



GRAMPAW PETTIBONE

Slats Splats Skyhawk

Two A-4M *Skyhawk* pilots briefed at 0555 for a scheduled defensive air combat maneuvering training flight. The flight leader briefed all the planned maneuvers in detail. The wingman then briefed out-of-control flight and spin recovery procedures. Both pilots were well qualified for the mission; the wingman had flown four air combat maneuver (ACM) sorties in the past 30 days and the flight leader was a designated air combat tactics instructor.

While signing for the aircraft, the wingman noted that his aircraft had two "sticking slats" discrepancies on the last three flights and informed the flight leader. The flight leader was already aware of the gripes because he had written the latter one. A careful preflight of the aircraft was conducted and no discrepancies were noted.

After a short flight to the operating area, gunsight checks were performed. The wingman then moved in to the trail position behind the flight leader to conduct gunsight tracking. During the tracking exercise, the wingman experienced an asymmetrical slat extension which caused his aircraft to roll left. He did not inform the flight leader of the problem.

When the external tank fuel had been exhausted, the wingman executed several pre-briefed maneuvers for airspeed and lateral separation, raking guns defense, and a rolling scissors.

The wingman then requested a second rolling scissors maneuver, which the flight leader initiated, attacking from the right perch position. The wingman turned right into the attacking flight leader to force an overshoot. As he executed a hard turn, the right wing slat extended. The pilot countered the slat extension with



aileron, rudder and reduced back stick. The right turn continued with a series of uncontrolled wing rocks. The wingman noted that he now had insufficient turn rate to force the flight leader to overshoot, terminated the maneuver and informed the flight leader of his problem.

The flight then set up for a third rolling scissors maneuver with the flight leader again attacking from a right perch position. As the wingman turned into the attacking leader and applied moderate G loads, the *Skyhawk* executed a rapid 360-degree roll to the left. The maneuver was immediately terminated and the flight climbed to altitude for another maneuver. During the climb at approximately 250 knots, the wingman noticed that his right slat was extended again, which he popped back in by

rapid forward stick movement.

The flight set up for a fourth rolling scissors, with the leader now attacking from a left perch position. The wingman, at 250 knots and 17,000 feet, turned hard left into the attacking leader and forced an overshoot. He reversed his turn quickly to the right and pulled hard back stick. The *Skyhawk* immediately performed a 360-degree roll to the left so rapidly that the pilot was unable to apply counter controls. After a momentary hesitation, the aircraft commenced another rapid, uncommanded 360-degree left roll with a nose-low attitude. The pilot neutralized the controls and observed the angle of attack (AOA) indicator needle bouncing between zero and 10 units. From 5,000 feet above, the flight leader observed the rolling *Skyhawk* and told the wingman to check his altitude and neutralize the controls. The wingman replied that the controls were neutralized.

Descending rapidly, the *Skyhawk* continued a series of violent positive and negative G maneuvers which forced the pilot against the canopy. After two complete rolls the *Skyhawk* slowed momentarily, with negative Gs reduced, and again rolled twice. The pilot then observed the AOA indicator pegged at zero and the turn needle indicating a right turn. He then applied inverted spin recovery control inputs but was unable to apply full rudder because he was physically pressed against the canopy.

Passing 11,000 feet, he heard the flight leader tell him, "Get out! Get out!" Unable to reach the upper ejection handle because of his position, he grasped and pulled the lower handle. Descending under a good chute, the pilot watched his ill-fated *Skyhawk* fall in a slow inverted right



Why don't
they get the
word?!

spin, impacting the ground in a 60-degree nose-down attitude.

During the ejection, the pilot lost his helmet and mask and sustained a cut on the side of his head from the chute risers. He deployed his seat pan and attempted to steer his chute to a farmer's field, but landed short in a cluster of 30-foot coniferous trees. His descent stopped two feet above the ground with him dangling in the straps, entangled in the tree branches. Local civilians assisted the pilot with first aid for his head wound, and walked him to a road area to await a rescue helo.



Grampaw Pettibone says:

Rats . . . rats . . . double rats to slats that cause splats!

The problem of asymmetrical slat extension in the A-4 has been well documented for close to 25 years. NATOPS procedures to counter a slat-induced departure from normal flight required aileron and rudder to be applied into the extended slat to control the roll moment. Rapid forward stick input to reduce aircraft G loading will normally reseal a slat that is aerodynamically locked up. Neutralizing the controls will not necessarily effect a recovery, if the slat remains out.

The application of anti-spin control response to slat extension departure from controlled flight, misinterpreted as a spin, results in pro-spin inputs. The effect will be a genuine spin.

This ill-fated *Skyhawk's* "squawk" should have been heard loud and clear by both its pilot and the flight leader, whose role resembled more that of an airborne spectator than a flight leader or qualified air combat tactics instructor. To press on with the execution of air combat maneuvering under these conditions was just plain dumb!

This incident left old Gramps like this young lad — hanging — except a lot higher than just two feet above ground!