Single-Engine Snafu

by Lt. Pete Staufenberger

We were on the proverbial routine training mission in the Arabian Gulf a little more than four months into cruise. We had launched off the ship for a double-cycle, airborne-intercept-control hop and a night trap for one of our nugget pilots. Set up on station at 21,000 feet, 80 miles southwest of the boat, we noticed a flicker in the starboard fire-warning light. (It is amazing how bright that light is at night.) I told the mission commander, who was in the tube, about the light, told him I was going to declare an emergency, and we started a turn back to the boat. The air control officer and radar officer relinquished control and told their assets about our

situation. I called Strike to declare the emergency and requested an emergency pull forward.

I told the nugget to start a descent, engage the AFCS, and unstrap for the seat swap. As we swapped seats, the fire-warning light flickered, then came on steady. I would've executed the standard procedures immediately after getting the fire light the first time, but two things concerned me. First, there was no way we could maintain altitude single-engine at 21,000 feet. Second, I'd never attempted a single-engine seat swap before and was concerned about controllability. As soon as we were both strapped in, we executed the engine-fire-in-flight procedures IAW NATOPS.

We leveled off at 8,000 feet, dumped gas down to 7,000 pounds to lighten our gross weight, and continued inbound to the ship. We started the post-shutdown procedures and decided to put the air conditioning into override until we dirtied up on final (it was the Gulf, after all). We then noticed something strange: The circuit breaker for the right-engine fire extinguisher was popped. Not knowing if the bottle had been expended, we reset the breaker and pushed the button. The breaker popped again. No one in that aircraft had a warm, fuzzy feeling that the bottle had been expended. But the fire-warning light remained out. The ship vectored us for the approach, and I intercepted the final bearing at 21 miles and 6,000 feet. We were asked to dirty up at 10 miles for spacing. (A recovery was in progress.) Single-engine controllability is not a problem, but I was beginning to think we might not have enough power for a waveoff. It required 1,040 degrees TIT on the port engine to fly on speed at 1,200 feet. The gear would have to come up immediately if we were waved off. As it turned out, we were locked up at 5 miles, flew a solid needles approach (somewhere in the middle, paddles told me I was "a little overpowered," which was exactly where I wanted to be), and caught the 3-wire for the OK.

After we returned to the ready room, we debriefed the flight. The front-to-back crew coordination was excellent. After notifying the CICO of the initial fire light, the controllers quickly turned over assets, switched frequencies for me until UHF-1 was available (it was being used for anti-jam intercept control), and backed us up by breaking out the pocket checklist. The coordination in the cockpit was just as solid. After a quick seat swap, my nugget copilot performed flawlessly. His use of the checklists was impeccable, and his timely suggestions about dumping fuel and securing the air conditioning on final in order to have more horsepower available were right on. The entire event could not have gone more smoothly.

In retrospect, the only thing I would have done differently would have been to secure the engine immediately. The technicians found a faulty fire-warning element (a nagging problem in the E-2 community); I suspected this problem when the light flickered, but you can't count on that. The fire bottle had worked. I was told afterward by our omniscient maintenance master chief that the circuit breakers sometimes pop because the CADs short themselves out after the button is pushed *[A hazrep was submitted about this problem on Aug 3, 1999.—Ed.]*. Having never heard this in more than four years and 1,400 hours flying the Hummer, I realized that there really is no way of knowing if the bottle has discharged. If there had been an actual fire and the bottle hadn't worked, the extra time we took to secure the engine could have been the difference between bringing the plane back in one piece for the OK and giving it back to the taxpayers.

It is amazing how bright that light is at night.

Lt. Staufenberger flies with VAW-124