



Aviation Investigation Final Report

Location:	ROSSVILLE, Tennessee	Accident Number:	MIA99LA008
Date & Time:	October 14, 1998, 13:22 Local	Registration:	N59514
Aircraft:	Ryan ST3KR	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 Fatal, 1 Serious
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

A Witness observed the airplane performing aerobatic flight. The airplane was observed to enter a spin and disappear below the tree line. Another witness observed the airplane start a steep climb estimated between 85 to 90 degrees nose up, as if the pilot was practicing a stall. The airplane was observed sliding backwards tail first. The nose pitched straight down, the airplane started spinning to the right before colliding with trees and terrain.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The failure of the pilot to maintain airspeed (VSO) while maneuvering in a recovery from a spin.

Findings

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

Findings

1. AEROBATICS - PERFORMED - PILOT IN COMMAND
2. STALL/SPIN - PERFORMED - PILOT IN COMMAND
3. (C) AIRSPEED(VSO) - NOT ATTAINED - PILOT IN COMMAND
4. STALL/SPIN - INADVERTENT - PILOT IN COMMAND

Occurrence #2: IN FLIGHT COLLISION WITH OBJECT

Phase of Operation: MANEUVERING

Findings

5. OBJECT - TREE(S)

Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER

Phase of Operation: MANEUVERING

Findings

6. TERRAIN CONDITION - GROUND

Factual Information

On October 14, 1998, about 1322 central daylight time, a Ryan ST3KR, N59514, operating as a 14 CFR Part 91 personal flight, registered to a private owner, crashed while maneuvering in the vicinity of Rossville, Tennessee. Visual meteorological conditions prevailed and no flight plan was filed. The airplane sustained substantial damage. The airline transport pilot/registered owner/pilot-in-command (PIC), and airline transport pilot-rated passenger sustained serious injuries and were air lifted to a medical trauma center. The flight originated from Wolf River Airport, Rossville, Tennessee, about 22 minutes before the accident. The FAA reported the pilot-rated passenger died of injuries on October 15, 1998.

A witness stated he and the pilot-rated passenger were driving around looking for land. They happened to drive by the airport, and he mentioned to the passenger that he knew another pilot who had an airplane there. They went to the airport not expecting to see the registered owner, since it was the middle of the week. Upon arrival at the airport they saw the registered owner by his hangar. He showed them the airplane, and offered his passenger a ride, which he accepted. The registered owner conducted a briefing and asked his passenger just before they started the engine if he wanted to do any aerobatics, which he stated yes. They started the engine, taxied out and took off to the northeast and went about 3 miles to the northeast. They were at about 2,000 to 3,000 feet and he observed them do some shallow turns followed by a couple of split S's. They changed direction and climbed a little higher, and did a couple of loops and then they did a spin. He saw them disappear below the tree line. He did not get concerned, he thought they had pulled out and gone out of sight for a minute. After about 10 to 15 minutes he became concerned and called the 911 operator and asked if anyone had reported an airplane crash. He was informed that they had, but they did not know the location.

Another witness stated he observed the airplane flying from north to south towards the Wolf River Airport. The airplane was between 500 to 600 feet at a very slow airspeed. The airplane was observed to start a right turn towards the west, and stopped the turn heading northbound. The airplane started a steep climb estimated between 85 to 90 degrees nose up, as if the pilot was practicing a stall. The airplane was observed to start sliding backwards tail first. The nose pitched straight down, the airplane started spinning to the right, and disappeared below the tree line, before colliding with trees and terrain.

The pilot-in-command stated in the NTSB Pilot/Operator Aircraft Accident Report, "After pushing the airplane out of the hanger I preflighted the plane and gave a safety briefing, including transfer of control procedures, to the passenger. I strapped him into the aft cockpit. I hand propped the aircraft (no electrical system) and strapped myself into the forward cockpit. It was a beautiful VFR day. We departed Wolf River Airport (54M) at approximately 1:00 PM and headed northeast for a local flight. At level off (2000 feet would have been typical for this

kind of flight, I don't recall the exact altitude) I trimmed the airplane and transferred control to the passenger. He did some turns and flew for while, after which I took control of the plane. I recall doing an approach to a stall and a recovery and continuing to maneuver in the area. I have no memory of the rest of the flight. I have no memory of any critical situation developing or of an impending crash. The passenger did not survive, and I was in intensive care for eight days."

