



Hot & Heavy

by Capt Chad Cartier, Davis-Monthan AFB, Ariz.

On the night of 12 July 04, my combat crew and I were tasked to fly two combat missions out of Ali Al Salem AB, Kuwait, in the EC-130H COMPASS CALL. We were scheduled to support Army and Marine forces in Iraq, with timely application of Electronic Warfare (EW) capabilities. The first sortie started uneventfully. However, we quickly developed a pressurization problem which required us to fly the mission at FL240 unpressurized and breathing oxygen for over 3 hours. This is not a normal practice in the EC-130H, but we had to get the mission done. After judiciously applying EW against terrorist insurgents, we recovered uneventfully back to the base. Maintenance looked at the plane, repaired the faulty valve responsible for the lack of pressurization, and miraculously got us ready to launch on the final mission of the night on time.

The second mission required us to takeoff at max weight with a high outside air temperature, which translates to minimum climb performance for an already underpowered aircraft. In fact, it was still 110 degrees Fahrenheit, even though it was completely dark already. We were physically drained from the first mission on oxygen, but the Army and Marine troops were relying on our support, so we pressed. It was my copilot's turn to fly; so he advanced the throttles to maximum power and released brakes to begin the takeoff roll. Passing a little over 100 knots, I called "GO" committing us to takeoff. As soon as we rotated, my Flight Engineer (FE) said he had a problem with the #4 engine.

Once airborne, I immediately took control of the aircraft as my FE reported a turbine temperature flux between 800 and 1,100 degrees Celsius, a 5,000 pound torque flux, with accompanying fuel flow flux and yaw towards the #4 engine. The engine was clearly doing its own thing, so I directed my copilot to shut down the #4 engine. The copilot and FE accomplished the Engine Shutdown Procedure passing through 100 feet Above Ground Level (AGL), and we began the task of retracting the flaps and landing gear to help increase our stagnant climb rate of only 300 feet per minute. Our performance slowly improved, so we elected not to jettison gas or our antennas. Leveling at 1,000 feet AGL the visibility was pretty bad, so we coordinated with the foreign tower controller to turn to a downwind and set ourselves up for our own base to final for the Instrument Landing System (ILS). The Navigator got in the radar and kept orientation with the field and surrounding terrain. On the downwind, we completed our after takeoff, descent, and before landing checklists and prepared for a heavyweight, 3-engine landing. After turning to base, I intercepted the ILS and flew an uneventful approach and landing to the field. It only took about 19 minutes from takeoff to landing, but it seemed much longer. Once on the ground, we received all the usual support for an emergency aircraft and gladly returned the aircraft to maintenance. They discovered a failed fuel control unit this time, completely unrelated to the first mission's problem.

The biggest lesson I learned from this sortie was to make the most of simulator emergency procedures training. In the simulator you sometimes feel like you are suspend-

ing belief with the compound emergencies they give you. You feel, "This couldn't possibly happen in real life." My crew was no different. None of us ever thought we would lose an engine on takeoff with all the variables against us. Even though we had seen it in the simulator, we had never met anyone who had seen it first-hand. That day in Kuwait we found out the worst-case scenarios they give you in the simulator can and do sometimes happen in real life! ★

Editor's note: Contributions for this article from Capt Adam Burch, 43rd Electronic Combat Sq., Davis-Monthan AFB, Ariz.

