



National Transportation Safety Board Aviation Accident Data Summary

Location:	BENNETT, CO	Accident Number:	DEN91FA065
Date & Time:	05/01/1991, 0653 MDT	Registration:	N7407L
Aircraft:	PIPER PA-31B-310	Injuries:	1 Fatal
Flight Conducted Under:	Part 91: General Aviation - Business		

Analysis

SHORTLY AFTER TAKEOFF, WHILE CLIMBING TO CRUISE ALTITUDE, THE PILOT REPORTED THE LEFT ENGINE COWL ASSEMBLY HAD COME OFF. WITNESSES OBSERVED THE AIRPLANE AT LOW ALTITUDE & NOTED THAT IT WAS 'YAWING, SPUTTERING, AND ROCKING BACK AND FORTH.' THEY INDICATED THE LEFT ENGINE WAS NOT RUNNING & THAT THE AIRPLANE BANKED SHARPLY TO THE RIGHT & DISAPPEARED BEHIND TREES BEFORE CRASHING. AN INVESTIGATION REVEALED THE LEFT PROPELLER HAD NOT BEEN FEATHERED. THE LEFT ENGINE COWLING WAS FOUND 1.8 MILES FROM THE ACCIDENT SITE. THE THREE PRIMARY (EYEBOLT) COWL FASTENERS ON THE OUTBOARD SIDE OF THE LEFT UPPER COWL WERE FOUND UNLOCKED & SEVEN OTHER COWL ATTACHING STUDS (SCREWS) WERE MISSING. THE COWLING HAD BEEN REMOVED 16 DAYS BEFORE THE ACCIDENT TO INSTALL AN OIL/AIR SEPARATOR. THIS WAS THE FIRST FLIGHT SINCE THAT WORK WAS PERFORMED. THE MECHANIC, WHO DID THE WORK, SAID HE NOTED SEVERAL COWL STUD FASTENERS WERE MISSING & THAT HE HAD NOTIFIED THE PILOT. THE PILOT WAS REPORTED TO HAVE REPLIED THAT HE HAD SOME FASTENERS & WOULD TAKE CARE OF THE PROBLEM.

Probable Cause

The National Transportation Safety Board determines the probable cause(s) of this accident to be: IN-FLIGHT SEPARATION OF THE LEFT ENGINE COWL ASSEMBLY THAT WAS NOT PROPERLY LATCHED, AND FAILURE OF THE PILOT TO MAINTAIN MINIMUM CONTROL SPEED, WHICH RESULTED IN HIS LOSS OF AIRCRAFT CONTROL. FACTORS RELATED TO THE ACCIDENT WERE: AN INADEQUATE PREFLIGHT INSPECTION, INADEQUATE MARKINGS/ALIGNMENT INDICATIONS TO ASSURE THAT THE COWL FASTENERS WERE LOCKED, AND AN INSUFFICIENTLY DEFINED PROCEDURE IN THE FLIGHT MANUAL FOR CHECKING THE COWL FASTENERS.

Findings

Occurrence #1: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION
Phase of Operation: CLIMB - TO CRUISE

Findings

1. (C) COOLING SYSTEM,COWLING - UNLATCHED
2. (F) AIRCRAFT PREFLIGHT - INADEQUATE
3. (F) AIRCRAFT/EQUIPMENT INADEQUATE - MANUFACTURER
4. (F) ACFT/EQUIP,INADEQUATE AIRCRAFT MANUALS - MANUFACTURER
5. (F) CONDITION(S)/STEP(S) INSUFFICIENTLY DEFINED - MANUFACTURER
6. (C) COOLING SYSTEM,COWLING - SEPARATION

7. VERTICAL STABILIZER SURFACE - BENT

Occurrence #2: LOSS OF ENGINE POWER
Phase of Operation: CLIMB

Findings

- 8. 1 ENGINE - SWITCHED OFF
 - 9. PROPELLER FEATHERING - NOT ATTAINED - PILOT IN COMMAND
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Occurrence #3: FORCED LANDING
Phase of Operation: DESCENT - EMERGENCY

Occurrence #4: LOSS OF CONTROL - IN FLIGHT
Phase of Operation: DESCENT - UNCONTROLLED

Findings

- 10. (C) AIRSPEED(VMC) - NOT MAINTAINED - PILOT IN COMMAND
 - 11. (C) AIRCRAFT CONTROL - NOT MAINTAINED - PILOT IN COMMAND
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Occurrence #5: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: DESCENT - UNCONTROLLED

Pilot Information

Certificate:	Private	Age:	45
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Instrument Rating(s):	Airplane
Other Aircraft Rating(s):	None	Instructor Rating(s):	
Flight Time:	6200 hours (Total, all aircraft), 6094 hours (Pilot In Command, all aircraft), 150 hours (Last 90 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	PIPER	Registration:	N7407L
Model/Series:	PA-31B-310 PA-31B-310	Engines:	2 Reciprocating
Operator:	JOHN WESTBROOK	Engine Manufacturer:	LYCOMING
Operating Certificate(s) Held:	None	Engine Model/Series:	TIO-540-A2B
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:	APA, 5883 ft msl	Weather Information Source:	Weather Observation Facility
Lowest Ceiling:	None / 0 ft agl	Wind Speed/Gusts, Direction:	3 knots / , 150°
Temperature:	-18°C	Visibility	50 Miles
Precipitation and Obscuration:			
Departure Point:	ENGLEWOOD, CO (APA)	Destination:	DES MOINES, IA (DSM)

Wreckage and Impact Information

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

Administrative Information

Investigator In Charge (IIC):	ARNOLD W SCOTT	Adopted Date:	10/02/1992
Investigation Docket:	NTSB accident and incident docket 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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