

NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety
Washington, D.C. 20594

July 7, 2013

Group Chairman's Factual Report

OPERATIONS GROUP

DCA13MA121

A. ACCIDENT

Accident: DCA13MA121
Operator: Rediske Air
Location: Soldotna, Alaska
Date: July 7, 2013
Time: 1120 Alaska daylight time¹
Airplane: deHavilland DHC-3 Otter, N93PC

B. OPERATIONS GROUP

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C. SUMMARY

On July 7, 2013, about 1120 Alaska daylight time, a deHavilland DHC-3 “Otter” airplane, N93PC, was destroyed after a collision with terrain shortly after takeoff from the Soldotna Airport, Soldotna, Alaska. The airplane was registered to Rediske Family Limited Partnership, Nikiski, Alaska, and was operated by Rediske Air, Nikiski, Alaska under the provisions of 14 Code of Federal Regulations (CFR) Part 135 as an on-demand charter flight. The commercial pilot and nine passengers were fatally injured. Visual meteorological conditions prevailed, and no flight plan was filed for the flight destined to Bear Mountain Lodge, approximately 90 miles southwest of Soldotna.

D. DETAILS OF THE INVESTIGATION

The Operations Group Chairman was the first NTSB investigator on-scene after the accident, arriving about 1700. First responders had extinguished the postcrash fire and were awaiting the medical examiner. The Operations Group chairman coordinated with law enforcement and

¹ All times are Alaska daylight time (AKD) based on a 24-hour clock, unless otherwise noted. Actual time of accident is approximate.

airport officials to secure the accident site, took initial on-scene photos, interviewed multiple airport tenants, and performed a general stake-down until the arrival of the full investigation team.

An Operations Group was formed on July 9, 2013, and the group performed on-scene interviews and document reviews at the operator's base location in Nikiski on July 9-10, 2013.

Rediske Air and Viking Air (DHC-3 Type Certificate Holder) provided requested flight documents and manuals for review. The Federal Aviation Administration (FAA) provided requested background documentation for the pilot. Copies of the operations specifications (Ops Specs), operations manual, training manual, drug policy, and pilot records were obtained from the operator.

Interviews were conducted with all company pilots and scheduler/dispatchers.

The Operations Group Chairman conducted additional interviews with the FAA Principal Operations Inspector (POI) and the Principal Maintenance Inspector (PMI) for Rediske Air on November 20, 2013.

E. FACTUAL INFORMATION

1.0 History of Flight

On the day of the accident, the pilot was scheduled to fly a different trip with the accident airplane, but shortly before the planned departure time, the trip was canceled. The group of nine passengers who were on board the accident flight had been scheduled to go to the lodge in two of the operator's smaller airplanes; however, when the pilot's previous flight canceled, he decided to use the Turbine Otter so the group could all fly on one airplane.

The lodge operator requested that a load of groceries and lodge supplies be flown out with the group. The lodge operator was in Nikiski at the time and brought the supplies to Rediske Air's base. The lodge operator estimated the weight of the cargo at 300 pounds. After the pilot unloaded the cargo from the canceled flight, he and the lodge owner loaded the cargo for the flight to the lodge.

Rediske Air did not keep fueling records for each flight. A witness who was present during the fueling operations at Nikiski said that he saw the pilot top-off the front tank and then start to fuel the center tank. The witness later returned to the fuel supply tank to fuel his helicopter and thought that he noticed 56 gallons on the fuel reader. He said that he and the accident pilot would have been the only people to use the fuel tank.

The first leg of the trip was a positioning flight from Nikiski to Soldotna, where the passengers were to be picked up. The flight was completed uneventfully.

According to witnesses at the Soldotna Airport, after loading the passengers and their baggage the pilot taxied to runway 25 for departure. There were no witnesses to the accident sequence. The airplane impacted the ground approximately 2,320 feet from the threshold of runway 25 and

about 154 feet right of the runway centerline. Impact signatures were consistent with a nose, and right wing low attitude at impact.

A post-impact fire ensued and the majority of the airplane's fuselage was consumed by the fire.

