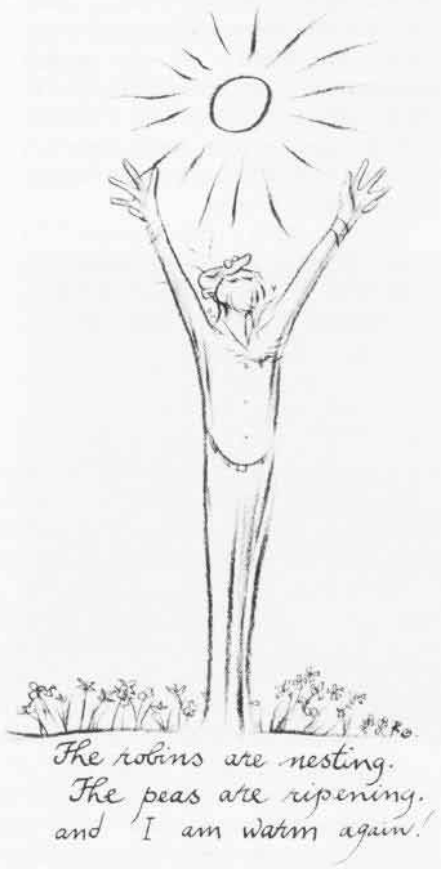
Grampaw Pettibone

Tailored Trouble

A senior aviator assigned to a highly demanding staff position was undergoing AV-8A *Harrier* training in a syllabus tailored to fit his experience level of 5,000 flight hours in tactical jet aircraft. The normal syllabus consisted of 14 dual sorties in the TAV-8A and seven in the single seat AV-8A. The abbreviated syllabus contained only four dual TAV-8A sorties and eight AV-8A sorties, and did not include helicopter familiarization training.

The pilot completed four dual TAV-8A sorties and four AV-8A sorties. Completing four conventional takeoffs and landings on his fifth AV-8A flight, the instructor pilot stationed on the runway directed the pilot to proceed to the hover pad for the briefed vertical takeoffs and landings, and continuous acceleration transition maneuvers. The maneuver called for a vertical takeoff headed into the wind, and then a turn and an acceleration in the desired direction of departure. The planned turn would be approximately 180 degrees. The pilot called for takeoff prior to reaching the pad and attempted to conduct the engine check with the nozzles at 10 degrees instead of zero degrees. The instructor called for a nozzles check and the pilot complied immediately.

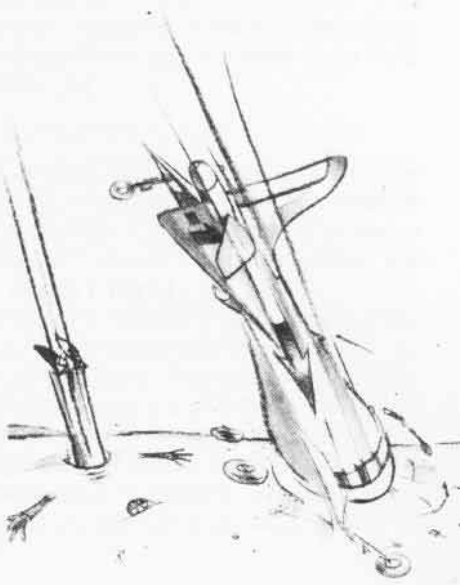
The *Harrier* performed the briefed vertical takeoff into the wind, heading opposite to the direction of the intended acceleration. At approximately 30 feet AGL, the *Harrier* started the briefed right turn to head downwind. Instead of a normal turn, the pilot performed a turn to the right at three to four times the maximum rate of turn allowed by Natops. The *Harrier* rapidly completed a 360-degree turn and continued to turn right and climb while simultaneously picking up a rapid drift in the direction of takeoff. The turn rate slowed as the second 360-degree turn started and the drift rate continued to increase. After another 180 degrees of turn, the *Harrier's* yaw movement hesitated slightly and the aircraft appeared to stabilize at 200 feet AGL with the wings level, while flying backwards at approximately 40 knots. The rearward speed was well in excess of the Natops maximum. The *Harrier's* nose pitched up 20 degrees, stopped, and then abruptly pitched to 60 degrees nose up. At this point, the instructor called for the pilot to eject. The nose-high *Harrier* then rolled right to an inverted position and the nose fell to 45 degrees below the horizon. As the hapless *Harrier* fell inverted, the pilot initiated ejection with the lower handle and was ejected through the canopy into the ground from an altitude of 100 feet AGL. The aircraft impacted the ground inverted at 70 degrees nose down and 12 feet from the fatally injured pilot.



Grampaw Pettibone says,

Great balls of fire – what a needless waste!

This senior aviator was highly experienced in jet tactical aircraft but had no previous experience in the vertical takeoff regime. His modified syllabus did not include the normal helicopter familiarization training. He also had not received basic AV-8A systems operations, flight physiology, AV-8A ejection seat, or VSTOL aerodynamics lectures. Nor had he completed the required open or closed book Natops exams. He had received informal briefings by instructor pilots prior to his flight in the aircraft.



