

Two helicopters on simultaneous nighttime approaches to a heliport at a Florida racetrack collided because neither pilot was maintaining an adequate visual lookout, the U.S. National Transportation Safety Board (NTSB) says.

The Nov. 20, 2005, crash killed the pilot of a HelicopterShuttle.com Eurocopter EC 130B4; the pilot of the other helicopter — a Biscayne Helicopters Eurocopter (formerly Aerospatiale) AS 350B — was uninjured. Both helicopters were substantially damaged.

In its final report on the accident, the NTSB cited as a contributing factor the failure of the AS 350B pilot to comply with approach procedures suggested in the operations manual for Motorsports Complex VIP Heliport, also known as Speedway Heliport, in Homestead, Florida. Findings of the investigation were that the pilot of the EC 130B4 intentionally operated the helicopter “with known deficiencies in equipment (inoperative landing light)” and that Speedway Heliport personnel failed “to conduct a safety briefing in advance of the race, flight-test temporary lighting to see whether

any issues [existed] and require a single-point entry and reporting point for approach to the heliport.”

The crash occurred about 2048 local time in night visual meteorological conditions. Both helicopters were arriving to pick up passengers who had attended a Ford 400 NASCAR Nextel Cup Series automobile race that had just ended at the Homestead-Miami Speedway.

The flight of the AS 350B originated about 2043 from Ocean Reef Club Airport in Key Largo; the EC 130B4 departed at 2038 from Kendall-Tamiami Executive Airport in Miami (Figure 1, p. 35).

Transcripts of Homestead Air Reserve Base air traffic control (ATC) radio communications showed that the pilots of both helicopters established contact and acknowledged traffic advisories before contacting “race control.”

The AS 350B pilot said that after he contacted the individual providing traffic information at the racetrack, he was told to report when his flight was 1.0 nm (1.9 km) south of the heliport. When he did, he was told to follow an Agusta 109 “to the pad,” the report said.

Failure to Look

The pilot of an EC 130B4 was killed in a collision with another helicopter during a nighttime approach to a busy heliport.

BY LINDA WERFELMAN



The pilot said that after he turned the AS 350B from a modified right base onto final, he “felt a shudder, and then the aircraft started to vibrate significantly.”

He said that he heard the president of Biscayne Helicopters say, on the radio frequency, that there had been a midair collision, and then he conducted a run-on landing on grass west of the helipads.

“While the helicopter started to slow, it began turning and listing to the left,” the report said. “He braced when he saw the main rotor blades contacting the ground, and when they slowed, he executed the emergency shutdown procedures. He then exited the helicopter from the right main cabin door.”

The pilot told investigators that he did not remember hearing a radio transmission from the pilot of the other helicopter or seeing another helicopter in the landing pattern, except for the Agusta that he had followed.

He said that the surrounding area was well-lit and that he saw the blinking lights of numerous police cars on a road south of the heliport. At the time of the accident, the strobe lights, position lights, instrument lights and searchlights on the AS 350B were illuminated, he said.

Another pilot who conducted a departure about the same time said that there were so many lights at the heliport and in the surrounding area that “it was almost like daylight there down on the ground.” In addition, the report said that “pyrotechnics [a fireworks display] occurred immediately before the collision.”

The report said that an individual at Speedway Heliport was using — without permission — a radio frequency assigned to the ATC at North Perry Airport, about 40 mi (64 km) north, to provide visual flight rules (VFR) advisory service to pilots during their approaches and departures from the facility. The pilots of both accident helicopters had announced on that radio frequency that they were inbound for landing. The radio operator said that, as the helicopters approached, he saw the AS 350B, which was advised to land on the west side of the Speedway Heliport area, but not the

