



Aviation Investigation Final Report

Location:	Ocean City, Maryland	Accident Number:	IAD99LA047
Date & Time:	May 30, 1999, 12:50 Local	Registration:	N4MF
Aircraft:	Nanchang CJ-6A	Aircraft Damage:	None
Defining Event:		Injuries:	1 Serious, 1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot completed the 'before starting engines' checklist prior to departure. The flight was delayed, and the pilot became concerned about oil collecting in the lower cylinders of the radial engine, and the potential for internal damage during engine start due to hydraulic lock. He elected to clear the oil from the cylinders by hand-propping the engine. The pilot left the cockpit, and rotated the propeller by hand. The engine started instantly and threw the pilot to the ground with serious injuries. According to the pilot, examination of the cockpit after the accident revealed the magneto switch was still in the 'on' position.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: Was the pilot leaving the magneto switch in the on position while hand rotating the propeller.

Findings

Occurrence #1: MISCELLANEOUS/OTHER

Phase of Operation: STANDING

Findings

1. (C) IGNITION SYSTEM,IGNITION SWITCH - ENGAGED
2. (C) PROCEDURES/DIRECTIVES - IMPROPER - PILOT IN COMMAND

Occurrence #2: PROPELLER/ROTOR CONTACT TO PERSON
Phase of Operation: STANDING

Factual Information

On May 30, 1999, about 1250 eastern daylight time, the certificated airline transport pilot/owner was seriously injured when the engine inadvertently started while hand rotating the propeller of his Nanchang CJ-6A, N4M, at the Ocean City Municipal Airport, Ocean City, Maryland. A passenger in the airplane was not injured and the airplane was not damaged. Visual meteorological conditions prevailed and no flight plan was filed. The pilot was preparing the engine for start with the intention of flight to be conducted under 14 CFR Part 91.

In a written statement, the pilot said:

"I had flown a local sortie out of Ocean City Airport earlier that morning. My intention was to fly a second sortie in a two-ship formation with another FAST qualified formation pilot flying his YAK-52. I had to wait approximately 35 minutes for fuel after the first sortie. We conducted a formal briefing for the formation flight and my back-seater from the earlier flight and I strapped into my airplane. I accomplished the "before starting engine" checklist and then looked over my shoulder to see if the other aircraft was ready to go."

At this point the pilot aborted the engine start procedure. The pilot was concerned that oil was accumulating in the lower cylinders, and the potential of internal engine damage due to hydraulic lock during start of the radial engine. He then exited the airplane.

The pilot further stated:

"...as a precaution, I decided to pull the prop through to assure myself that I did not have a hydraulic lock situation. As I pulled the prop through from the 3 o'clock position to approximately the 6 or 7 o'clock position the engine fired and began running, catching me off guard and throwing me to the ground. When I aborted the start and shut down the electrical systems, I had overlooked one switch, the magneto. The magneto switch was in the "both on" position and therefore the mags were hot. All the elements were there for a successful engine start: fuel, air, and spark."

The pilot reported there were no mechanical deficiencies with the airplane. He also reported a total of 11,500 flight hours which 350 flight hours were in make and model.

The pilot acknowledged that all switch positions should be double checked to make sure the magnetos are not on prior to touching the propeller.

Pilot Information

Certificate:	Airline transport; Commercial; Flight engineer; Private	Age:	50, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Unknown
Other Aircraft Rating(s):	Glider	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 1 Valid Medical-w/ waivers/lim	Last FAA Medical Exam:	December 18, 1998
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:	11500 hours (Total, all aircraft), 350 hours (Total, this make and model), 8000 hours (Pilot In Command, all aircraft), 275 hours (Last 90 days, all aircraft), 92 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Nanchang	Registration:	N4MF
Model/Series:	CJ-6A CJ-6A	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Experimental (Special)	Serial Number:	2951203
Landing Gear Type:	Retractable - Tricycle	Seats:	2
Date/Type of Last Inspection:	August 18, 1998 Annual	Certified Max Gross Wt.:	3086 lbs
Time Since Last Inspection:	177 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	2330 Hrs	Engine Manufacturer:	China
ELT:		Engine Model/Series:	HUISAI-6 JIA
Registered Owner:	MICHAEL J. FILUCCI	Rated Power:	285 Horsepower
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:	SBY ,5 ft msl	Distance from Accident Site:	18 Nautical Miles
Observation Time:	12:50 Local	Direction from Accident Site:	273°
Lowest Cloud Condition:	Unknown	Visibility	8 miles
Lowest Ceiling:	Broken / 20000 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	5 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	300°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	31°C / 19°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	(OXB)	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	00:00 Local	Type of Airspace:	

Airport Information

Airport:	OCEAN CITY MUNICIPAL OXB	Runway Surface Type:	
Airport Elevation:		Runway Surface Condition:	
Runway Used:	0	IFR Approach:	
Runway Length/Width:		VFR Approach/Landing:	

Wreckage and Impact Information

Crew Injuries:	1 Serious	Aircraft Damage:	None
Passenger Injuries:	1 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Serious, 1 None	Latitude, Longitude:	38.310272,-75.118107(est)

Administrative Information

Investigator In Charge (IIC):	Cain, Jim
Additional Participating Persons:	KIM BARNETTE; BALTIMORE, MD
Original Publish Date:	November 2, 2000
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=46432

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