

MC1 Failure?

Cockpit photo by Matthew J. Thomas
Photo-composite by Allan Amen

No Problem!

By Lt. Oscar Montes

It was a good deal OCA, a short 1+15 cycle with 2,000 pounds of gas per blue fighter, and with a mixed division of Hornets and Tomcats as red-air. It was our first flight since a sweet port visit to Singapore, and we were licking our chops to fly this hop. I made a mental note to work slow, methodical CV ops—I wasn't the only rusty person on the flight deck after the in-port period.

Right off the cat shot, my displays flashed in a weird flicker. After the clearing turn, I leveled off at 500 feet and took a moment to analyze the situation. It looked like an MC1 failure. Yep,

it was. No big deal, I thought, and headed out 10 miles and climbed to 10,000 feet to meet the tanker. After making sure both of my external tanks were transferring, I set the switches to stop, to keep the drop tanks from transferring. I wanted the fuel from the S-3 going straight into my internal tanks. That way, I'd save a couple hundred pounds and a little time.

It was a quick climb and rendezvous with the tanker at altitude. I considered radioing my flight lead about my system malfunction, but he was on the tanker, so I waited until we headed out to CAP. After a short bout with the basket, I crossed

under to the outside of the formation and thought about my problem. MC1 failure—that’s the NAV computer, so I could expect to have no waypoint information and a degraded HSI for navigation. I still had a TACAN, and the sky was clear. I wouldn’t have any problem finding the ship or my emergency divert field.

My thoughts were interrupted as the division completed tanking, and we turned to CAP. All thoughts of the malfunction took back seat to basic aviation. We simply were staying in formation as we went through item checks, executed our G-warm, and fenced in.

“Cobra one two fenced in, MC1 failure. I have no waypoints, so I’ll need BRAA calls for control.” That was my first call to the outside world about a malfunction.

My lead rogered the call. He thought I had it suitcased. I certainly sounded like I had it under control. We pressed out for the first run.

It was an awesome fight. The red-air presentation was aggressive, and we responded in kind. MC1 notwithstanding, I was getting great training and having a bit of fun, though I had to fight some gremlins in the radar. Still, we managed to splash every bandit, with no blue fighters lost.

The MC1 failure was out of my mind completely and out of my scan. It was a mere inconvenience I might have to think about on the RTB. On the way back to CAP, lead initiated a fuel check—we were fat. I still had 10,000 pounds. The next run was even more challenging than the first. My radar acted up, the bandits were wily, and, as I turned hard left at the merge with a Tomcat, I found myself contending with a squirrelly jet.

In a 400-knot, 7-G, nose-low, slicing turn, the jet tried to roll right toward the horizon. I lowered my G while continuing an easy turn, then saw the Tomcat coming nose on. I popped some flares and again programmed the stick back to a 7-G turn. The right wing kept dropping off. As I prepared to call “Terminate,” my lead

called, “Fox two, kill Tomcat, left-hand turn.” We knocked off and headed back to CAP.

I swept my eyes around the cockpit, feeling like something definitely was not right. I looked to the right at my warning-lights panel. There it was—a low-fuel light. I then noticed my total fuel was up at 7,000 pounds, well above ladder, but my internal fuel was a mere 2,500 pounds. I glanced at the DDI for any warnings and cautions—nothing there but the MC1 failure. What in the world?

I realized my external tanks were off. I put the switches in the normal position and prayed the transfer would work. It did, but I was rattled. Why hadn’t I gotten a bingo caution or a low-fuel aural warning? Then it dawned on me: The most significant effect of an MC1 failure is the loss of all aural tones and nearly all DDI warnings and cautions, including the bingo aural warning and the low-fuel warning.

I had started earning my paycheck, so I broke out the PCL for the first time. There it was in black and white. How had I been so foolish? After I got back on deck, I analyzed the situation. I had made several mistakes that could have led to an airborne flameout. First, and most importantly, I had failed to accurately assess the effect of my MC1 failure. Second, a misplaced sense of mission accomplishment had led me to blow off the PCL and my other information assets (such as flight lead) on my way to the tanker. Third, my cockpit scan was lacking. I hadn’t thoroughly checked my fuel state on several fuel checks, relying on the bingo bug to remind me to transfer my external tanks. Overall, my habit patterns needed some work.

If the gas remaining on the external wing tank hadn’t altered the jet’s handling characteristics during my fight with the Tomcats, I never would have figured it out. My first indication would have been the sound of an engine spooling down. Would I have had time to transfer the fuel? Would I have remembered I had gas trapped in the external tanks? Probably. 

Lt. Montes flies with VFA-97.