See the Airworthiness Group Chairman's Factual Report for additional wreckage documentation

1.1 Witness Accounts

Five witness accounts were taken, and the summaries of the information are as follows:

1. Witness #1 stated that she heard the pilot start the airplane and announce on the common traffic advisory frequency (CTAF) that he was ready to taxi to runway 25. She was inside her hangar, but looked out the window to admire the airplane, then returned to what she was doing. About one minute later, there was a loud explosion, and an ELT signal was heard on the radio. She looked out the window again and saw the airplane engulfed in flames. She called 911 and tried to get out to the airplane, but was unable to get close because of the heat.
2. Witness #2 was located at a campground on the river about 1/2 mile from the airport. She heard what she thought was an airplane taking off, but she said that the engine had a very high-pitched sound, not like what other planes sound like. She went inside and did not hear an impact.
3. Witness #3 was also at the campground and heard the airplane take off. She stated that the engine had a very high pitch. She said that, shortly after she heard the engine, it went silent and then she heard a loud "pop."
4. Witness #4 stated that he did not see the accident but saw the airplane landing at the airport about 1120. He thought that he was landing "low and slow."
5. Witness #5 was a passenger in a car heading east on the road paralleling the airport. He stated that he saw the airplane in flight at what he estimated as 100 feet in the air. He said that the airplane looked to be climbing in a normal attitude, but he did see a "puff of black smoke" coming from the engine area. The car he was in traveled behind a hangar, and he did not see the airplane's impact. He did see the fire after he passed the hangars.

2.0 Flight Crew Information

2.1 The Pilot-in-command

The pilot, age 42, held a commercial pilot certificate with an airplane single-engine land, multi-engine land, and instrument ratings. His most recent second-class airman medical certificate was issued July 11, 2012, and contained no limitations. On April 24, 2012, the pilot was approved as a check airman in single-engine land airplanes flown by Rediske Air.

A review of Rediske Air's training records showed that the pilot's initial ground training in the Otter was completed on June 28, 2011. The pilot's most recent Part 135 competency check in the

Otter was accomplished on June 15, 2012, and his most recent recurrent ground training in that airplane was completed on that same date. The pilot received Part 135 competency and line checks in a Cessna 206 airplane on May 15, 2013.

Personal flight logbooks were not located, but the pilot's most recent insurance application, dated April 23, 2013, showed a total flight time of 7,765 hours with a total time in DHC-3 airplanes of 105 hours. The insurance form for the previous year indicated a total time in DHC-3 airplanes of 155 hours. His total flying time in the last 12 months was listed as 350 hours.

Company flight and duty time records were located for the pilot; however, there were no entries after June 23, 2013. Company personnel attempted to recreate the pilot's flights between that date and the day of the accident, but were not able to create a complete log because company flight records did not have pilot names under each flight. According to the records that they could recreate, the pilot flew 1.9 hours the day prior to the accident, and 6.1 hours in the 72 hours prior to the accident.

2.1.1 72-Hour History

The pilot's spouse could not recall the pilot's work and sleep schedule for the Thursday before the accident. She stated that, on Friday, the pilot went to work around 0600. She recalled that they took their children to a movie that started at 1920, and they were back home between 2100 and 2130. She stated that Saturday was a normal work day for the pilot and that he left the house for work by 0830. She stated that he returned home and they had dinner around 1830 to 1900. She said they got the children ready for bed and watched TV, and the pilot fell asleep between 2100 and 2130. She stated that on Sunday (the day of the accident), the pilot got up and showered prior to leaving for work. She was not sure what time he left, but it was bright outside. She did not talk to him before he left for work.

2.2 Medical and Pathological Information

A postmortem examination of the pilot was conducted under the authority of the Alaska State Medical Examiner, Anchorage, Alaska, on July 9, 2013. The examination revealed that the cause of death for the pilot was attributed to blunt force injuries.

2.2.1 Post-Accident Toxicological Testing

A toxicological examination by the FAA's Civil Aeromedical Institute (CAMI) on January 9, 2013, was negative for any carbon monoxide, alcohol, or drugs.

3.0 Airplane Information

N93PC, a de Havilland DHC-3 "Otter" airplane, is an all-metal, high wing monoplane powered by a single Honeywell (Garrett) TPE331-10R-511C engine driving a 4-blade Hartzell constant speed, full-feathering, reversing propeller. The airplane was modified with the Honeywell engine through the Texas Turbine Conversions "Super Otter" Supplemental Type Certificate (STC). The

accident airplane was configured with nine passenger seats and two pilot seats. The airplane is divided with partitions into a cockpit, a cabin, and a baggage compartment.

The current Type Certificate holder for the DHC-3 is Viking Air Limited, Sidney, British Columbia, Canada.

4.0 Weight and Balance

See the Airworthiness Group Chairman's Factual Report and the Weight and Balance Study for weight and balance information.