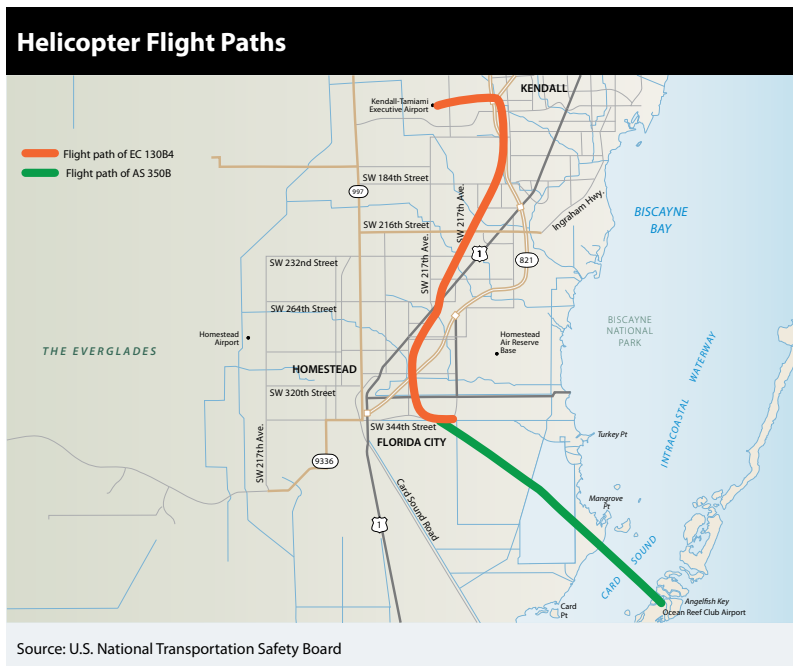


Figure 1

EC 130B4, which was on a straight-in approach, landing to the east on the west pad.

Witnesses said that the AS 350B was southwest of the heliport when the pilot turned it to the east; at the same time, the EC 130B4 was west of the heliport, also on an easterly heading.

“Witnesses reported the AS 350B helicopter was slightly higher and to the right of the EC 130B4 helicopter, and the AS 350B helicopter appeared to be flying at a faster speed,” the report said. “One witness reported that the AS 350B helicopter was ‘coming in hard’ with respect to speed and vertical descent rate, while another witness reported that the AS 350B helicopter overtook the EC 130B4 helicopter and appeared to be flying at twice the speed of the EC 130B4.”

The report said that the EC 130B4’s main rotor blades struck the left skid of the AS 350B. The EC 130B4 descended immediately, and the pilot of the AS 350B flew the helicopter east to land on grass at the heliport.

The pilot of the AS 350B held a commercial pilot certificate with helicopter and airplane single-engine land ratings, an airline transport pilot certificate with an airplane multiengine land rating and a first-class medical certificate. He had 7,000 flight hours, including 4,600 flight hours in



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The pilot of this AS 350B — photographed at the racetrack heliport before the accident — said he felt significant vibration as he landed the aircraft after the midair collision.

rotorcraft. He had worked for Biscayne Helicopters at several times and in several capacities; the latest was as a contract pilot, beginning Oct. 11, 2005. Company records showed that, from Oct. 11, 2005, until the time of the accident, he had accumulated 43.6 flight hours; the day of the accident, he had 6.4 flight hours, the report said.

The EC 130B4 pilot held a commercial pilot certificate with a helicopter rating, an instrument helicopter rating, and a second-class medical certificate. He had 2,717 flight hours, all in helicopters. He was hired by HeliFlight (doing business as HelicopterShuttle.com) on Jan. 10, 2005, and after several months of training, was assigned as pilot-in-command of EC 130B4s on April 21.

The AS 350B was manufactured in 1981 by Aerospatiale as an AS 350D and was converted to an AS 350B in accordance with a company service bulletin; it was certificated as a normal category helicopter and was equipped with a landing light, position lights and an upper strobe light.

Maintenance records from April 1, 2005, until the accident showed no entries for the helicopter's external lights. Two radio discrepancies were noted during that period, and both were corrected several months before the accident. The last scheduled maintenance before the accident was a 100-hour inspection on Sept. 29 at 6,483 flight hours, 41 flight hours before the accident.

The report said that the “External Preflight Inspection” checklist included specific instructions to check the landing light, taxi lights, instrument lights and anti-collision lights and that “a review of an undated aircraft maintenance log sheet, presumed to be for the accident date, revealed a signature of the accident pilot.”

The EC 130B4 was manufactured in 2004 by Eurocopter France; a standard/normal airworthiness certificate was issued the following year by the U.S. Federal Aviation Administration (FAA). The helicopter had a landing light, taxi light, position lights, a red strobe light atop the vertical stabilizer and a strobe light on the bottom of the fuselage.

Records indicated that three times during the spring and early summer of 2005, bulbs were replaced in the tail position light of the EC 130B4. Maintenance personnel traced the frequent burnouts of the bulb to vibration from the helicopter's fenestron; after the vibration was corrected, the burnout problem ended, the report said.

The last inspection of the EC 130B4 occurred during a 100-hour inspection on Sept. 7 at a total time of 181 flight hours. When the accident occurred, the helicopter had been flown 76 flight hours since the inspection.

