

# 7 Seconds From Destiny

*By Ltjg. Marc A. Aragon*

Anyone who has spent a summer in the Arabian Gulf knows misery. The heat is oppressive, and you realize it the moment you step through the watertight door onto the weather deck of any ship in the gulf. The temperature and moisture of the air are extremely high. Your chest tightens up, and you instinctively gasp for air in which the oxygen largely has been displaced by water vapor. Almost immediately, your clothes are soaked with sweat.

Such extreme environmental factors significantly affect the moods and performance of squadron personnel, maintainers and flight crew, alike. I'm certain heat and humidity contributed to one of the scariest moments in my aviation experience.

In May, I had been tasked as an H2P on a shore-based detachment whose mission was to FCF a particularly stubborn H-46. It was three weeks of FCF day after bloody-long day. Although it may seem like it, I'm not complaining because it was three weeks spent in Bahrain, complete with per diem and a nice hotel bed. The det gave me a lot of good experience, but none could have prepared me for the FCF nightmare coming my way.

Fast-forward to July. It was the fourth month of our six-month deployment to the Gulf. We were supporting a West Coast ship that supplied the carrier battle group with fuel, bombs and beans. One of our aircraft had a problem that

required the removal and replacement of a rotor blade. Of course, an FCF is required whenever there's a change of any dynamic component.

For some reason, we were having a difficult time with this aircraft. Run after run, the FCF computer would come back with recommended pitchlink changes, along with the disclaimer "sub-optimal solution." A sub-optimal solution means the best solution the computer can come up with is one it doesn't expect will reduce the vibration levels to within its goal limits. Finally, after the eleventh run, and four days of flight testing, the functional check pilot and the MO were exasperated and decided to "zero out" the blade adjustments. The maintenance people sat down with all the printouts from the previous runs. They added all the adjustments that had been made to the pitchlinks and came up with pitchlink adjustments requiring as much as minus-eight clicks on one blade and plus-six clicks on another.

Armed with the data, the maintainers headed onto the 110-degree flight deck for the twelfth time to adjust the six pitchlinks to their zero settings. When the adjustments were complete, the HAC and I, along with our crewmen, faced the same stifling heat to try again to get the vibe levels within limits.

We flew through a checklist that, by now, had been deeply ingrained in our heads. The engine start and rotor engagement were normal, albeit with slightly higher-than-normal vibrations. The



Photo by Matthew J. Thomas  
Retouched by Allan Amen

FCF checklist procedure is to face the helicopter into the wind before initiating the vibrex computer. Our aircraft was parked on the port-to-starboard line-up line, but winds were down the starboard-to-port line-up line at 15 knots. We had two choices: One, ask the ship to give us winds down the starboard line-up, a task requiring at least fifteen minutes to complete. Two, pick up into a hover and do a pedal turn to park the aircraft on the port line-up, a three-minute evolution at most. The choice seemed obvious.

The HAC called tower with souls and state and said we were ready for break-down and launch to reposition nose to port. With the deck-status light flashing green, I signaled the LSE to remove chocks and chains. The LSE showed five chains and two chocks. I acknowledged and signaled we were ready to launch.

The HAC was at the controls, and, as we lifted off, I felt vibrations the likes of which

I never hope to feel again. If I hadn't been strapped in, I would have been thrown out of my seat. As it was, I was thrown against the straps with some serious force. The violent motion of the helicopter blurred my vision, and I couldn't see any of the gauges or anything else. Nor could I reach for the cyclic and the ICS switch. Luckily, the HAC had the presence of mind to put us right back down on the deck. After the HAC's landing, the vibes immediately went back to their slightly high but comfortable level.

After talking with the crew chief, we figured out what had happened. Either the calculations were 180 out, or the people who actually did the pitchlink changes did them backward. The pitchlinks that should have been dialed down eight clicks, were dialed up eight clicks, with nearly disastrous consequences. 🦅

Ltjg. Aragon flies with HC-11.