

NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety
Washington, DC 20594

February 19, 2015

SURVIVAL FACTORS

Survival Factors Specialist's Factual Report

DCA15MA029

A. ACCIDENT

Operator: Sage Aviation LLC.
Location: Gaithersburg, Maryland
Date: December 8, 2014
Time: 1041 EST
Airplane: Embraer EMB-500 Phenom 100, N100EQ

B. SURVIVAL FACTORS SPECIALIST

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C. SUMMARY

On December 8, 2014, about 1041 eastern standard time (EST), an Embraer EMB-500 Phenom 100, N100EQ, impacted terrain and three houses about 0.75 miles short of runway 14 while on approach to Montgomery County Airpark (GAI), Gaithersburg, Maryland. The airline transport rated pilot and two passengers were fatally injured as well as three persons on the ground. The airplane was destroyed during the impact and ensuing fire. Marginal visual meteorological conditions prevailed at the time and the flight was operating on an instrument flight rules (IFR) flight plan. The airplane was registered to and operated by Sage Aviation LLC., of Chapel Hill, North Carolina, under the provisions of 14 Code of Federal Regulations Part 91 as a personal flight. The flight originated from Horace Williams Airport (IGX), Chapel Hill, North Carolina, with GAI as its intended destination.

D. DETAILS OF INVESTIGATION

This factual report addresses medical information and locations of the pilot and two passengers, and information on the emergency locator transmitter.

1.0 Medical information

The Office of the Chief Medical Examiner for the State of Maryland performed an autopsy on the deceased pilot and passengers. The findings of the autopsy were:

Cause of Death: Multiple injuries

Manner of death: Accident

2.0 Occupant Information

2.1 Injury Table

Injuries	Flight Crew	Flight Attendants	Passengers	Other	Total
Fatal	1	0	2	0	3
Serious	0	0	0	0	0
Minor	0	0	0	0	0
None	0	0	0	0	0
Total	1	0	2	0	3

2.2 Occupant Seating Location

The pilot was seated in the left cockpit seat and the passengers were seated in the right cockpit seat and the aft facing left side cabin seat (figure 1). The cockpit portion of the airplane wreckage came to rest inverted, with extreme impact damage, and the interior cabin fuselage was heavily damaged by fire (photograph 1).

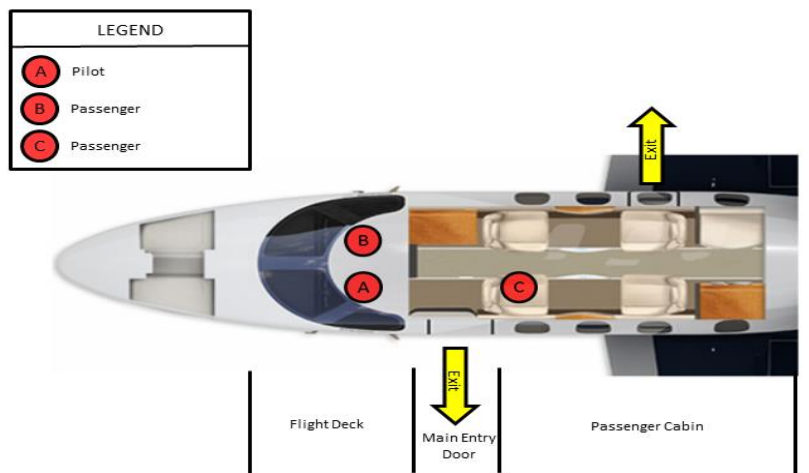


Figure 1- Occupant seat location.

2.3 Occupant Location and Orientation

Body Location Designator	Gender	Weight ¹	Injury Classification	Occupant Location and Orientation ²
A	M	163 lbs	Fatal	Pilot A was found outside the airplane between two garage doors. He was secured to the left cockpit seat pan with a lap belt. He was in the prone position. He suffered multiple injuries to the head and neck, torso, and extremities with chemical-type burns.
B	M	198 lbs	Fatal	Passenger B was found in the cockpit of the airplane. He was secured to the right cockpit seat by two shoulder harnesses and a lap belt. He suffered multiple injuries to the head and neck, torso, and extremities.
C	M	300 lbs	Fatal	Passenger C was found inside the airplane cabin. He was belted. He was found in the prone position facing the aft of the airplane. He suffered multiple injuries to the head and neck, torso, extremities, and postmortem thermal injuries.



Photograph 1- Location of the fuselage.

¹ Weights were obtained from autopsy reports.

² Injuries were obtained from autopsy reports.

3.0 Emergency Locator Transmitter (ELT)

The ELT was identified as a Kannad 406AF (Photograph 2). The NTSB Structures Chairman noted the ELT was still operating and found the ELT with the switch in the 'ARM' position. The ELT was secured to a side wall inside the cargo compartment with a Velcro strap. The antenna and cockpit remote switch cables were still securely affixed, connected, and secured with Velcro. The following information was obtained from the ELT:

Kannard 406AF
Identification Number: A00527
GSN: 291807
Registration markings: N100EQ
MSN: E50000082
Connector for Kannad 406 ELT TSO-C91a and TSO-C126
P/N S1820514-03
S/N 2621277-0071



Photograph 2- Secured ELT inside the cargo compartment.