



GRAMPAW PETTIBONE

Test Flight Terror

As a result of recent maintenance on its engine fuel control unit, an A-7E was scheduled for a post-maintenance functional check flight. The pilot, a one-cruise-veteran lieutenant junior grade, reviewed the aircraft data and launched on what was to be his fourth functional check flight since designation as a "test" pilot. The hop proceeded normally through the 30,000-foot engine performance sequence. A climb to 40,000 feet was then completed, followed by level-off and acceleration to .8 Mach.

As the pilot began to reduce throttle the engine experienced hard compressor stalls. Turbine outlet temperature (TOT) began to rise sharply from 535 degrees. As the temperature approached 600 degrees, the pilot secured the engine and eased the nose over to maintain 300 knots airspeed and 15 percent turbine rpm. Descending through 25,000 feet, passing over Cecil Field, he attempted his first engine relight. (Natops procedures call for successful TF-41 relights to be performed at altitudes below 25,000 feet to avoid hot starts or no relight.)

Passing 24,000, the engine relight attempt (in the manual fuel mode) resulted in a hung (malfunctioning) start with rapidly rising TOT. The engine was again secured. Thirty seconds later a second relight attempt was made passing through 19,000 feet altitude. Again, there was another hung start at 33-35 percent rpm, and rising TOT. The engine was secured and descent continued on a southerly heading now three miles south of Cecil Field. A third and unsuccessful attempt was made passing through 14,000 feet. This time there was no engine response whatever.

At this point, the pilot established



the aircraft on a heading toward an unpopulated area in the event the situation didn't improve. He made another thorough check of the cockpit gadgetry and ensured that manual fuel was selected. Forty-five seconds later the fourth relight was attempted with the aircraft passing through 7,000 feet.

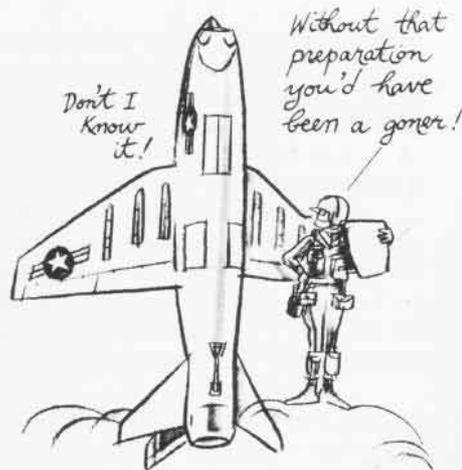
Much to the young flyer's delight this attempt resulted in a successful light off with normal temperatures and good rpm. The throttle was gently advanced to idle, and then to normal rated power to arrest the loss of altitude as the aircraft was now passing through 4,000 feet. After a couple of deep pulls on the old oxygen, a sigh of relief, and a wipe of the brow, the pilot turned back toward Cecil Field and made a precautionary approach to an arrested landing.



Grampaw Pettibone says:

Holy test hop terrors! The veteran TF-41 engine's attempt to sucker in

this newly designated functional check lad through the old "defective mass airflow regulator" trick was foiled at last. But not with a lot of room to spare! Some of Ltjg. Pete Wilson's coolness under pressure and success in this incident can be attributed in part to procedures which took place prior to his designation as a functional check pilot. It is SOP in this squadron to have all functional check candidates formally schooled by the Natops officer and quality assurance representative on all test procedures, as outlined in Section III, Part 6 of the A-7E Natops Manual. The entire flight profile is then flown in the A-7E simulator to ensure that all procedures, warnings and cautions are thoroughly understood. The pilot then performs the functional check mission in a known "all-systems-up-aircraft" to reinforce normal system operations. After designation, he is fed into the program with the lesser complicated maintenance hops before graduating to the more complicated ones. VA-82, NAS Cecil Field, has details on the program which Gramps endorses. I'm certain that Ltjg. Wilson will be happy to share how he turned his Test Flight Terrors into Inflight Relight Delight!



