



National Transportation Safety Board Aviation Accident Final Report

Location:	BENNETT, CO	Accident Number:	DEN91FA065
Date & Time:	05/01/1991, 0653 MDT	Registration:	N7407L
Aircraft:	PIPER PA-31B-310	Aircraft Damage:	Destroyed
Defining Event:		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 and Findings

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

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

Occurrence #5: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: DESCENT - UNCONTROLLED

Factual Information

Pilot Information

Certificate:	Private	Age:	45, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Seat Occupied:	Unknown
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):		Toxicology Performed:	Yes
Medical Certification:	Class 3 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	07/31/1991
Occupational Pilot:	Last Flight Review or Equivalent:		
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	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:		Serial Number:	31-790
Landing Gear Type:	Retractable - Tricycle	Seats:	6
Date/Type of Last Inspection:	Unknown	Certified Max Gross Wt.:	6500 lbs
Time Since Last Inspection:	0 Hours	Engines:	2 Reciprocating
Airframe Total Time:		Engine Manufacturer:	LYCOMING
ELT:	Installed, not activated	Engine Model/Series:	TIO-540-A2B
Registered Owner:		Rated Power:	310 hp
Operator:	JOHN WESTBROOK	Operating Certificate(s) Held:	None
Operator Does Business As:	JOHN WESTBROOK, INC.	Operator Designator Code:	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	APA, 5883 ft msl	Distance from Accident Site:	21 Nautical Miles
Observation Time:	0657 MDT	Direction from Accident Site:	240°
Lowest Cloud Condition:	Clear / 0 ft agl	Visibility	50 Miles
Lowest Ceiling:	None / 0 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	3 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	150°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	-18°C / -18°C
Precipitation and Obscuration:			
Departure Point:	ENGLEWOOD, CO (APA)	Type of Flight Plan Filed:	None
Destination:	DES MOINES, IA (DSM)	Type of Clearance:	None
Departure Time:	0645 MDT	Type of Airspace:	

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
Total Injuries:	1 Fatal	Latitude, Longitude:	

Administrative Information

Investigator In Charge (IIC):	ARNOLD W SCOTT	Report Date:	10/02/1992
Additional Participating Persons:			
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 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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