Mishap with a Moral

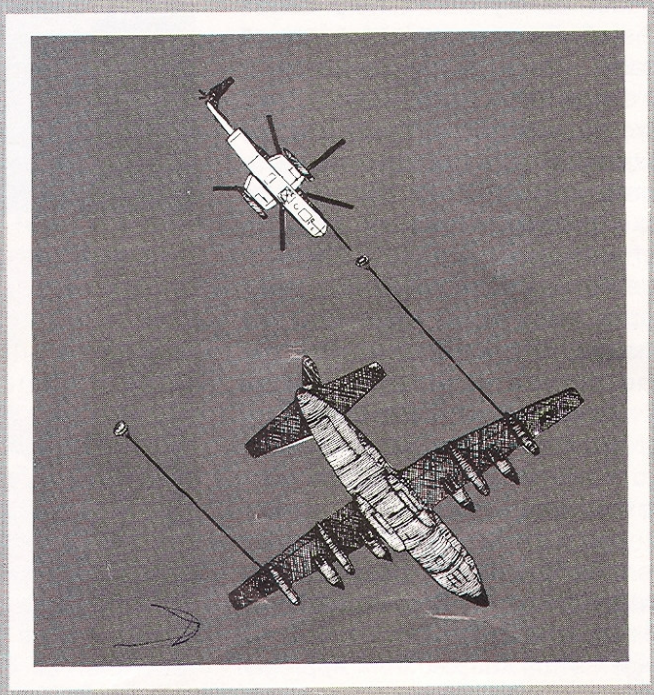
How Far is Too Far?

The aerial ballet that occurs when a Rescue HC-130 refuels a Jolly Green Giant helicopter in flight is an amazing sight to see. With the Herk operating at the low end of its speed range and the Jolly charging along about as fast as it can go, the unlikely duo is just able to get close enough to each other and stay that way long enough to transfer the desired quantity of JP-4.

Watching the hummingbird-like approach of the helicopter as its long proboscis of a refueling probe stabs at the HC-130's extended drogue basket, it is very easy to envision several possibilities for disaster. Most obvious, of course, is the fact that only a few feet above the refueling hookup equipment of the two aircraft are the helicopter's slashing rotor blades. Although the Jolly's fuel probe telescopes out to a maximum length of four feet beyond the rotor tips, there is still relatively little room for any false moves.

Miscalculation is rare in this demandingly precise operation, but despite a long and enviable safety record for Herky/Jolly aerial refueling, mishaps can happen. On a recent refueling training mission, it did happen, but the initial situation wasn't as instantly disastrous as might have been expected. The final outcome however, was extremely tragic. That grim finale raises some pentrating questions; but first, we need to take a look at the mishap itself, which occurred during the practice overwater refueling mission.

Having made several successful hookups on the left side of the Herk, the pilot (who is out on an evaluation ride with a flight examiner in the left seat) maneuvers his Jolly into position for some practice hookups on the HC-130's right wing refueling drogue. He makes a stab at the basket, misses and falls back to a position somewhat below and behind the normal precontact location. Quickly regrouping, he adds power to accelerate and gain altitude for another contact attempt. As he moves in, he reduces the climb rate by applying forward cyclic, but does not reduce the power.



Suddenly the Jolly is accelerating too rapidly past the drogue basket. Seeing this, the flight examiner warns, "Hey, don't undershoot," but doesn't interfere. Aware that he is about to blow a second approach, the pilot raises the nose of the helo to slow it down, banks to the left a bit and rapidly lowers the collective.

From his vantage point in the open troop door of the Herk, the scanner sees the disastrous result of the abrupt collective change as the chopper's blades dip and slam into the air refueling receptacle. Fuel sprays from the severed end of the refueling hose, and it automatically begins to reel back into the HC-130's under-wing pod.

Vibrating badly because of its damaged rotor blades, the Jolly is maneuvered by the crew toward a nearby island. Despite a severe lateral shuffle and a cluster of illuminated warning lights that make the caution panel look like a pinball machine, the pilot in command elects to try and limp 12 miles to terra firma, rather than ditch. Together, he and the right-seater wrestle the injured chopper to within a mile of shore; then suddenly the tail boom separates. With the tail rotor gone, the center of gravity shifts forward drastically and all control is lost. The Jolly plummets nose first from the sky and crashes in the shallow waters of the island's offshore coral reef. Miraculously, a third pilot who is on board in the rear of the chopper survives virtually unscathed, but both pilots and the flight mechanic up front perish.

Normally, our *TMF* mishap reports have clear-cut lessons, and in true Monday-morning-quarterback style, we point them out. In this case, however, what we end up with instead of glib no-nos are a couple of sets of questions involving some general principles. We suggest you formulate your own answers and then stow them away in the back of your mind for the time when you must make a critical decision that may result in survival or doom for everybody on board your aircraft.

The first questions pertain mainly to you in the role of aircraft commander, instructor or flight examiner, and they hinge on this: How far will you let a pilot, student, or examinee go astray with a maneuver before you take the controls? Would you, for example, have let the pilot in this mishap attempt another hookup from a less than ideal position right after he blew one? Or, would you have let him try, and then taken over when it became obvious he was coming in too hot? Just what is your personal safety margin in any given situation?

Second question is: Do you know when to throw in the towel? How long, for example, would you "tough it out" trying to save a really sick air machine before deciding to set it down someplace — even if that someplace was in the water? The pilot in this mishap elected to play the odds and tried to keep going in an attempt to reach a more ideal site for landing — and he *almost* succeeded. It is impossible to say that he would have fared any better had he ditched while the chopper was still reasonably controllable, but the question remains: How far would you stretch *your* luck by pressing on with a damaged aircraft while you have the option of setting it down with a reasonable amount of control?

The answers to both these sets of questions depend on a variety of conditions and factors which you will have to take into account at the time you are faced with that ultimate challenge. Will you, having gone over as many of the "what-ifs" as possible beforehand, be mentally "up" and make the best decision; or will you be caught unprepared?