Arcing the Prowler

By Lt. Michael J. Szczerbinski

It was a beautiful, crisp, fall day at Whidbey Island, and our Ops O had available OPTAR funds. We planned a mini-cross-country flight that would return by 1600, so our maintainers could secure before it got too late. The plan was ambitious but reasonable: Take off by 0930; fly our Prowler to NAS Fallon via a military, low-level route; hot pit; fly to MCAS Yuma; quickly fuel; and airways navigate back to NAS Whidbey.

After an extensive brief covering all the legs, our four-person crew manned up. The aircrew experience level greatly varied from a pilot with over 2,000 flight hours to an NFO only a few months out of the FRS. Because of a fueling delay, we took off late and missed our first low-level. We then refiled in-flight for a high-altitude direct to NAS Fallon, so we could make our scheduled hot-pit time. Unfortunately, we landed after a typical Fallon air-wing strike, and the line to the pits was long. We realized our first planning error.

We had remembered all the cross-country kit bags but had left the fuel cards in bags in the cheek panels. To get the cards, we had to pull out of the pits after fueling, alternately shut down both engines, and cross-bleed restart. The engine shutdowns were not a big problem because we had planned to alternately shut down the engines to swap out a frontseat and backseat NFO. Unfortunately, this evolution took longer than we had planned, and we missed our second low-level time to MCAS Yuma. While I was outside the jet, the remaining crew refiled over the radio with base operations to go to Grand Junction, Colo., and from there to home base.

One problem with last-minute filing to airfields you hadn't originally planned for is a lack of NOTAMS information. Sure enough, when we arrived at Grand Junction, the field was closed because of a Thunderbirds practice for the weekend air show. We took up a max-endurance profile and decided to wait, instead of going to our nearest divert, Hill AFB. Both locations had clear and forever weather. After a 30-minute delay, we landed with 1,000 pounds above our bingo, and we were short on time to get back to Whidbey as planned.

The fueling was quick, and we had time to spare—until we repeatedly dropped ground-power on start-up. Our power problems continued, even with the second power cart. The EA-6B is notorious for problems with power carts exactly not in phase. I should have been more concerned with our electrical issues.

Because we had no other indications, we decided to jumper the electrical-safety connection—something I had done several times on cross-country flights. To jumper the connection, we took off the port shoulder panel above the wing, removed a cannon plug from the safety relay, and connected it to a jumper placed in the cross-country kit. Unfortunately, that plan didn't work. As soon as the pilot tried to start either engine, the jet dropped power. We had little time remaining on our crew day to get home. We called our maintainers, and they suggested

one last way to get the jet to accept power. By jumping the F and H leads with a wire, you isolate the connection, but this method means manually holding up the cannon plug, so the wire or plug doesn't touch the jet and ground out.

With wire in hand, I tried to isolate the two leads, but, like most older items on the Prowler, the marking on it was worn out, and I had to use a chart in the cross-country kit. I read it wrong and placed the jumper wire in the E and F leads. My next mistake was not stopping to think if this really was something I wanted to do. I knew the risk as I put my gloves on, held the plug by the electrical tape bundle under the cannon plug, and told one of the aircrew not to grab me but to kick me off the wing if anything happened.

I didn't stop and analyze the risk to the jet, to others, or to myself. Sure enough, as the pilot tried to start the first engine, there was an arc of electricity. I immediately let go as the jumper wire burned in two but not before my hand had been shocked and my arm temporarily had gone numb. I was fortunate not to have been injured severely.

