



NATIONAL TRANSPORTATION SAFETY BOARD

Office of Research and Engineering
Washington, DC

MEDICAL FACTUAL REPORT

April 24, 2018

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Medical Officer

A. ACCIDENT: CEN16FA373 - Ephraim, Wisconsin

On September 18, 2016, about 2032 central daylight time, a Cessna 182T airplane, N2012F, impacted terrain during a visual approach to the Ephraim-Gibraltar Airport (3D2), Ephraim, Wisconsin. The pilot and student pilot were fatally injured, and the airplane was destroyed. The airplane was registered to and operated by Keller Aviation LLC under the provisions of 14 Code of Federal Regulations Part 91 as a personal flight. Night visual meteorological conditions prevailed for the flight, which departed from Green Bay-Austin Straubel International Airport (GRB), Green Bay, Wisconsin on an instrument flight rules (IFR) flight plan at 2003.

B. GROUP IDENTIFICATION:

No group was formed for the medical evaluation in this accident.

C. DETAILS OF INVESTIGATION

Purpose

This investigation was performed to evaluate the pilot and student pilot for medical conditions, the use of medications/illicit drugs, and the presence of toxins.

Methods

The FAA medical case review, pilot's FAA medical certification file and personal health care records, FAA Bioaeronautical Sciences Research Laboratory toxicology reports, and autopsy reports were reviewed.

Pilot - Left Seat

FAA Medical Case Review and Medical Certification File

According to the FAA documents, the 69-year-old male pilot was 68 inches tall and weighed 225 pounds at the time of his most recent FAA medical certification exam, dated August 31, 2016. At that time, he reported 920 total flight hours. The pilot had reported having high blood pressure controlled with lisinopril and diabetes controlled with the oral medication metformin to the FAA. These medications are generally considered not to be impairing. The aviation medical examiner (AME) documented the pilot did not have any other significant medical issues. The pilot was issued a time limited special issuance third

class medical certificate with the limitation: valid for twelve months following the examination.

Included in the FAA files was a letter from the pilot's primary care provider to the FAA dated August 8, 2016, that documented the pilot had type 2 diabetes well controlled with metformin. His hemoglobin A1C was 6.9%. and he had had no episodes of low blood sugar and no evidence of organ disease associated with diabetes. Additionally, the FAA records included FAA Form 8500-7 (Report of Eye Evaluation) completed by an Ophthalmologist on August 24, 2016 documenting the evaluation non-insulin dependent diabetes. The pilot's visual acuity corrected to 20/25 distant and 20/20 near and the ophthalmologist's professional evaluation documented there was no pathology that affected vision.

Personal Ophthalmology Records

The investigation obtained and reviewed annual diabetic ophthalmology examination records from August 2014 through August 2016. The records documented the pilot had bilateral cataracts with mild to moderate nuclear sclerosis.¹ The ophthalmologist's impression was the pilot had non-insulin dependent diabetes with no diabetic retinopathy and no pathology that affected the pilot's vision.

Autopsy

The Dane County Medical Examiner's autopsy report documented the cause of death was thermal injuries and inhalation of superheated gases and the manner was accident. The heart was enlarged with 40 to 50% narrowing of the right coronary and 60 to 80% narrowing of the left anterior descending and left circumflex coronary arteries. The autopsy did not find evidence of ischemic heart muscle damage. The autopsy was limited due to the extent of injury and the brain was not examined.

Toxicology

FAA Bioaeronautical Sciences Research Laboratory toxicology testing was negative for tested-for-drugs, alcohol and carbon monoxide.

Student Pilot - Right Seat

FAA Medical Case Review

According to the FAA medical case review, the 16-year-old female pilot did not have nor was she required to have a medical certification examination.

Autopsy

The Dane County Medical Examiner's autopsy report documented the cause of death was thermal injuries and inhalation of superheated gases and the manner was accident. No natural disease was identified.

Toxicology

FAA Bioaeronautical Sciences Research Laboratory toxicology testing was negative for tested-for-drugs, alcohol and carbon monoxide.

¹ A moderate cataract is an area of yellowing and clouding of the eye's internal lens matrix. Cataracts may be asymptomatic, but symptoms can include: cloudy or blurry vision, faded colors, glare from headlights and halos around lights as well as poor night vision. (See: https://nei.nih.gov/health/cataract/cataract_facts)

D. SUMMARY OF MEDICAL FINDINGS

The 69-year-old male pilot had high blood pressure controlled with lisinopril and diabetes controlled with metformin. Both medications are generally considered not to be impairing. The aviation medical examiner issued him a special issuance medical certificated with a one-year time limitation.

According to medical records, the pilot had bilateral cataracts with mild to moderate nuclear sclerosis, but the examining ophthalmologist determined there was no pathology that affected his vision.

The Dane County Medical Examiner's autopsy report documented the cause of death was thermal injuries and inhalation of superheated gases and the manner was accident. The heart was enlarged with 40 to 50% narrowing of the right coronary and 60 to 80% narrowing of the left anterior descending and left circumflex coronary arteries. The autopsy did not find evidence of ischemic heart muscle damage.

Toxicology testing was negative for tested-for-drugs, alcohol and carbon monoxide.