The wreckage of N59514 was located about 3.2 miles northwest of Wolf River Airport, Rossville, Tennessee, in the woods at the edge of a corn field located in the vicinity 810 Blain Road Rossville, Tennessee.

Examination of the crash site revealed the airplane collided with trees and terrain in a nose down right wing low attitude. The airplane came to rest on a north-northeast heading. The right wing had compression damage extending from the wing root outboard to the wing tip, and the wing was bent upward. The left wing separated from the airframe and was located about 35 yards ahead of the wreckage. The fuel tank was ruptured and an odor of fuel was present.

Examination of the airframe and flight control assembly revealed no evidence of a precrash mechanical failure or malfunction. An engine examination was not conducted. The engine sustained extensive damage.

Review of the pilot-in-command's medical transferee records was conducted by the NTSB Medical Officer. The records did not document any injuries to the upper extremities except for abrasions to the left and right elbows. The positive toxicology results are consistent with treatment received postaccident. (For additional information see Medical Records and Autopsy Report Extracted Pertinent Factual Information MIA99LA008.)

Postmortem examination of the pilot rated passenger was conducted by Dr. J. T. Francisco County Medical Examiner, Memphis, Tennessee, on October 16, 1998. The cause of death was multiple injuries. Postmortem toxicology of specimens from the pilot rated passenger was performed by the Forensic Toxicology Research section, Oklahoma City, Oklahoma. These studies were negative for ethanol. The positive toxicology results are consistent with treatment received postaccident.

Review of the pilot-rated passenger discharge/death summary revealed fractures of the left ulna, injury to the right distal radius, and injury to the right palm at the base of the right thumb. Numerous lesions were noted over the backs of the hands. (For additional information see Medical Records and Autopsy Report Extracted Pertinent Factual Information MIA99LA008.)

The wreckage was released by the FAA to the Fayette County Sheriff's Department, Somerville, Tennessee, on October 14, 1998.

Pilot Information

Certificate:	Airline transport; Commercial	Age:	51, Male
Airplane Rating(s):	Single-engine land; Single-engine sea; Multi-engine land	Seat Occupied:	Front
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	Yes
Medical Certification:	Class 1 Valid Medical--w/ waivers/lim	Last FAA Medical Exam:	September 10, 1998
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:	10000 hours (Total, all aircraft), 1000 hours (Total, this make and model), 200 hours (Last 90 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Ryan	Registration:	N59514
Model/Series:	ST3KR ST3KR	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	1991
Landing Gear Type:	Tailwheel	Seats:	2
Date/Type of Last Inspection:	February 14, 1998 Annual	Certified Max Gross Wt.:	1885 lbs
Time Since Last Inspection:	33 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	2630 Hrs	Engine Manufacturer:	Kinner
ELT:	Installed	Engine Model/Series:	R-540-3
Registered Owner:	RONALD J. SPENCE	Rated Power:	
Operator:		Operating Certificate(s) Held:	None
Operator Does Business As:		Operator Designator Code:	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	MEM ,332 ft msl	Distance from Accident Site:	
Observation Time:	12:50 Local	Direction from Accident Site:	
Lowest Cloud Condition:	Clear	Visibility	20 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	23 knots / None	Turbulence Type Forecast/Actual:	/
Wind Direction:	0°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	21°C / 32°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	(54M)	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	13:00 Local	Type of Airspace:	Class G

Airport Information

Airport:		Runway Surface Type:	
Airport Elevation:		Runway Surface Condition:	
Runway Used:	0	IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 Serious	Aircraft Damage:	Substantial
Passenger Injuries:	1 Fatal	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Fatal, 1 Serious	Latitude, Longitude:	35.040958,-89.540168(est)

Administrative Information

Investigator In Charge (IIC): Smith, Carrol
Additional Participating Persons: JOHN E BASSLER; MEMPHIS , TN

Original Publish Date: August 3, 1999

Last Revision Date:

Investigation Class: [Class](#)

Note:

Investigation Docket: <https://data.nts.gov/Docket?ProjectID=44172>

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).