



National Transportation Safety Board Aviation Accident Final Report

Location:	LAKELAND, FL	Accident Number:	MIA00LA133
Date & Time:	04/13/2000, 1830 EDT	Registration:	N905AS
Aircraft:	Air & Space. 18A	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 Fatal
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

Witnesses stated the gyroplane jumped into the air about 30 to 50 feet, made a right turn down runway 32 climbing to about 150 to 200 feet, turned right down a cone line (crosswind), leveled the gyroplane and climbed another 100 feet. The gyroplane was observed to make a right turn, level briefly, and begin another right, which continued until the rotor blades were near vertical. The gyroplane slid sideways towards the ground in a high sink rate and collided with terrain. Examination of the airframe, flight controls, and engine assembly and accessories revealed no evidence of a precrash mechanical failure or malfunction. The reason for the in-flight loss of control was not determined.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's in-flight loss of control while maneuvering for undetermined reasons resulting in an uncontrolled descent and subsequent in-flight collision with terrain.

Findings

Occurrence #1: LOSS OF CONTROL - IN FLIGHT
Phase of Operation: MANEUVERING

Findings

1. (C) REASON FOR OCCURRENCE UNDETERMINED

Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: DESCENT - UNCONTROLLED

Findings

2. TERRAIN CONDITION - GROUND

Factual Information

On April 13, 2000, at about 1830 eastern daylight time, an Air & Space Gyroplane 18A, N905AS, registered to Air & Space America Inc., operating as a 14 CFR Part 91 personal flight, crashed while maneuvering in the traffic pattern at Lakeland-Linder Regional Airport, Lakeland, Florida. Visual meteorological conditions prevailed and no flight plan was filed. The gyroplane sustained substantial damage. The airline transport pilot was transported to a local area hospital with serious injuries, and died on April 23, 2000. The flight originated from Lakeland-Linder Airport about 2 minutes before the accident.

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Examination of the crash site revealed the aircraft was located in the grass east and north of taxiways "L" and "E". Numerous main rotor blade strikes were present on the ground and the aircraft was laying on its right side. Examination of the airframe, flight control assembly, engine assembly and accessories revealed no evidence of a precrash failure or malfunction. (For additional information see FAA inspector Statement and Lakeland Police Department Report, an attachment to this report.)

Dr. Stephen J. Nelson, District Medical Examiner, District Ten, Bartow, Florida conducted postmortem examination of the pilot, on April 24, 2000. The cause of death was complications of blunt force trauma. Postmortem toxicological analysis of specimens from the pilot were deferred due to the prolonged 10 day hospitalization prior to death, and because of the absence of any blood specimens suitable for toxicological testing obtained at the time of his initial hospital presentation after the accident.

According to the summary of hospital course by the pilot's treating physician at the hospital, the pilot "...had a complicated course with cardiac arrhythmias requiring pacemaker placement. He had difficulty during this time with his heart and sustained a period of arrest...." (For additional information see Medical Information supplied by NTSB Medical Officer, an attachment to this report.)

Review of pilot medical records obtained from Lourdes Hospital, Paducah, Kentucky, revealed the pilot saw a physician on February 28, 1996, for abdomen/chest pain and shortness of breath. A treadmill test was administered and the following comments were entered in the graded treadmill exercise report:

1. The resting ECG (electrocardiogram) reveals sinus rhythm with mild inferolateral ST-T wave changes.
2. Good exercise tolerance.
3. Appropriate heart rate and BP response to exercise with the patient achieving target heart rate.
4. Clinically negative for ischemia.

5. Electrocardiographically nondiagnostic for myocardial ischemia due to resting ECG abnormalities. However, with exercise there were noted to be changes suggestive of myocardial ischemia.

Review of FAA records on file at the Aeromedical Certification Division, Oklahoma City, Oklahoma, revealed on the pilots application for a second class medical application dated February 20, 1997, that the pilot indicated that he visited a health professional in February 1996. He indicated in block 19, "complete physical-no problems."

The aircraft wreckage and aircraft logbooks were released to Mr. John Potter, Air and Space America Inc., on May 5, 2000.

Pilot Information

Certificate:	Airline Transport	Age:	69, Male
Airplane Rating(s):	Multi-engine Land; Multi-engine Sea; Single-engine Land; Single-engine Sea	Seat Occupied:	Front
Other Aircraft Rating(s):	Glider; Gyroplane; Helicopter	Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	Airplane Multi-engine; Airplane Single-engine; Glider; Gyroplane; Instrument Airplane; Instrument Helicopter	Toxicology Performed:	Yes
Medical Certification:	Class 2 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	03/29/1999
Occupational Pilot:		Last Flight Review or Equivalent:	
Flight Time:	25000 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Air & Space.	Registration:	N905AS
Model/Series:	18A 18A	Aircraft Category:	Gyroplane
Year of Manufacture:		Amateur Built:	Yes
Airworthiness Certificate:	Experimental	Serial Number:	18-9
Landing Gear Type:	Tricycle	Seats:	2
Date/Type of Last Inspection:	07/16/1999, Annual	Certified Max Gross Wt.:	1800 lbs
Time Since Last Inspection:	48 Hours	Engines:	1 Reciprocating
Airframe Total Time:	440 Hours at time of accident	Engine Manufacturer:	Lycoming
ELT:	Not installed	Engine Model/Series:	O-360-A1D
Registered Owner:	AIR & SPACE AMERICA INC.	Rated Power:	180 hp
Operator:	AIR & SPACE AMERICA INC.	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	LAL, 142 ft msl	Distance from Accident Site:	1 Nautical Miles
Observation Time:	1835 EDT	Direction from Accident Site:	360°
Lowest Cloud Condition:	Scattered / 5000 ft agl	Visibility	15 Miles
Lowest Ceiling:	Broken / 15000 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	4 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	210°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.04 inches Hg	Temperature/Dew Point:	28° C / 19° C
Precipitation and Obscuration:			
Departure Point:	LAKELAND, FL (LAL)	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	1828 EDT	Type of Airspace:	Class D

Airport Information

Airport:	Lakeland-Linder Regional (LAL)	Runway Surface Type:	Unknown
Airport Elevation:	142 ft	Runway Surface Condition:	Unknown
Runway Used:		IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Fatal	Latitude, Longitude:	27.988889, -82.018611

Administrative Information

Investigator In Charge (IIC):	CARROL A SMITH	Report Date:	09/30/2003
Additional Participating Persons:	ALBERT KIMBALL; FAA FSDO; Orlando, FL		
Publish Date:			
Investigation Docket:	NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at pubinq@ntsb.gov , or at 800-877-6799. Dockets released after this date are available at http://dms.nts.gov/pubdms/ .		

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