Last Ditch Maneuvers

An intercept between an A-7E *Corsair* acting as the adversary and an F-14 *Tomcat* resulted in a close pass with both aircraft having a "tally-ho." At one point, the F-14 pilot leveled his wings and pulled his aircraft smartly to a 30-degree, nose-up position, to force the A-7E into a vertical overshoot. It experienced moderate buffet as the airspeed dropped rapidly to below 200 knots. The aircraft departed from controlled flight and snap-rolled to the right with the nose falling through to an extremely nose-low position. The pilot neutralized the controls, added slight right rudder and was able to effect an upright recovery. The RIO thought the maneuver was a planned sliced turn since the pilot did not lose sight of the bogey and had said nothing about losing control of the aircraft.

On the next intercept, the F-14 pilot sighted the A-7 bogey at 11 o'clock high and commenced a starboard nose-high turn. After 45 degrees of nose-high turn, the F-14 again snap-rolled to the right, with some right yaw, and pitched almost straight nose-down.

The F-14 pilot realized he had again lost control of his aircraft. Informing the RIO of his actions, he neutralized the controls. The RIO advised that the port spoilers were partially extended. As the nose of the aircraft came back to the horizon, the pilot realized that the aircraft was not recovering and began to apply forward stick. The aircraft continued to yaw and roll right while the nose dropped below the horizon again. The pilot now applied full forward stick, neutral lateral and left rudder. The angle of attack indicator was pegged at 30 units and the ball was full left. The aircraft pitched up and stabilized with the nose on the horizon.

The A-7 pilot transmitted that the F-14 was in a flat spin. With the rotation, the RIO was experiencing moderate eyeballs-out Gs. The pilot was pressed against the glare shield, could no longer see and was losing consciousness. The RIO pushed himself back into his seat and executed command ejection at 9,000 feet. The pilot was totally out of the safe ejection position.

The A-7 adversary pilot saw two good chutes and broadcast a mayday to the ship with bearing and distance. An S-3 vectoring to the crash heard the F-14 pilot transmit, "Two good chutes" on his PRC-90 as he descended in his chute. The two crewmen landed near each other, released their KOCH fittings, entered their rafts, pulled their seat pans into the rafts and *deactivated* their homing beacons.

The A-7 pilot, anchored overhead at 500 feet, detected errors in bearing and range vectors passed to the rescue helo, and directed the S-3 crew, now at the scene, to detach, visually pick up and escort the rescue helo to the scene.

By this time the F-14 pilot had paddled his raft alongside the RIO's. The S-3 pilot, inbound with the rescue helo, transmitted a request for a smoke flare. The RIO copied the request on his PRC-90 and lit the day end of a flare. A chunk of the burning material broke off and fell into the lap of the pilot in the adjacent raft. As the rescue helo approached, the pilot informed the RIO that his feet were injured during ejection. Both crewmen egressed their rafts which the RIO deflated with his survival knife.

The helo made one pass over the survivors and then returned, deployed a swimmer into the water and set up a

10-foot hover. The swimmer approached the RIO first because his parachute was still below his raft and possibly still connected. The RIO verified that he was clear of the chute and directed that the pilot be rescued first. The RIO and swimmer were then hoisted aboard with 38 minutes having elapsed between ejection and rescue.

Grampaw Pettibone says:

"Great balls of fire! A departure from controlled flight can ruin your whole day, particularly when it results in a spin and a ride in a rubber raft with lap full of flaming embers. While

the exact cause of this mishap is undetermined, several lessons were learned which are worth sharing, hindsight being what it is.

1. The breakdown in crew coordination following the first loss of control was a problem. The RIO didn't recognize the departure and therefore failed to discuss the maneuver or point out the rapidly decaying airspeed.

2. Delay and improper flight controls input increased the severity of the departure and enhanced the probability of the flat spin. The F-14 NATOPS manual states the most important action of a departure recovery in reducing the angle of attack.

3. The helo pilot could have arrived five minutes earlier had the crew left their homing beacons on. Even though the A-7 was overhead, leaving the beacon on until the actual rescue vehicle arrives is worth considering.

4. Egressing and deflating one's raft before the swimmer arrives is worthy of discussion. Occasionally, the helo is not able to hoist either one or both survivors aboard, and often the water is cold.

On a closing note, Old Gramps has frequently heard a departure from controlled flight referred to as a last ditch maneuver. As pointed out here, this too often means that it was the last maneuver before you ditched.

Snake Charmer

An F-4 pilot was on a refueling stop one leg away from home base. Frustrated when the *Phantom* wouldn't accept external electrical power for starting, he decided to try a nonstandard procedure, principally used for testing the ram air turbine (RAT) in order to get going. In the procedure, high-pressure air is directed at the RAT which spins into operation, providing power. He deployed the RAT and, standing on the wing, held the nozzle of the hose from the Wells Air Starting Unit. The pilot intended to guide high-pressure air from the hose across the blades of the RAT. The RAT would spin and thus produce electrical power for lighting off his fighter.

Fast-moving air charged through the hose to the nozzle. Unfortunately, back pressure on the hose caused it to flail and whip about wildly, in effect tossing the flyer to the concrete below. The medical folks needed approximately 100 stitches to close up a three-inch gash in the *Phantom* flyer's left forearm.

Grampaw Pettibone says:

Slithering serpents! An old wingman told me about a wrestling match he saw one murky night in a forbidden hideaway in Casablanca, or maybe it was Istanbul. A berobed and turban-topped fellow got himself wrapped up with an 18-foot python. The match was a draw. It was all an act, of course. The python and the man were really buddies.

This aviator surely didn't have a buddy in that air pressure hose. It's a snake that won't dance with anybody.

There is a procedure for testing the RAT, but with the nozzle attached to the aircraft using an appropriate device. And this procedure is not designed to provide electrical power for ground starts.

What prickles my hide is the fact that trained technicians were available to repair the bird. The pilot-in-a-hurry convinced his RIO and visiting aircraft line personnel that he could fix the machine on his own. Adding salt to the wounds was the discovery that this was not an isolated case, that it has happened before in other units, but without injury.

Leave repair actions to trained technicians. Mixin' it up with high-pressure snakes can leave cracks in the cranium, not only slits in the skin.