



Deacon... you're really on Fire!

By Maj Roy Qualls, Louisiana Air National Guard

On the first day of pilot training my instructor told me that the handling of every airborne emergency could be boiled down to four basic steps, maintain aircraft control, analyze the situation, take the appropriate action, and land as soon as possible. He was right ...

“**T**oast 8, you are trailing smoke and venting gas.” My flight lead Toast 7 blared into my helmet just seconds after an illumination of my Master Caution light which disturbed the relative peace of an 8-ship of Eagles marshalling east of Student Gap. A scan of my engine instruments revealed zero oil pressure on the #2 engine.

Almost immediately, the Cockpit Voice Warning System alerted me to further problems when a disarmingly uninterested voice declared, “Engine Fire Right, Engine Fire Right.” Simultaneously with the cau-

tion, my jet abruptly pitched hard left. Although quickly corrected with a moderate input of right stick, this flight control anomaly in conjunction with a Fire Warning Light, and an ever-growing number of other caution lights now ensured that the jet had my undivided attention.

Glancing at the fuel gauge, I noted 16,000 pounds of fuel — too heavy for a safe landing, so I began dumping gas and turned towards home.

“Toast 8, you are trailing smoke and venting gas.” I quickly replied, “No, I’m on fire and I’m

dumping gas.” I requested and received the lead on the left, and Toast 7 moved into chase position, as I rolled out, and pointed toward Nellis Air Force Base, 90 miles to the south. The words of my first instructor went through my thoughts again.

Maintain Aircraft Control. This idea repeated itself in the back of my head as I attempted unsuccessfully to trim out the right stick required to keep my jet flying straight and level. When I cautiously removed my hand from the control stick, the plane again began a roll to the left. Forced either to fly with my left knee or keep my right hand

glued to the stick, I began to realize that maintaining aircraft control was going to require more conscious thought than I’d like to expend on such a simple task. Meanwhile, a myriad of other problems were demanding my consideration, so I began to address those concerns while maintaining aircraft heading with my knee.

Analyze the Situation and Take the Appropriate Action. These concepts are sometimes easier said than done when flying with limbs usually reserved for stumbling home from the Officer’s Club. But since I had no other ideas, I initiated that activity. Scanning the cockpit, I discovered that retarding the throttle to idle had extinguished neither the Fire Light nor the fire itself, so I mentally reviewed the next steps of the checklist, “Push, Throttle, Bottle” before pushing the Fire Warning Light, pulling the throttle to OFF, and actuating the fire extinguisher bottle.

By this time Toast 7 had rejoined into a close chase position and reported, “You’ve got a hole the size of a cantaloupe in your right afterburner, and I can see a small fire burning inside.” Looking outside at the mountainous terrain, I fumbled for the checklist, hoping that Step 5 of

the Engine Fire Inflight checklist had miraculously changed since the last time I checked. It had not — Step 5. If fire persists — Eject (Refer to page H-11 for ejection checklist).

Not wanting to refer to page H-11 yet, I elected to continue towards Nellis. The Teletlight Panel was lit like the proverbial Christmas tree, so I began to perform triage on the jet. Slowly I attempted to put the pieces of this puzzle into a coherent whole. I reset the Control Augmentation System (CAS), and switched the right ramp to Emergency. Four caution lights dutifully disappeared from the panel — just twenty more to go. Then things got **REALLY** interesting.

The AMAD Fire Light illuminated, indicating a fire in one of the jet’s two Airframe Mounted Accessory Drives — a fancy term for a device that powers the flight controls. Since one AMAD was already inoperative as a result of shutting down the right engine, I’d have no choice but to refer to page H-11, if the AMAD on fire was the left one. The plane can’t fly without at least one operating AMAD.

Out of the corner of my eye, I saw Toast 7 move further away from my aircraft as I heard this radio call. “Deacon, you are really on fire now.” And I was — fire had engulfed the

aft end of my jet and flames were trailing behind about 20 feet. Having already expended my only fire bottle on the first fire, and having watched too many World War II movies, I began a steep dive in an attempt to blow the fire out.

To my utter amazement, the AMAD Fire Light extinguished, and Toast 7 moved closer advising me that the fire was under control, but was still “cooking in the afterburner section.” (The safety investigation revealed that the fire receded due to running out of oil to burn, and not due to my poor impression of “The Flying Leathernecks.”)

