



National Transportation Safety Board Aviation Accident Final Report

Location:	BOYNTON BEACH, FL	Accident Number:	MIA96LA074
Date & Time:	02/02/1996, 1715 EST	Registration:	N77YK
Aircraft:	Yakovlev YAK-52	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	1 Fatal
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

A witness stated that the airplane was observed on a low pass down the runway at about 900 to 1,000 feet. The pilot then made three barrel rolls and lost altitude on all three rolls. The pilot remained in a closed traffic pattern and made a second pass down the runway at about 100 to 200 feet. The airplane was observed to enter a pull-up and a barrel roll to the left. According to information from witness reports, when the airplane was at the 90-degree point, it entered a descent and crashed into the ground. Examination of the airplane revealed no evidence of a precrash failure or malfunction. The pilot had limited experience performing aerobatic flight, and he had only about 6 hours of flight time in this make and model of airplane. A colleague observed that when the pilot performed barrel roll maneuvers on previous flights, the airplane was 'dishing out and losing . . . altitude on a regular basis.' The colleague said that he had 'informed' the pilot that he should obtain some dual instruction. A toxicology test of the pilot's blood showed an alcohol level of 0.10%.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: Pilot impairment of judgment and performance due to alcohol, his resultant improper planning/decision, and his failure to maintain sufficient altitude above the terrain while performing an aerobatic maneuver. Factors relating to the accident were: the pilot's lack of experience in the make and model of airplane, and his lack of experience in the type of operation (aerobatic flight).

Findings

Occurrence #1: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: MANEUVERING

Findings

1. (C) PLANNING/DECISION - IMPROPER - PILOT IN COMMAND
2. (C) IMPAIRMENT(ALCOHOL) - PILOT IN COMMAND
3. AEROBATICS - INITIATED - PILOT IN COMMAND
4. (C) ALTITUDE - NOT MAINTAINED - PILOT IN COMMAND
5. (F) LACK OF TOTAL EXPERIENCE IN TYPE OF AIRCRAFT - PILOT IN COMMAND
6. (F) LACK OF TOTAL EXPERIENCE IN TYPE OPERATION - PILOT IN COMMAND

Factual Information

On February 2, 1996, about 1715 eastern standard time, a Yakoblev 52 experimental airplane, N77YK, registered to a private owner, operating as a 14 CFR Part 91 personal flight, crashed while maneuvering in the vicinity of Boynton Beach, Florida. Visual meteorological conditions prevailed and no flight plan was filed. The airplane was destroyed. The private pilot was fatally injured. The flight originated from Willis Gliderport, Boynton Beach, Florida, about 30 minutes before the accident.

A witness stated neighbors observed the airplane make a low pass down runway 27 at about 900 to 1,000 feet. The airplane made three barrel rolls and lost altitude on all three rolls. The airplane remained in closed traffic and made a second pass down the runway at about 120 mph, and at about 100 to 200 feet. The airplane was observed to initiate a pull up and did a barrel roll to the left. When the airplane was 90 degrees off heading, it was observed to enter a vertical nose down descent and collide with the ground.

On scene examination of the crash site conducted by the FAA revealed the airplane collided with the ground in a near vertical nose down attitude. The engine and composite propeller blades were buried below the ground. Both the left and right wing were displaced aft and sustained compression along the leading edge of both wings. The left and right fuel cells were ruptured. The fire department stated fuel was present at the crash site.

Examination of the airframe, flight controls, engine assembly and accessories revealed no evidence of a precrash failure or malfunction. All components necessary for flight were present at the crash site. Continuity of the flight control system was confirmed for pitch, roll, and yaw.

The next of kin could not locate the airplane log books.

Post-mortem examination of the pilot was conducted by Dr. James A. Benz, Palm Beach County Medical Examiner's Office, Palm Beach, Florida, on February 2, 1996. The cause of death was multiple blunt traumatic injuries. Post-mortem toxicology studies of specimens from the pilot was performed by the Palm Beach County Sheriff's Laboratory. These studies were positive for alcohol, 0.10 percent (blood) weight /volume, and 0.92 percent (gastric fluid) weight /volume. A comprehensive drug screen by fluorescence polarization immunoassay and gas liquid chromatography revealed no drugs were detected.

Pilot Information

Certificate:	Flight Engineer; Private	Age:	58, Male
Airplane Rating(s):	Single-engine Land	Seat Occupied:	Front
Other Aircraft Rating(s):	Glider	Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	Yes
Medical Certification:	Class 3 Valid Medical--w/ waivers/lim.	Last FAA Medical Exam:	03/10/1995
Occupational Pilot:		Last Flight Review or Equivalent:	
Flight Time:	8000 hours (Total, all aircraft), 6 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	Yakovlev	Registration:	N77YK
Model/Series:	YAK-52 YAK-52	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:		Serial Number:	822604
Landing Gear Type:	Retractable - Tricycle	Seats:	2
Date/Type of Last Inspection:	Unknown	Certified Max Gross Wt.:	2844 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:		Engine Manufacturer:	Voronezh
ELT:		Engine Model/Series:	M-14P
Registered Owner:	ZOLY SOMMER	Rated Power:	360 hp
Operator:	ZOLY SOMMER	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	PBI, 19 ft msl	Distance from Accident Site:	10 Nautical Miles
Observation Time:	1953 EST	Direction from Accident Site:	330°
Lowest Cloud Condition:	Scattered / 2300 ft agl	Visibility	10 Miles
Lowest Ceiling:	None / 0 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	12 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	180°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	25° C / 21° C
Precipitation and Obscuration:			
Departure Point:	(1X4)	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	1645 EST	Type of Airspace:	Class G

Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Destroyed
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Fatal	Latitude, Longitude:	

Administrative Information

Investigator In Charge (IIC):	CARROL A SMITH	Report Date:	03/25/1997
Additional Participating Persons:	TERRY S HURST; FT. LAUDERDALE, 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 pubinquiry@ntsb.gov , or at 800-877-6799. Dockets released after this date are available at http://dms.nts.gov/pubdms/ .		

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The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).