



National Transportation Safety Board Aviation Accident Data Summary

Location:	Gainesville, GA	Accident Number:	ATL02FA072
Date & Time:	04/01/2002, 1500 EST	Registration:	N7471C
Aircraft:	North American T-6-AT6D	Injuries:	2 Fatal
Flight Conducted Under:	Part 91: General Aviation - Instructional		

Analysis

The pilot and CFI were conducting a series of touch and go landings when smoke was seen streaming from the right lower section of the engine cowling after take off. Witnesses also reported hearing a rough engine condition. At approximately the same time, the pilot initiated a left turn towards the airport. The airplane was last seen in a nose low attitude. The airplane disappeared below the tree line and collided with the ground. Examination of the engine revealed damage throughout the supercharger assembly. The supercharge impeller was not totally secure on the impeller shaft. The impeller shaft retainer nut was loose on its shaft. This nut as well as the impeller shaft gear-teeth showed signs of wear. These teeth were worn down and disfigured. Both the aluminum cover plate and the bottom of the impeller blades showed signs of circular scraping. Small pieces of metal were found throughout the engine. Disassembly of the oil filter revealed metal shavings throughout. No metal parts or gear teeth were found in the oil sump.

Probable Cause

The National Transportation Safety Board determines the probable cause(s) of this accident to be: A loss of engine power following a supercharger bearing failure and subsequent collision with the ground while maneuvering for an emergency landing.

Findings

Occurrence #1: LOSS OF ENGINE POWER
Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings

1. (C) ENG ASSEMBLY,BLOWER/IMPELLER/INTEGRAL SUPERCHARGER - FAILURE,TOTAL

Occurrence #2: FORCED LANDING
Phase of Operation: DESCENT - EMERGENCY

Occurrence #3: IN FLIGHT COLLISION WITH OBJECT
Phase of Operation: EMERGENCY LANDING

Findings

2. OBJECT - TREE(S)
3. MANEUVER TO AVOID OBSTRUCTIONS - NOT SUCCESSFUL - PILOT IN COMMAND(CFI)

Pilot Information

Certificate:	Airline Transport; Flight Instructor; Commercial	Age:	51
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Instrument Rating(s):	Airplane
Other Aircraft Rating(s):	None	Instructor Rating(s):	Airplane Multi-engine; Airplane Single-engine; Instrument Airplane
Flight Time:	6550 hours (Total, all aircraft)		

Other Flight Crew Information

Certificate:	Private	Age:	62
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Instrument Rating(s):	Airplane
Other Aircraft Rating(s):	None	Instructor Rating(s):	None
Flight Time:	833 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	North American	Registration:	N7471C
Model/Series:	T-6-AT6D	Engines:	1 Reciprocating
Operator:	U.S. Aircraft Inc., LLC	Engine Manufacturer:	Pratt & Whitney
Operating Certificate(s) Held:	None	Engine Model/Series:	R-1340
Flight Conducted Under:	Part 91: General Aviation - Instructional		

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	PDK, 1002 ft msl	Weather Information Source:	Weather Observation Facility
Lowest Ceiling:		Wind Speed/Gusts, Direction:	4 knots / , 290°
Temperature:	21°C	Visibility:	10 Miles
Precipitation and Obscuration:			
Departure Point:	Gainesville, GA (GVL)	Destination:	Gainesville, GA (GVL)

Airport Information

Airport:	Lee Gilmer Memorial (GVL)	Runway Surface Type:	Asphalt
Runway Used:	290	Runway Surface Condition:	Unknown
Runway Length/Width:	4001 ft / 100 ft		

Wreckage and Impact Information

Crew Injuries:	2 Fatal	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Latitude, Longitude:	34.273056, -83.826944		

Administrative Information

Investigator In Charge (IIC): Phillip Powell

Adopted Date: 11/25/2003

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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