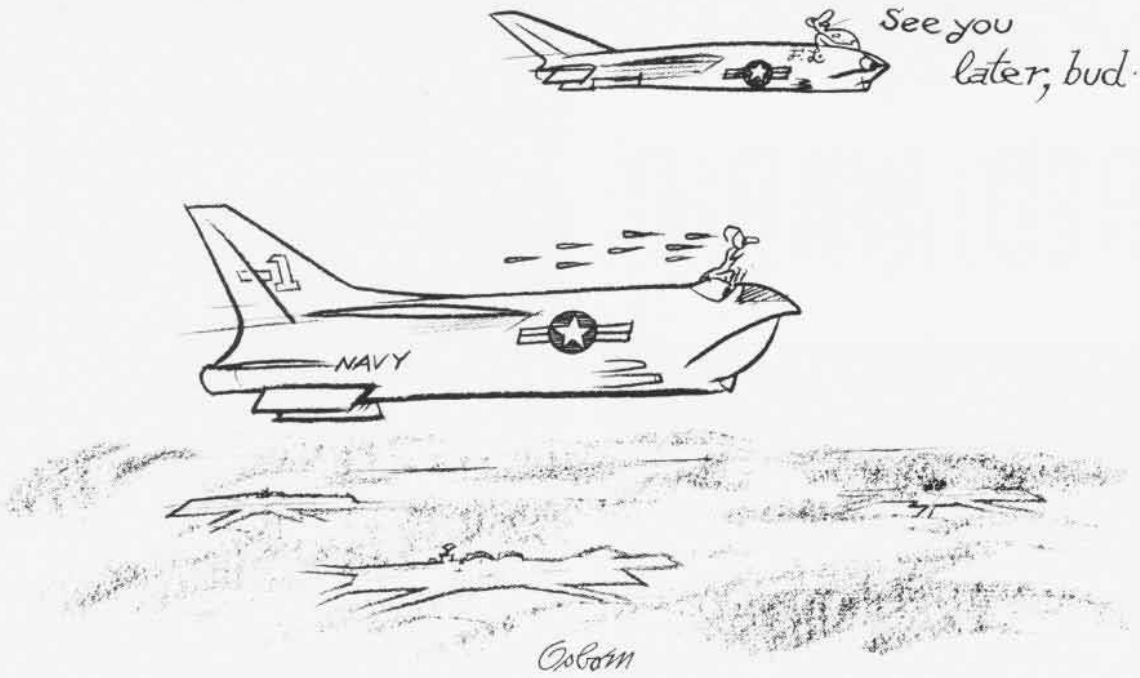
Home field was still 3,000 miles away and the day was young, so they decided to press on in spite of possible fatigue and the problems with the wingman's aircraft. Weather at the mid-continent fuel stop was reasonably good with headwinds forecast to 100 knots en route. The lieutenant commander planned the hop using a 70-knot headwind component and made a conservative estimate that they would have 800 lbs. of fuel aboard upon arrival. He briefed the lieutenant for a droops-up climb to altitude to save fuel. They were airborne by 0912.

They made a running rendezvous and, upon reaching altitude, the lieutenant experienced the same problems with the DME and UHF receiver as on the previous flight.

At their first major checkpoint, the flight leader's fuel was 200 lbs. above flight plan; the lieutenant's was 200-300 lbs. below. After two more hours of flight, the wingman was 400 lbs. below plan.

The leader calculated that fuel on deck would be 400 lbs. for the wingman, so he decided they would con-

Illustrated by Gibbon



tinue on to their destination rather than divert to a closer field.

Seventy miles out, an en route descent was requested and received, and the lieutenant immediately started to fall behind. When approach control gave him a vector away from a direct path to the field, the flight leader accepted the course and requested a separate approach and minimum fuel handling for his wingman. Shortly thereafter, he cancelled his IFR flight plan and landed at the NAS, shutting down with 1,000 lbs. of fuel remaining.

The lieutenant, by this time very concerned about his rapidly diminishing fuel supply, continued a 220-knot maximum-range descent toward destination, leveling off at 1,000 feet,about 25 miles out.

As he reached a fuel state of about 350 lbs., he finally realized that he could not make the NAS. He anxiously reported to approach control, "I'm down to almost nothing and I'm gliding in." The controller declared an emergency for him and advised that there was a civilian airport at his 11 o'clock position, eight miles ahead.

Although one of the runways was 5,400 feet long, the frantic pilot selected the closest one which was only 3,800 feet.

Visual contact with the hangars was made at three miles on a close base leg to the short runway. His final approach was very fast with the boundary layer control turned off.

The aircraft landed 2,400 feet down the runway, porpoised once and touched down again, 621 feet from the end. As the *Crusader* went off the end, it still had sufficient speed to become airborne at the top of a 20-foot slope and touched down again, finally, in a meadow. It then continued through two drainage ditches, across a blacktop road, under a power line and came to rest, sans landing gear, in a grove of small cedar trees, 1,300 feet beyond the end of the runway.

The lieutenant activated the emergency canopy release, left the cockpit with minor bruises and was rescued by helicopter some 12 minutes later. The flight had been airborne for two hours and 51 minutes. Only 120 lbs. of fuel were drained from the main fuel cell by the accident board.

Grampaw Pettibone says:

This RP only made nine major fopaws which might have prevented the accident:

1. He didn't get any sleep the night and day before, so should never have made the flight.

2. The discrepancies on his aircraft should've been grounding ones, especially in IFR weather.

3. He forgot to put the leading edge droops out upon reaching cruise altitude, thus increasing fuel flow by 300 pounds per hour.

4. He didn't use the proper maximum range descent speed for the F-8, reducing his glide distance.

5. After leveling off at low altitude, he didn't accelerate to proper cruise speed, thus further increasing his fuel flow.

6. He never did declare an emergency in order to obtain maximum assistance from FAA as soon as possible.

7. He elected to land downwind,

8. on the short runway, and

9. with the BLC off.

In addition, the flight leader, who alone must bear the primary responsibility for this fiasco:

1. took the lieutenant on the flight without adequate rest,

2. planned the flight poorly, using incorrect winds,

3. didn't allow adequate fuel reserve at destination,

4. didn't check for droop position when his wingman's fuel consumption was discovered to be too high,

5. bypassed a suitable alternate airfield after there was some question of their safe arrival at destination, and

6. abandoned his wingman to his own devices when he was in an emergency condition and needed every bit of help he could get.

I wonder what ever happened to that old "mother hen" instinct of a good flight leader for his wingman, or is it now "every man for himself?"