

COAST GUARD HH-65C GETS HIGH MARKS

By Capt. Gordon I. Peterson, USN (Ret.)



Maritime safety and search and rescue are some of the Coast Guard's best publicized responsibilities. On a typical day, Coast Guard fixed-wing aircraft, helicopters, cutters, and small boats save 15 lives, assist 117 people in distress, and conduct 90 search and rescue missions. These efforts received a much needed boost when the Coast Guard began its conversion of the workhorse HH-65B Dolphin

helicopter into the multimission HH-65C version, above, as part of the Coast Guard's Integrated Deepwater Program—an ambitious effort to modernize the service's ships, fixed-wing aircraft, and helicopters.

Spurred by a high incidence of inflight engine power losses, in 2003 the Coast Guard imposed operational flight restrictions on its fleet of 95 HH-65B helicopters. In 2004 the service began a priority program to

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upgrade the Dolphins with two Turbomeca Arriel 2C2-CG turboshaft engines and install new control systems as part of the first phase of the aircraft's conversion to the HH-65C. The Charlie's new engines provide approximately 40 percent more power than those they replaced, resulting in improved endurance, payload, and performance. CGAS Atlantic City, N.J., received its first Charlie in April 2005 and by July 2006 had

logged more than 4,350 hours on six HH-65Cs. Atlantic City pilots, aircrew, and maintenance personnel speak highly of the more capable and reliable aircraft.

"The HH-65C offers higher dispatch and readiness availability rates than the HH-65A/B, and we are exceeding the Commandant's goal for readiness," said air station CO Capt. James T. P. Hubbard. "Our range



is essentially the same, but the increased power availability, combined with greater aircraft gross weight limits, have enabled many missions otherwise not achievable in the previous model.”

Three of the more powerful HH-65C helicopters did just that during rescue operations along the Gulf Coast in September 2005 following Hurricane Katrina, flying 85 sorties to save 305 lives. It was not uncommon for the modernized helicopter to hoist twice the number of people and remain on station for twice as long as older Bravo models. “We were able to carry more fuel and fit into tighter landing zones with less fear of losing an engine,” said Lt. Eric Perdue, CGAS Atlantic City’s training officer, who flew as a copilot during Katrina operations.

The new engines allow pilots to transition to a hoist

AMT3 Eric Petricca inspects and services the left-hand mixing unit on an HH-65C Dolphin at CGAS Atlantic City, N.J. Improvements to the Dolphin have improved its performance in the air and made maintenance easier for personnel on the ground. Photo by Gordon I. Peterson.

operation immediately should the need arise during a search and rescue mission. The aircraft can also be flown safely out of a hover if one engine loses power, another margin of safety appreciated by Atlantic City HH-65C aircrews. “The HH-65C’s performance and capabilities were immediately apparent the very first time I conducted a flight mechanic

upgrade flight requiring two rescue swimmers, two flight mechanics—an instructor and a student—and two pilots,” Lt. Perdue said. “It was a hot day with light wind, which with the Bravo would mean that we would need to reduce the fuel load to accommodate the increased number of people on board.

“With the Charlie, however, we took nearly a full fuel load for the flight—roughly 1,700 pounds—and required only a few minutes before we were able to begin our first



Left, an HH-65C from CGAS Port Angeles, Wash., hoists an injured hiker to safety from a mountain peak in July 2006. Photo by Brian Redanderson. Below, a rescue swimmer from an HH-65C prepares survivors to be lifted to safety during Hurricane Katrina search and rescue operations on 7 September 2005.

boat hoist. Normally this would require 30 to 40 minutes to burn down to a fuel level that would allow us to hover with the necessary safety margin. For anyone who has flown the HH-65B, this is a significant indicator of the HH-65C's increased capabilities."

The crew of a re-engined HH-65C Dolphin assigned to CGAS Port Angeles, Wash., demonstrated the helicopter's impressive performance with the hoist rescue of an injured hiker from a near-vertical mountain slope at



an elevation of 6,300 feet (at a density altitude approaching 9,000 feet) in July 2006. The rescue, performed at the outer limits of the helicopter's operating envelope, would have been impossible in the Bravo model given the mission's altitude and an ambient air temperature of more than 86 degrees. "The Charlie model proved to be a real lifesaver during this SAR case," said Lt.

Dan Leary, the aircraft commander and pilot in command during the rescue mission. "Someone is safe now who otherwise would have lingered in harm's way—it was a real testament to the helicopter's power."



Lt. Eric Perdue, center, conducts a law enforcement mission briefing with AMT Byran Corn, left, and Ltjg. Jamie Reed in August 2006. Photo by PA1 Kyle Niemi, USCG.



Above, a re-engined HH-65C flies seaward out of CGAS Atlantic City, N.J., during a routine maritime mission. The more powerful Charlie has been praised by air crew members and ground personnel for its versatility and easy maintenance. Photo by Dan Megna. Right, AMT2 Jason Taylor conducts preflight checks on the engine of an HH-65C at CGAS Houston, Texas. Photo by PA2 Adam Eggers.

By June 2006 about half of the Coast Guard's operational HH-65s had been converted to the Charlie model. Phase I of the HH-65C conversion is scheduled to be completed for all 84 of the Coast Guard's operational HH-65s in 2007, with the service's remaining 11 aircraft completed during scheduled depot-level maintenance. The Coast Guard's budget request for FY 07 included funding to begin Phase II of the aircraft's conversion to a multimission helicopter. This work includes a service-life extension to refurbish the airframe, tail drive shaft, and antitorque device. Strengthened landing gear, a new radar and C4ISR suite, and an integrated cockpit also will be installed.

"The transition to the HH-65C has been remarkably painless and highly successful," said Capt. Hubbard, who credits this success to the hard work, planning, and professionalism of the air station's engineering and operations departments. Programmatic support from the Coast Guard's Aircraft Repair and Supply Center in Elizabeth City, N.C., company representatives, and the Deepwater Program also receive high marks in his view. "There has been a wonderful partnership between all entities toward making the HH-65C program a success."

Having excelled during rescue missions from the Gulf Coast to the Pacific Northwest, the upgraded Dolphins provide aircrews with greater capabilities to match their challenging mission. The Charlie model's increased power and versatility will allow air crews to save more lives. As AET1 Ben Bradley, a 10-year veteran with CGAS Atlantic City, puts it: "We can actually fly like a helicopter again." ✈

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