Relieved, I leveled off and once again began dealing with those knotty little details like useless gauges — both my airspeed and my fuel gauge read zero. Evidently, the fire had fried several wire bundles including the ones responsible for those gauges. Due to the malfunction with the fuel gauge, I could no longer dump gas, which was problematic, since I figured that I still had about 13,000 pounds of fuel remaining — at least 5,000 pounds more than I’d like to have upon landing. Having little choice but to drop my external tanks, I pressed the Emergency Jettison button and absolutely

nothing happened. Add the jettison circuits to the list of wires destroyed by the fire.

Once again, those early instructor words came back to me

Land as Soon as Possible.

This action was right up there with my top priorities. I must admit, I had little desire to see what else was going to go wrong with this jet. Before landing I knew a controllability check was in order, since I obviously had some sort of flight control problem that required constant right stick.

Flying off the standby air-speed indicator, I slowed to 250

runway at 200 knots. At that speed, a flare was out of the question. I essentially flew the aircraft onto the ground in a three-point attitude, in what Toast 7 later described as *"the ugliest landing I've ever seen."* Be that as it may, I was on the ground and glad to be there.

Once I passed the approach end cable, I lowered the hook and then focused on staying on the runway centerline and carefully applied the brakes. Just as I was beginning to relax, my chase airplane said, *"Deacon, drop your hook."* I double-checked the position of the switch and replied that **"I HAD"**

lowered the hook. *"Well, it's not down,"* was the unwelcome answer. *"This is not your day,"* flashed in my mind as I applied maximum braking and for the second time in 5 minutes prepared for ejection.

Much to my relief, the jet slowed to a stop 300 feet from the end of the runway. As I was in the process of shutting down the engines and performing an emergency ground egress, the radio blared one last time, *"Toast 7 request vectors back to the fight"* — I had to laugh.

While most sorties have something to offer in the way of fod-

der for the fabled clue bag, this particular sortie was fraught with lessons learned.

A good chase ship is indispensable, especially during a complicated emergency such as this. While not noted in this story, Toast 7 took care of a multitude of details I was simply too busy to handle. These included but are not limited to: coordinating with the Supervisor of Flying and Air Traffic Control, reading checklists, offering suggestions for alternate landing sites, (Area 51 was closer, but covered by a cloud deck) monitoring the status of the fire, and reminding me to fence out when I inadvertently dropped a flare on 10 mile final.

During the entire sequence of events, my chase maintained a cool, yet confident voice. His use of my name (Deacon) as opposed to our flight call sign (Toast) while not standard procedure, had a calming affect and ensured extremely time critical information was passed without any chance of confusion. His demeanor and outstanding airmanship had a direct and profound impact in the safe

recovery of my jet.

Finally, it never hurts to recall the words of those who have flown before us and who continue to teach us ... *every airborne emergency can be boiled down to four basic steps, maintain aircraft control, analyze the situation, take the appropriate action, and land as soon as possible.* Those words helped me make it through this flight. ▶

A Dangerous Vase

By MSgt Jeffrey J. Chandler, Offutt AFB, Neb.

Ever used a magnifying glass to start a fire? Well, that concept hit a little too close to MSgt Mike Stenger's home last year.

The days were bright and sunny in America's heartland when his wife noticed a burn spot on the solid oak table they have in their kitchen. At first, they thought a hot pan or candle had caused the burn mark, but neither of them could remember setting something down in that location. They had recently placed a glass vase — you know, the kind with water, rocks, and plant roots that just kind of float around — on the table and started to suspect that the vase might be focusing sunrays onto the table and burning it — just like a magnifying glass.

Although MSgt Stenger thought this was unlikely, he removed the vase from the table and conducted a test during his lunch break the next day. He placed the vase on a scrap piece of wood in front of the glass patio door and sure enough, in just a few minutes, the wood started to blacken and even smoke slightly! Needless to say, the Stenger household no longer has the vase in the direct sunlight.

The vase had been on that table for over a week. Both worked during the day so they were never at home to smell or see the smoke that resulted from the sun shining through the sliding glass doors and the vase

onto the table. I have absolutely no idea how intense light has to be to burn wood, but I can remember that it did not take long at all to burn things using a cheap magnifying glass. Can you imagine what might have happened if the vase had been sitting on a lace tablecloth or doily? What if a newspaper or

The wood started to blacken and smoke!

paper napkins had been close by? Thankfully, the Stenger family was able to avert a tragedy, but their story really makes one stop and take another look at what is around us.