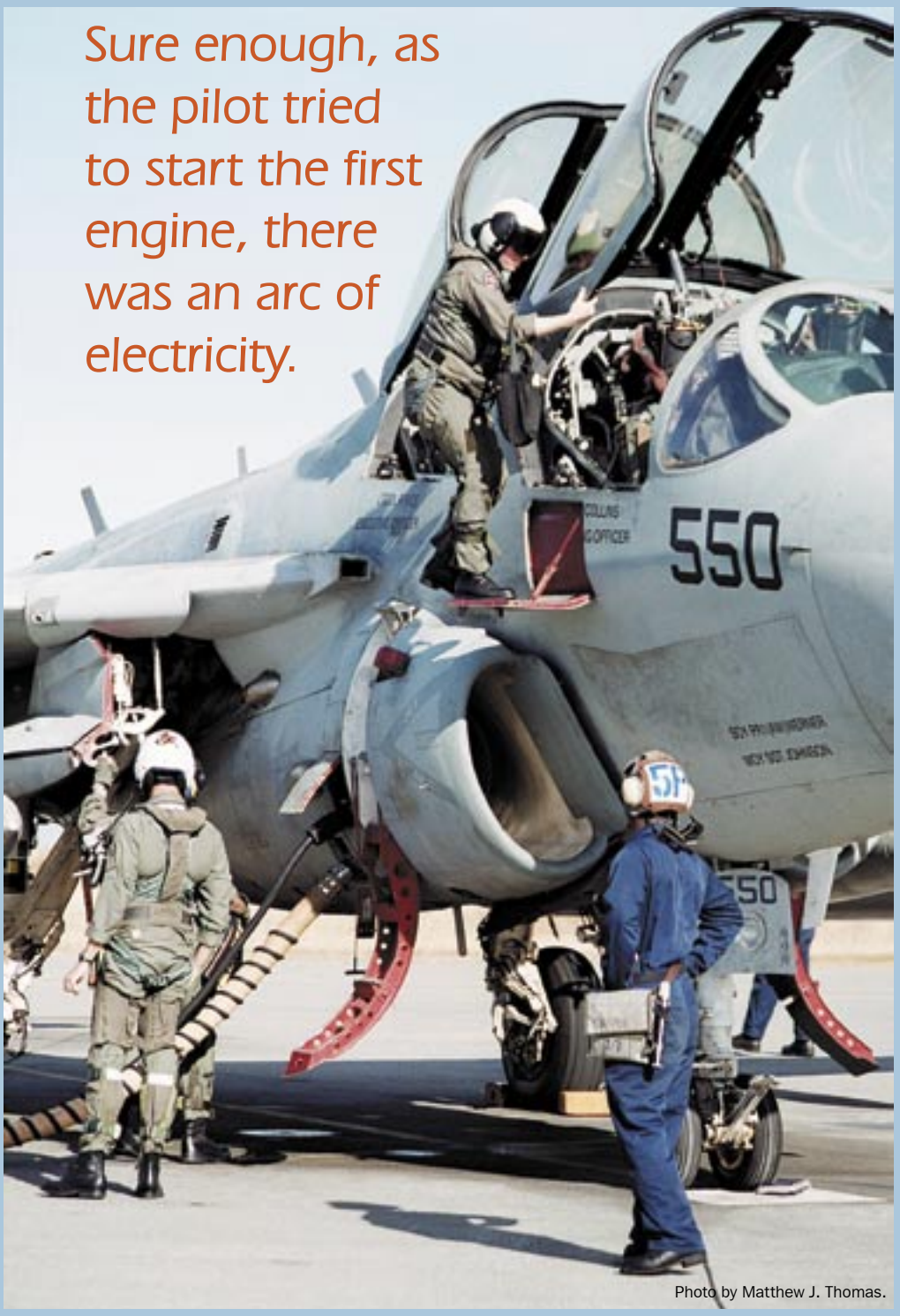

Photo by Matthew J. Thomas.

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I fell into the trap of letting artificial goals affect my judgment on safety and acceptable risk.

That Sunday, our electricians discovered the external-power contactor (P/N DHR-25B), installed in 1983, had broken. The jet would not have taken power on start-up, no matter what leads I had jumpered. With a two-hour fix and a new contactor, our jet started 4.0, and we went home. We were wiser on the risks involved with being too flexible in mission execution and not taking enough time to assess the risks before any activity.

Lt. Szczerbinski flies with VAQ-137.