5.0 Company Overview

Rediske Air is a Part 135 on-demand air operator with its main office located in Nikiski, Alaska, and a satellite base at the Soldotna Airport. The accident pilot was the owner and Director of Operations. The company employed five pilots, one of whom was part-time. The company also had a check airman who was not a full-time employee.

The company operated six airplanes: three Cessna 207s (one of which was being rebuilt at the time of the accident), one Cessna 206, a Brittan Norman BN-2 Islander, and the accident airplane (DHC-3 Otter.)

6.0 FAA Oversight

FAA responsibility for Rediske Air's Part 135 Operating Certificate was maintained at the Anchorage Flight Standards District Office (FSDO).

The principle operations inspector (POI) stated that he had worked for the FAA since September 1998. Prior to working for the FAA, he had been a pilot in Alaska for 30 years. He stated that he was the POI for Rediske from late in 2009 to September 2013. He was also the POI for 37 other Part 135 operators. He stated that, with regards to surveillance, Rediske Air was a good operator and "wasn't on the radar." He said that he would visit their facility a couple of times a year and he had regular conversations with them on the phone.

The principle maintenance inspector (PMI) stated that he had worked for the FAA since July 2012. Years prior to working for the FAA, he had worked for Rediske Air as a mechanic and Director of Maintenance. He stated that he had been the PMI for Rediske Air since February 2013. He said that he was responsible for 28 other operators and 50 mechanics with inspection authority, but noted that many of his operators were seasonal and only 10-15 had year-round operations. He stated that he would visit Rediske Air's operation once every 3 months, and he had had monthly conversations with them over the phone. He said that he had no issues with the operator's maintenance program, and that they were a good operator. He last visited Rediske's operation on the Wednesday prior to the accident. During that visit he performed a fuel facility inspection and a ramp check on the Otter. A FAA Program Tracking and Reporting Subsystem (PTRS) entry, dated July 8, verified the inspection.

6.1 Operations Specifications:

The FAA issues Part 135 certificated operators Ops Specs which are a set of documents that establish how an operator will comply with the safety standards required by regulation. Ops Specs describe the authorizations, limitations, standards and procedures that are applicable to a specific certificate holder.

A Basic Part 135 operator is an operator that is limited in size and scope, and therefore is allowed some deviations to the requirements of Part 135, such as, management personnel, manual requirements, and training programs. A Basic Part 135 operator has limitations placed on the number of pilots, aircraft and types of operations.

Rediske Air had operated as a Basic Part 135 Air Operator (Ops Spec A-038)² until it added the DHC-3 to its certificate in 2010, at which time the size and scope of the operation became such that it could no longer operate under the less-restrictive Basic Operator Ops Specs.

Rediske was authorized operations of aircraft with passenger seating configurations, excluding any pilot seat, of nine seats or less.³ The accident airplane was configured for nine passenger seats.

The DHC-3 is type certificated for 16 seats (1 pilot + 15 passengers). A Supplemental Type Certificate (STC) limiting the airplane to nine seats is available⁴; however, the operator did not have the STC installed on the accident airplane.

Rediske Air's Operations Specifications Part D (aircraft maintenance) defines the program under which the aircraft will be maintained. Aircraft type certificated for 9 seats or less require a less robust maintenance program per regulation than aircraft type certificated for 10 seats or more. According to the operations specifications D-73, *Additional Maintenance Requirements*, issued by the Anchorage FSDO on August 9, 2012, the accident airplane was being maintained under a 9 seat or less maintenance program even though it was type certificated for 16 seats.

The operator was required to have each aircraft that it operated listed in the company weight and balance program (Ops Spec A-096). A review of the company's Ops Specs after the accident revealed that the accident airplane was not listed in the weight and balance program. When asked why the airplane had not been added, the POI stated that it was an oversight. Rediske personnel were asked to add the accident airplane to the weight and balance program documents after the accident occurred.

² See Appendix A of the Operations Group Chairman's Factual for a copy of related Ops Specs.

³ In order to operate airplanes that are type-certificated with 10 seats or more, an operator must accomplish additional maintenance tasks, as well as increase the structure of their maintenance program. Operations of aircraft with a seating configuration of more than 9 passenger seats, excluding any pilot seat, must be maintained under a maintenance program in 14 CFR Part 135.415, 135.417, and 135.423 through 135.443.

⁴ STCs SA4345NM and SA4301NM are listed in the FAA STC database for installation of a one to nine seat passenger configuration.