We should all do this both at home and in our work areas. We should also do more to consider our surroundings and what impact there might be when we introduce something new. A good rule of thumb is to always let your supervisors know when you bring things from home into your office. Items like portable

electric heaters, fans, and individual coffee pots may need to meet certain requirements before they can be used. Additionally, many maintenance and industrial areas require such things to be rated or certified. Prior approval is always a must.

The Stenger's experience provides all of us with a valuable lesson learned about nature's fire-starting power. What seemed ordinary and harmless had the potential to cause great destruction. Each of us can do our part by bringing similar things to the attention of our supervisors, spouses, friends, or manufacturers of a particular product. Sharing what you have learned is one of the important keys to mishap prevention. ▶



knots and dropped my gear. Thankfully, the gear came down normally, as did the flaps. As I slowed further, the jet required more and more right stick to maintain level flight. At 190 knots, with the stick full right, the jet still rolled left at about a degree per second. My game plan was to land at 200 knots. At that speed I still had about

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an inch of stick authority. Knowing that stopping a fast, heavyweight Eagle on the runway would be difficult, I planned on taking the departure end cable, reasoning that I would probably rip the approach end cable out of its moorings if I attempted to use it.

I aligned my jet with the runway and concentrated on getting the jet down in the first 500 feet of

der for the fabled clue bag, this particular sortie was fraught with lessons learned.

It can happen to you. Years of flying with no major emergencies can naturally lead to complacency unless we make a concerted effort to defeat this subtle enemy. I had the misfortune/luck to burst my personal complacency bubble in the real world. This was my second en-

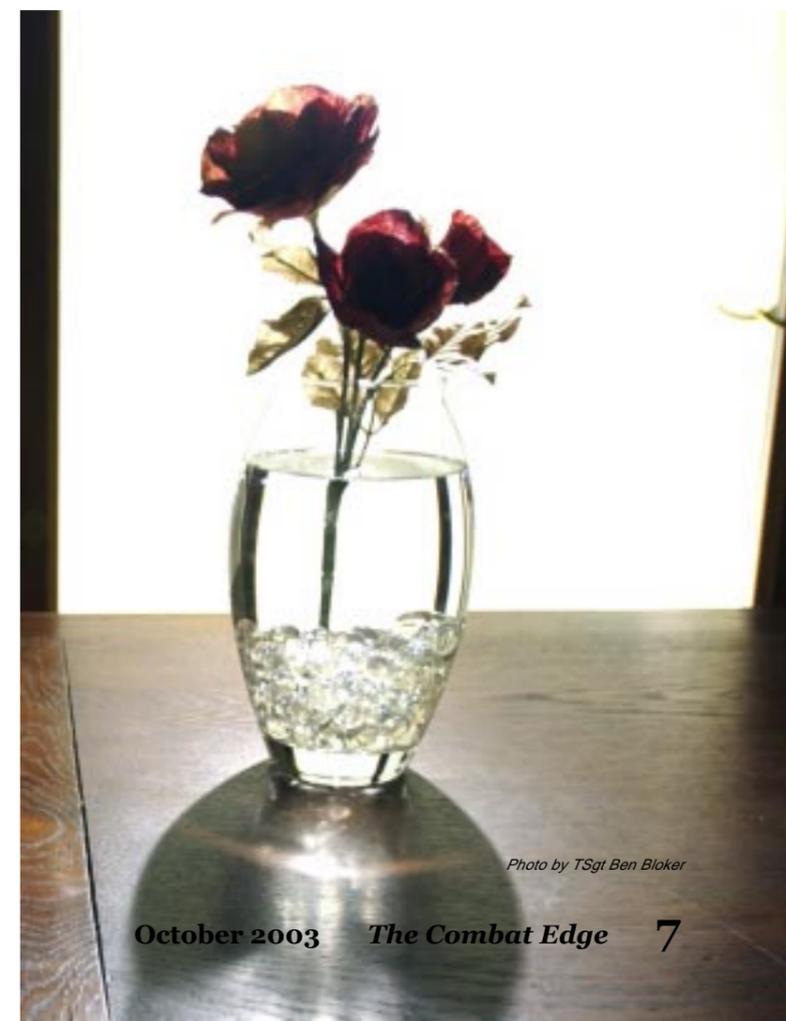


Photo by TSgt Ben Bloker