

## Hypoxia Hazard

A pair of F-14 *Tomcats* launched on an overland cross-country. They were cleared to flight level 370. As the formation climbed and leveled off, the radar intercept officer (RIO) in the lead aircraft was "70-percent sure [the mishap crew's oxygen] masks were off." He also later stated that he had flown with the pilot of number two before and they never took off their masks until completing a positive cabin pressurization check on climb-out. For this reason, he wasn't concerned that there might be a potential problem, even though the pilot and RIO in the number two aircraft had their masks off.

Number two began dropping back to number one's five-o'clock position without calling the leader. This made it difficult for the leader to keep his wingman in sight. A little later, number two pulled up 200 feet abeam lead on lead's port side.

The leader then saw that the pilot and RIO in number two had removed their helmets in addition to their oxygen masks and were wearing their garrison caps.

"That's real funny," the lead pilot said sarcastically to his RIO. When lead saw number two's crew salute in unison, he signaled them to come up on base frequency. Number two then crossed under lead and stabilized at his four o'clock position, 200 feet away and 50 feet above lead's altitude. Number two subsequently slid aft toward the five-thirty position about a half mile distant.

The fliers in *Tomcat* number one believed that those in number two were removing their garrison covers and putting helmets and masks back on. However, they tried numerous times, without success, to communicate over the radio with number two. The sun angle impeded visual contact with the wingman as well.

The lead crew did not suspect hypoxia immediately because their own *Tomcat's* cabin altitude was 14,000 feet. They were more concerned that number two was making unnecessary throttle movements and using up too much fuel.

Eventually, number one tried moderate turns hoping to catch sight



of number two and even porpoised the nose, signaling the wingman to join up – all to no avail.

A civilian aircraft reported seeing an explosion in a desert-like area to ground controllers. Unaware of this, the lead crew assumed number two had diverted to an air force base because of radio failure or some other problem. On intercom, the lead crew discussed the possibility of hypoxia affecting number two's pilot and RIO.

There followed numerous transmissions between number one and ground facilities during which it was reasoned that number two had crashed. Number one landed at an air force base and gave an account to base flight safety personnel.

Number two *Tomcat* had, indeed, struck the earth. Both crew members were killed instantly. Investigators found all four oxygen mask bayonet fittings and helmet bayonet receivers at the site. None of the bayonet fittings

were attached to the receivers, indicating the pilot and RIO were not wearing oxygen masks on impact.



**Grampaw Pettibone says:**

**Gol dang it!**

The book (OPNAVINST 3710) says: "Oxygen shall be used by all occupants from takeoff to landing in tactical jet and tactical jet training aircraft." That means wear those masks!

Turns out there are aviators who flaunt this rule – and get away with it. The masks become uncomfortable, so they say. Could be. But a little discomfort sure as shootin' beats what happened to these two highly regarded fliers.

It was also said that some training command instructors removed their masks while students had to keep theirs on; that in fleet readiness squadrons, fliers don't keep 'em on from launch to recovery all the time.

Such tales rattle these old bones!

For one thing, lack of oxygen at 35,000 feet gives a flier 30 to 60



Osborn

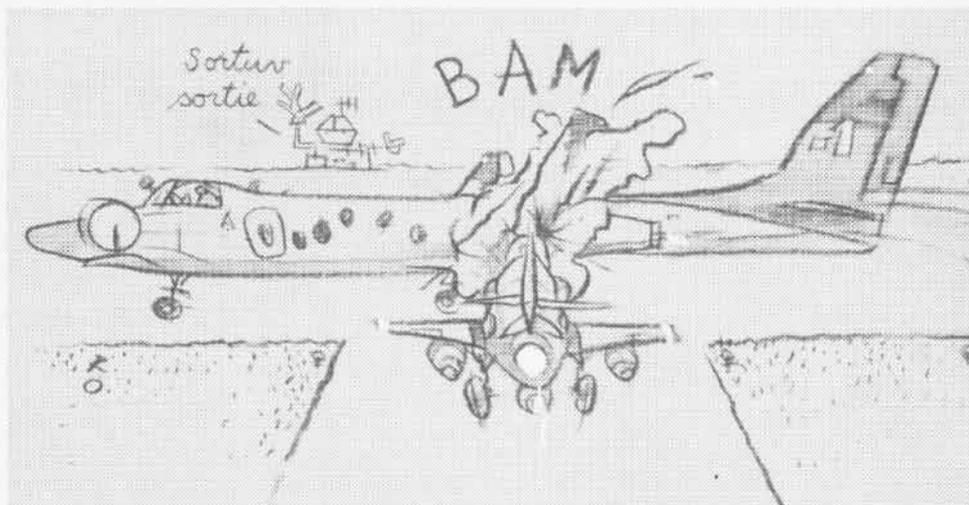
seconds of "useful consciousness." Plus, lead shoulda gotten worried sooner, 'specially when the men in Tomcat number two removed helmets, put on fore and aft caps, and saluted! "Euphoria" is the fancy word for such behavior and hypoxia can breed euphoria.

The Tomcat coulda had a pressurization leak or somethin' like it. Won't ever know for sure. But the signs were there.

Still, lead motored on and when he did tell ground controllers he'd lost contact with his wingman, it was 45 minutes after the fact and 30 minutes after two had crashed!

Also, crew number two was due for aviation physiology training and hadn't had same since the training command, about four years before. C.O.'s, please take note of that.

It's too late for these two fellows. Until we come up with a better system, keep those oxygen masks on from launch to recovery!



### Be Careful or Collide

A Navy-contracted, civilian T-47 Cessna *Citation II* landed on the right-hand, parallel runway (west right) at about the same time a TA-4 *Skyhawk* touched down on "west left." It was night and both aircraft were rolling out normally when the tower controller issued instructions.

The T-47 slowed to make a left turn from west right in order to cross west left and proceed to the parking area. In addition to the *Citation's* pilot, there was a student Naval Flight Officer (NFO) in the right seat, the mission commander (instructor) in the jump seat, and another student NFO in the back.

During the *Citation's* landing rollout, tower directed exit of the runway to the left, when able, and to hold short of west left. The *Citation* pilot acknowledged receipt of hold-short instructions. Additional traffic, a T-38 *Talon* on two-mile final for west right, became a "separation" factor following the T-47. The tower directed the *Citation* to expedite exiting the runway, if able. Although acknowledged, that transmission may have been misunderstood as authorization to cross west left. A difference of opinion existed as to exact location of the T-47 on the airport at the time of transmission.

The *Citation* executed a left turn but the *Skyhawk* was still on its rollout. Both aircraft were traveling at approximately 15 knots. They collided on

west left at roughly 90-degree angles to each other. There were no injuries in either plane. The *Skyhawk* sustained less damage than the *Citation*, which incurred major damage to its wing and fuselage.



Grampaw Pettibone says:

Look before you leap!

In Ole Gramps' day, we didn't have parallel runways. A cleared path in a pasture could do in a pinch. Later on, we got paved strips. That was high tech for us. Yet, we still bumped into each other now and then when we didn't pay full attention. Which is what happened here.

Apparently, the pilot of the *Citation* got distracted by a landing T-38 when he was "clearing" the port side before turning and was unaware of the coming *Skyhawk*. The student NFO in the right seat had cleared the right area but couldn't see to the left. The pilot himself had the best view of the left area and believed it was O.K. to proceed. The mission commander in the jump seat didn't have a window or a good view.

For the pilot, it was like bein' on the highway with a car comin' up on the left in a "blind" area. All of a sudden, it's there!

Until we develop eyes in the back and on the sides of our heads, check, double-check, and check again whenever there's even a trace of doubt.