ILLUSTRATED BY Osborne

Launch-Bar Lament

The flight deck was awchirl with the noisy activity of night carquals as the crew of an F-14 *Tomcat* taxied clear of the landing area and continued cautiously up the deck toward the #2 catapult. The pilot and RIO made hurried but careful preparations for launch as the fighter rolled forward into the slot like a disciplined thoroughbred entering the starting gate. Hookup to the cat was accomplished without incident and the final checker signaled for catapult tension. The pilot responded promptly, selecting military power as the catapult shuttle was advanced.

The final checker inspected the aircraft holdback unit and gave the all O.K. signal to the catapult officer with his lighted wands. The cat officer made his initial checks, received the pilot's ready signal (lights on), made his final check of the deck and catapult instruments, then touched his green wand to the deck, signaling launch aircraft.

The catapult was fired and its tremendous force compressed the nose gear of the aircraft as it lunged forward down the track. After about 50 feet, the plane's launch bar popped up out of the shuttle groove. The startled aircrew immediately noticed the deceleration. The RIO asked the pilot, "Can you stop the aircraft? Should we eject?" The pilot replied, "Stand by!" He instinctively selected zone 5 afterburner and applied full back-stick in an attempt to rotate the nose and gain flying speed.

Despite his efforts, the aircraft lumbered off the bow, nose dropping sharply toward the water. Recognizing imminent disaster, as the aircraft approached 30-degrees nose down with only 80 knots of airspeed, the pilot told the RIO to initiate ejection.

The RIO responded immediately and initiated command ejection. The aircraft pancaked off the water, became airborne again and began climbing in maximum afterburner at progressively steeper attitudes to approximately 2,000 feet, directly above the ship. The aircraft then leveled off, rolled inverted and, with



nose falling through, began an accelerated descent directly toward the bow of the ship. It struck the water approximately 300 feet off the bow.

The RIO's ejection, water entry and rescue were uneventful. But the pilot was tumbled into his shroud lines by the ship's wake and became almost totally entangled. Both legs and left arm were wrapped in the lines. He managed to get one side of his LPA-2 life vest inflated before water entry and the other half shortly after.

The pilot was *in extremis!* He was being pulled under by his parachute and on the verge of surrendering to Davey Jones. He was near exhaustion from trying to keep his head above water when a swimmer arrived from the rescue helo. The swimmer, unfortunately, did not have a knife so he returned to the helo and was hoisted back up to obtain one. By this time the pilot had managed to remove his own survival knife and began cutting away at the shroud lines. He freed himself just as the rescue swimmer returned and assisted him into the helo.



Grampaw Pettibone says:

Great sufferin' shroudlines! There's a little sumpin' here for everybody. Not a lot this unfortunate pair could do except tap dance to this launch-bar lament. The PLAT film showed that the final safety

checker did not ensure that the launch bar was properly seated in the shuttle. He looked at the launch bar momentarily at a distance of six feet, under dimly lit conditions. At that, it was only a backward glance as he was moving away from the aircraft. The launch bar was, apparently, resting on the point of the shuttle rather than snug against the shuttle throat.

Gramps finds this to be a pretty casual approach even for old Eagle Eye Fleagle, which this gent was not! It was later determined that the final checker had significantly decreased visual acuity for which he was issued glasses over three years ago (his last physical), but never wore them! Subsequent eye examination showed that, without his glasses, he could not have detected the improper hookup under these same conditions had he looked at it for a long time. The flight deck, day or night, is no place for blindman's bluff, gang! Let's take five and survey the qualifications and physical limitations of *all* the folks we have in responsible positions, flight deck or otherwise.

We're working on better water survival gear to help out in cases such as this, but one thing a guy doesn't need following an 80-knot night cat shot is to be bound in shroud. Fortunately, this young man was in good physical shape or he probably would not have survived. Also, I'm sure this pilot, like Old Gramps, was chagrined with the swimmer who didn't bring a shroud-cutting knife with him. Even so, why didn't the swimmer use the knife located on the pilot's survival vest?

This was a senseless, but not centless, waste of assets and dang near cost some lives. At least the plane didn't hit the ship.