

Isn't This Supposed a Four-Stage Turb

By Lt. Aaron Kleinman

After a long delay, we finally were underway aboard USS *John F. Kennedy*. Before we could “head east,” we had to complete phase II of JTFEX. We already had completed one week of the exercise from the beach while the ship underwent repairs and sea trials. We were more than a little anxious to get on with the deployment and relieve our shipmates, who were awaiting our arrival in the Indian Ocean.

We launched for a standard-day, double-cycle to control a strike into the Dare range and to enforce a make-believe, no-fly zone in the warning area. I was the CAPC in the left seat, and my nugget copilot was in the right seat. I had made one full cruise and two sets of work-ups, and the copilot had made only the recent work-ups. We climbed to station profile at 24,000 feet and let George, the autopilot, do the flying, while we listened to the back-end check in the strike package and pass them off to the range controller.

All was going well, and the strikers were off-target, passing their reports, when we heard and felt a loud thump as the aircraft swerved



left. I immediately disconnected the autopilot and scanned the engine instruments. The CICO asked over the ICS, “What was that?”

I selected the entire crew on ICS and replied, “I don’t know,” as we turned the airplane toward mother.

Hmmm...RPM, TMT, IHP, fuel flow, oil pressures and temperatures were within limits. The starboard engine required much more fuel and higher temperatures than the port engine to get the same horsepower.

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Photo by PHAN Ferguson



As we continued inbound to the ship, the CICO ignored Bravo Papa's plaintive cries for a MISREP and broke out the PCL. Although the engine was stable, we selected the "RPM/IHP/TMT/Fuel Flow Fluctuations" checklist as the most applicable. These checklist procedures deactivate all electrical signals to the propeller and electronic-fuel control. The engine showed no effect, and the CICO and copilot coordinated our recovery one cycle early. The boss agreed to take us first, so we bustered home. Descend-

ing through 8,500 feet, we noticed a 2,000-horsepower split between the port and starboard engines—the T56-A-427 engines are rated at 5,100 shp each. Despite this difference, the starboard engine still was governing and producing positive thrust, so we decided to leave it online.

We adjusted our fuel state. The boss cleared us for a five-mile straight-in, and we set up at 2,000 feet. I elected to leave the starboard engine set at 1,000 horsepower and fly with the left power lever. I briefed my copilot to back up rate of descent, lineup, and to tell me when we had cleared the ramp.

We commenced the approach. Glide slope was under control, but the asymmetrical thrust on lineup gave me fits. By the time we called the ball, I had things squared away, thanks to my copilot's sugar calls. In close, I had to reduce power on the starboard to stay on glideslope. Crossing the ramp, the copilot said, "You've got it made." I closed out the power levers and settled onto the ace. Welcome aboard!

Taxiing clear of the LA, we noticed that the TMT on the right was out of limits for ground operation. We shut down and headed to the PR shop.

The paddles were waiting for me when I arrived at maintenance control. That's when I discovered not only had we failed to secure our taxi light (oops), but we had told everyone on the ship, except the LSOs, about our emergency. They had no idea what was wrong with us, or that we had an emergency. When they learned of our problems, they graciously no-counted my deserved no-grade.

The loud thump we had heard and felt was the first stage of our risk-mitigated turbine eating itself. Borescope pictures showed not one blade was left on that stage, and several stator vanes had large chunks missing. Amazingly, the rest of the engine held together. Good aircrew coordination got us aboard that day. 🦅

Lt. Kleinman flies with VAW-121.