

In my first fleet squadron for less than two months, I was not looking forward to flying my defensive BFM flight. This flight is a prerequisite for the level two, combat-wingman qualification.

My flight time had been limited because of the holiday season, and the two flights to complete my training-rules requirements were a benign red-air hop and an incomplete CAS hop. I was preparing to get gunned all day and lose sight of my instructor during the ditches—two things I found common as a replacement-squadron student trying to survive defensive-perch sets.

Shutting Off the Wrong Engine

By Ltjg. Patrick O'Mara

The first half of the flight went as advertised, and we completed a snapshot drill, 9k and 6k sets. We set up for another 6k, and my bucket completely was full. I'd had an offensive-BFM flight a month before, but keeping sight then had been a lot easier. It took all my concentration to correctly move the jet and to react to my instructor at my six during the break turns and deck transitions. This was the first time I had kept sight the entire time—much better than reacting off of “zen” or hearing “pipper’s on” from your instructor.

The second 6k began with a 7.1G break turn to the right. I performed a nose-low ditch, bottoming out at 10K, and then unloaded and rolled into another ditch. While 75 degrees nose low and looking above me at my flight lead, I heard the “deedle deedle” aural caution with “engine fire left, engine fire left.” All I actually heard was the aural caution and engine fire. I knocked off the flight and pulled the jet back to the horizon, bottoming out at 8K.

I looked everywhere for a lit-up fire light, engine cautions, peculiar engine performance, or smoke from my plane. I looked for anything and everything as fast as I could. I needed to forget about BFM and remember NATOPS, both hard to do. To make things worse, I had no fire light to push, no strange engine parameters, no signs of a fire. I did have a left and right bleed-air-off caution but no bleed-air-warnings lights. What on earth was happening?

When I saw the right bleed-off, I was concerned I would be caught on the other side of the mountains from Lemoore without my hyd 2 system. I was unsure which engine I heard had the fire, and, without any other clues, I talked myself into assuming the worst. I might have to shut down my right engine and lose all my normal landing-gear hydraulics and braking system.

My flight lead asked which engine had the engine-fire-aural caution. Instead of telling him I was not sure, I told him I thought it was the right engine. We agreed I normally should drop the gear, then shut off the right engine. I made an uneventful, short-field, arrested landing at China Lake.

With the aircraft on deck, I turned my attention to figuring out what had happened. To my dismay, when I played my tape, I heard, clear as day, “Engine fire left.” Maintenance inspected the aircraft and found nothing wrong.

It could have been a stray electron, but hearing only “engine fire left, engine fire left,” and having the left and right bleeds turned off is exactly what happens when you engage the fire-warning-test switch. I’m left handed, and I keep my kneeboard on the left. So, it is possible my kneeboard or my hand could have hit the switch while moving the throttles. Many things happen during BFM; I still am not sure what caused the aural caution.

The boldface procedures for an in-flight fire in the Hornet include:

1. Throttles minimum practical for flight.
- If single fire light or confirmed engine fire:
2. Throttle affected engine—off.
3. Fire light affected engine—push.
4. Fire extinguisher ready light—push.
5. Hook—down.

Knocking off the BFM, leveling off, and slowing down was an easy decision. However, because I had no fire lights or abnormal engine indications, and because my flight lead saw no signs of a fire, I should not have continued with the NATOPS-fire procedure. Even though I had heard the fire-aural caution, I should have observed every indication I had available to make a decision on what action to take.

The events did not follow anything I ever had seen before, and I never had thought about what would happen if the fire-warning-test switch was engaged in flight, especially during a BFM. The rule, “No fast hands in the cockpit,” warns pilots to take time in moving things in the cockpit when following a procedure. It also should mean not making quick decisions, based on assumptions and incomplete facts. I shut off a perfectly good engine, taking away my normal braking system, which forced me to take a short-field arrestment—all because I kept the fire mindset. You must pay attention to everything, be ready for anything, and not make up what you think you saw or heard when you are not sure. 

Ltjg. O'Mara flies with VFA-147.