



National Transportation Safety Board Aviation Accident Data Summary

Location:	Apison, TN	Accident Number:	ATL05FA032
Date & Time:	12/02/2004, 1324 EST	Registration:	N421SD
Aircraft:	Cessna 421B	Injuries:	5 Fatal, 1 Serious
Flight Conducted Under:	Part 91: General Aviation - Business		

Analysis

The airline transport pilot (ATP) stated the airplane was between 200 to 300 feet on initial takeoff climb when the right engine lost power and the airplane yawed to the right. The pilot lowered the nose of the airplane to gain airspeed, pulled the right power lever rearward and nothing happened. The pilot did not feather the right propeller and started moving switches in the vicinity of the boost pump switches. The ATP passenger stated, he did not think the left engine was producing full power. He scanned the instruments with his eyes looking at the manifold pressure gauges. "One needle was at zero and the other was at 25-inches. The manifold pressure should have been 39-inches of manifold pressure. The ATP passenger observed trees to their front and thought the pilot was trying to make a forced landing in an open field to their left. The ATP passenger realized the airplane was going to collide with the trees. Just before the airplane collided with the trees, the pilot feathered the right engine. The ATP passenger observed the right propeller going into the feather position, and the propeller came to a complete stop. Examination of the right engine revealed no anomalies. Examination of the left engine revealed the starter adapter gear teeth had failed due to overload.

Probable Cause

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's improper identification of a partial loss of engine power on initial takeoff climb resulting in a collision with trees and the ground. A factor was a partial failure of the left engine starter adapter due to overload.

Findings

Occurrence #1: LOSS OF ENGINE POWER(PARTIAL) - MECH FAILURE/MALF
Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings

1. (F) 1 ENGINE
2. (F) ENGINE ACCESSORIES,ENGINE STARTER - OVERLOAD

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

Findings

3. OBJECT - TREE(S)
4. (C) EMERGENCY PROCEDURE - IMPROPER - PILOT IN COMMAND
5. TERRAIN CONDITION - GROUND

Pilot Information

Certificate:	Flight Instructor; Commercial	Age:	36
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Instrument Rating(s):	Airplane
Other Aircraft Rating(s):	None	Instructor Rating(s):	Airplane Single-engine; Instrument Airplane
Flight Time:	4475 hours (Total, all aircraft), 2000 hours (Total, this make and model), 4250 hours (Pilot In Command, all aircraft), 120 hours (Last 90 days, all aircraft), 40 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N421SD
Model/Series:	421B	Engines:	2 Reciprocating
Operator:	Georgia Cumberland Conference of Seventh Day	Engine Manufacturer:	Lycoming
Operating Certificate(s) Held:	None	Engine Model/Series:	GTSIO-520-H
Flight Conducted Under:	Part 91: General Aviation - Business		

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	CHA, 682 ft msl	Weather Information Source:	Weather Observation Facility
Lowest Ceiling:	None	Wind Speed/Gusts, Direction:	3 knots / , Variable
Temperature:	11 °C	Visibility	10 Miles
Precipitation and Obscuration:			
Departure Point:	Collegedale, TN (3M3)	Destination:	Knoxville, TN (TYS)

Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Destroyed
Passenger Injuries:	4 Fatal, 1 Serious	Aircraft Fire:	On-Ground
Ground Injuries:	N/A	Aircraft Explosion:	On-Ground
Latitude, Longitude:	35.081111, -85.009167		

Administrative Information

Investigator In Charge (IIC): Carrol A Smith

Adopted Date: 06/08/2005

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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