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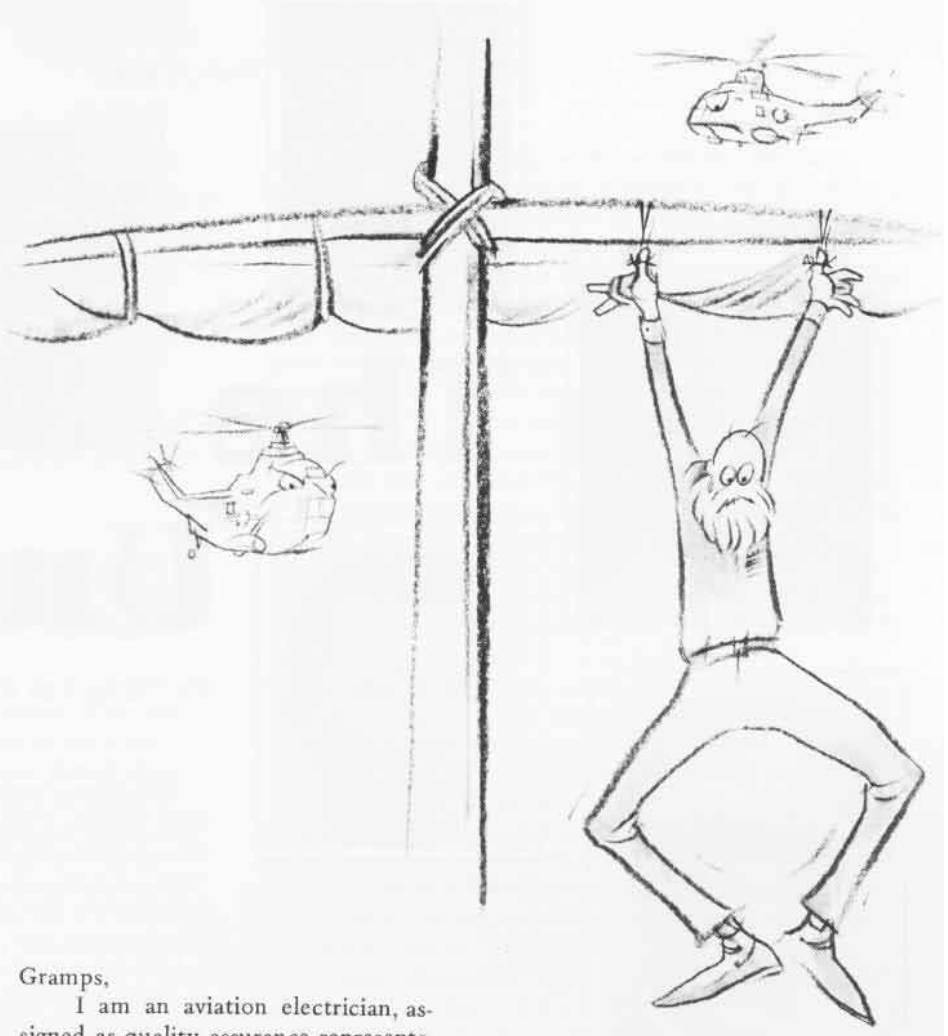

He should have had more respect for the interface – called training – between man and machine in today's aircraft. It's all too obvious that this aviator used his senior position, past experience and aggressive personality to bulldoze his way into a program for which he was ill prepared. He tailored himself right into the ground. I won't ask where the supervision was that could have prevented this. There doesn't appear to have been any.

From the mailbag:

Gramps received the following notes from the mailbag and wanted to share them with you folks. The two letters below are in response to an obviously wrong impression reflected in the November 1981 Gramps article on "The Uncollected Collective."

Dear Gramps,

Someone has certainly given you some bum dope. There is no mechanical connection between the barometric altitude (BarAlt) controller and the flight controls in the H-3. There is, however, a mechanical connection between the flight controls and the collective stick sensor and clutch assembly, located in the "broom closet" under the auxiliary servo. When the sensor assembly is removed, the link connecting it to the flight controls must also be removed or left dangling. The responsibility for removing the link is anybody's guess but, in my opinion, the person who removed the sensor assembly and left the link dangling should be the one dangling, preferably from the yard arm by his thumbs.

James Moore, ATC, USN(Ret.),
plus 21 H-3 years with
Sikorsky Aircraft
PMRF Barking Sands
Kekaha, HI 96752

Gramps,

I am an aviation electrician, assigned as quality assurance representative in Helicopter Anti-Submarine Squadron One. This correspondence is in reference to *Naval Aviation News'* November 1981 issue, Grampaw Pettibone article "The Uncollected Collective." The facts in this article are incorrect. It states that upon removal of the barometric altitude (BarAlt) controller the loose collective arm was not tagged nor mentioned in maintenance control. There was good cause for this as the aluminum feedback arm has nothing to do with, and is in no way connected or related to, the BarAlt controller. The BarAlt controller is located on the A/C deck under the pilot's right-hand console and has no mechanical connection to any flight control. The aluminum feedback control arm mentioned is connected to the collective stick sensor located at the bottom of the auxiliary servo package and is connected to collective flight controls. How the mechanical arm got disconnected should be the question here. The statement that you don't need a BarAlt controller to have an up aircraft is TRUE if you cap off the static line and it's other than IFR or night flight.

Very respectfully,
AE1 Michael R. Viladesau
HS-1 Quality Assurance
NAS Jacksonville, FL

Gramps stands corrected on the technicality of the physical connection (or lack of connection, in this case) between the BarAlt and the aluminum feedback arm.

The main point of the article was not so much what is connected but, more importantly, the impact of what was left unconnected and why. The plane captain was able to detect something amiss and, try as he did, he was unable to impress anyone in a position of responsibility to take the action necessary to prevent the near-mishap that resulted.

Both of you gentlemen are correct in your comments and your points are sincerely appreciated. Thanks, Gramps.