Single-Engine in the Heat

by Lt. Chris Sullivan

It was a sweltering 140 degrees on the flight deck as we taxied our Prowler to the catapult for a late July launch into the skies of the Arabian Gulf. It was our second week of flying in support of Operation Southern Watch. As a nugget, I was ready for my first front-seat flight into Iraq. My responsibilities during the mission would be navigation, communication and copilot duties. Since we just had arrived in theater, most of the preflight brief was focused on aviating and communicating in the confined airspace of the AOR. My crew had flown together for most of the workups and the first month and a half of deployment. We were confident of our responsibilities in the event of an emergency. As we shot off the cat on our way to deter Iraqi aggression, an in-flight emergency was the farthest thing from my mind.

I managed to keep the nav tight and make the many standard radio calls in and out of country. As we turned feet wet, we gave our Hornet escort the lead to the tanker, knowing he would require fuel before us. We settled on his left wing and let his radar do the work.

We soon spotted our tanker as our Hornets turned aggressively to rendezvous. The Prowler hung in there as we closed within a mile. Just as we were ready to join in left echelon, we heard a series of loud chugs, followed by severe airframe buffeting.

"What was that?" I asked, as I looked over and saw the port rpm, fuel flow, and EGT bottom out by the pilot's left knee.

"I think we just lost our port engine," came the reply, as the master-caution light illuminated and the left generator dropped off-line. The pilot secured the engine and descended away from the tanker stack to gain separation from the other aircraft. The airplane still was shaking as we turned toward our nearest divert, Ahmed Al Jaber Airfield, in Kuwait, 45 miles to the west. We discussed recovering back at the ship, 100 miles to the south but decided it was not an option because the high temperature would produce poor single-engine performance. The low gross weight required for an acceptable waveoff capability would put our fuel state near day tank. The only other possibility would be to jettison our external stores. Since that is the last choice for a Prowler crew, a long runway with arresting gear was the right decision.

Crew coordination became paramount as we diverted. Our pilot began the descent for landing, leveling at 5,000 feet to ensure the performance of our remaining engine. I broke out the checklist and approach plate and talked to approach control. ECMO 2 got on the radios and relayed our intentions, via the E-2 Hawkeye, to the ship. ECMO 3 backed me up on the emergency procedures and descent checklist. We broke out the field at five miles, dumped a little gas, and made a right play to centerline. I managed to get clearance to land at one mile and 500 feet, completing the last step of the single-engine landing checklist about 10 seconds before touchdown. The pilot used the

Photo by A1C Greg L. Davis

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entire available runway in the touchdown zone and took the long-field arresting gear.

The postflight inspection found oil covering the port nacelle and running down the entire empennage. We were fortunate the engine did not fail in flight and cause additional damage (or injure someone from the thrown blades). Five hours later, a helo from the ship dropped off a maintenance team from our squadron and flew us back to the ship.

I credit much of our decision-making to a safety stand-down brief two weeks earlier that had covered single-engine, carrier landings during high temperatures. One of our discussion items was a hazrep in which another EA-6B crew, in a similar situation, was unable to maintain altitude and was forced to dump below bingo to arrest their rate of descent. These considerations made our decision easy. Besides, it was hard to justify passing up a long runway at an operationally approved divert 45 miles away. Flying with the same crew also helped, as we divided up responsibilities to make efficient use of time. Finally, always review divert data when entering an AOR or any unfamiliar area. Only nine minutes elapsed from engine failure to on deck at Al Jaber, which didn't give us much time to study approach plates.

Lt. Sullivan flies for VAQ-132.