

Out-Thinking the System, Almost

by LCdr. Ted Williams

It was certain to be an easy flight. I had flown a half-dozen or so FCF charlie profiles in the past few months, and today's looked like a repeat of yesterday's. The maintainers had done some tweaking and adjusting on the flaps, which had not been indicating full down in flight. Like most difficult gripes, the flaps were working like a champ on deck, but in flight would not come down all the way to 30 degrees. The EA-6B has two methods of lowering the flaps: the normal way (hydraulic), and the emergency way (electrical).

I was confident that I knew the system and this particular aircraft. On start-up, the flaps worked fine, just as they had the previous day. In flight, however, the discrepancy repeated itself. We couldn't get a full-down indication with either the hydraulic or electrical method. Anticipating that we wouldn't be able to duplicate the problem on deck, I was determined to help the ground-maintenance crew by troubleshooting in flight. I wanted to give them as much information and feedback as possible. I found that if I lowered the flaps hydraulically and, when they had finished travel, used the electrical method, I was able to achieve a full-down indication. The opposite was also true: I could lower them electrically, then use the hydraulic method to assist. "Great," I thought, "I can give the airframers some good information to help them fix this problem."

After dirty-up on a straight-in, using electrical flaps to assist

the hydraulic actuators, we took an uneventful carrier arrestment. I cycled the flaps on deck and found that I was able to duplicate the problem. "Even better," I thought. "Now the ground crew can see firsthand what I was experiencing in flight. We'll have this problem fixed in no time and the aircraft up and flying missions again."

After shutting down and climbing out of the aircraft, I was surprised to see the entire ground crew huddled around the port inboard flap. I thought the airframers would find something of interest, but what would an ordie or a PC care about an errant flap? I soon saw the problem. The flap-drive, span-wise shaft was so badly twisted and torqued that the flap was frozen in position and would not have moved again, even if I had tried. By troubleshooting in flight, I had managed to locate the problem, but in doing so, I had almost torn off the flap and had severely endangered my crew. Instead of troubleshooting in flight, I should have left it to the maintainers.

In short, what appeared to be a rather easy, routine flight actually could have become much more exciting because of my overconfidence and eagerness to troubleshoot. In the future, I'll be sure to go only as far as the checklist allows, despite what I might think the problem is, and leave the true troubleshooting to the experts on the deck. ✈️

LCdr. Williams was the operations officer for VAQ-136 at the time of this incident. He has since been transferred to McDill AFB.