The EC 130B4 flight manual said that daily operating checks must be conducted on a number of items, including the taxi light, landing light and external lights on the vertical stabilizer and fin. Paperwork found in the wreckage included a “Daily Inspection” item that contained an entry dated Nov. 20 with a signature “consistent with other signatures of the accident pilot,” the report said.

According to the operations manual, the facility's radio operator was responsible for directing aircraft movement at the heliport.

Operators of both accident helicopters had submitted applications to operate at the heliport; those applications included signed statements that they had copies of the heliport's operations manual and that they would comply with its procedures. Each application included space to list the names of two helicopter pilots; the name

of the EC 130B4 pilot was listed on the HelicopterShuttle.com application, but the Biscayne Helicopters application did not include the name of the pilot of the AS 350B.

Both helicopters were listed as authorized to enter Homestead-Miami Speedway special use airspace.

A September 2000 agreement between the speedway and the Homestead Air Reserve Base ATC tower said, “All aircraft shall be responsible for providing their own separation under VFR ... during entry/exit to [the speedway] complex and while operating in the vicinity.”

The agreement also said that, unless instructed otherwise by the control tower, pilots of helicopters arriving from the east and south “will enter the ... airspace in the vicinity of Turkey Point at or below 500 ft MSL [mean sea level] and proceed direct to Point ‘S,’ direct to [the heliport] pad.” However, the pilot of the AS 350B, which was approaching the heliport from the southeast, was told by a tower controller to fly direct to the racetrack, the report said.

The director of operations for HeliFlight told investigators that the pilot of the EC 130B4, one of two company pilots handling race-related flights, had not been trained by the company for flights to the heliport. He also said that there had not been a safety briefing that year on racetrack flights.

The other HelicopterShuttle.com racetrack pilot said that the accident pilot had flown to the heliport once before the race and that the track had been closed during that flight. The pilot also said that he had asked the “racetrack representative” — the same person who handled radio communications the night of the accident — about a mandatory pilot briefing.

“He was advised there would be no safety briefing this year, since ‘the operation is well-established, with a good safety record,’” the report said. “The racetrack representative briefed him on items including power lines, suggested approach paths, communications and reporting points. On Nov. 17, 2005, he [the other HelicopterShuttle.com racetrack pilot] briefed the accident pilot on what he was briefed on by the racetrack representative and specifically discussed the safety hazards, approach paths, radio communications [and] reporting points. He also suggested that a steep approach be conducted, but no approach speeds were discussed.”

Later in the day, the accident pilot confirmed that he had received copies of the operations manual and the agreement between the racetrack and Homestead Air Reserve Base and that he had no questions because the information was “straightforward and clear,” the other pilot said.

The president of Biscayne Helicopters told investigators that the company’s chief pilot had briefed all company pilots involved in racetrack flights before the Nov. 20 race and had discussed the operations manual and the racetrack–air base agreement.

“Additionally, the pilot of the AS 350B helicopter and another company pilot flew into the [heliport] before the day of the race during the daytime to re-familiarize themselves with the heliport and the surrounding area, installed equipment at the heliport and procedures,” the report said.

Both operators said that a safety briefing was not conducted before the start of flights to and from the heliport. The president of one operation said that a night flight along the routes to be used had been planned to “determine if there were any issues with in-place

lighting” or other problems, but the flight did not occur because of “a natural disaster.”

FAA Advisory Circular (AC) 00-61, dated July 24, 2000, recommends safety briefings for all participants in flight operations associated with auto-racing events to discuss a number of topics, including night operations. The AC does not discuss speed restrictions but depicts “a single altitude to be flown, a frequency changeover point and one route to the event site and heliport,” the report said.

Witnesses saw exterior lights on both helicopters before the collision, but several saw that the EC 130B4’s landing light was not illuminated; it had previously burned out, the report said.

The chief pilot for Biscayne Helicopters said that during night flights to the heliport, “it is sometimes difficult to locate another aircraft ... due to ground lights (motor vehicle traffic). ... Ground checkpoints are difficult to identify at night, making sequencing of aircraft uncertain at times, as aircraft are not always calling in (to the helipad) at regular or known checkpoints. This makes visually identifying other aircraft difficult for both pilots and ground personnel. Maintaining a close listening watch to radio traffic is essential.”

Someone acquainted with both pilots said that after an earlier flight on the night of the accident, he told the pilot of the EC 130B4 that the landing light was not illuminated. The pilot replied, “Oh, sorry about that. Thanks, man.” When the helicopter departed, the landing light still was not illuminated, the report said. ●

This article is based on U.S. National Transportation Safety Board accident brief no. MIA06FA022A and the accompanying public docket.