



Aviation Investigation Final Report

Location:	CHEHALIS, Washington	Accident Number:	SEA91FA076
Date & Time:	March 28, 1991, 07:40 Local	Registration:	N6044P
Aircraft:	PIPER PA-24-250	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	1 Fatal, 1 Serious
Flight Conducted Under:	Part 91: General aviation		

Analysis

DURING A CROSS COUNTRY FLT, THE ENG LOST PWR. DURING THE EMERGENCY DESCENT, THE AIRPLANE COLLIDED WITH A BUILDING. THE POST CRASH ENG INSPECTION REVEALED THAT THE CRANKSHAFT GEAR WAS NOT SEATED PROPERLY DURING THE MAJOR OVERHAUL, WHICH RESULTED IN THE FATIGUE FAILURE OF THE CRANKSHAFT DOWEL. FURTHER RESEARCH REVEALED THAT DURING THE ENG OVERHAUL, A SERVICE BULLETIN WAS NOT COMPLIED WITH TO INSTALL A CRANKSHAFT GEAR THAT WAS MANUFACTURED WITH THREE, THREE QUARTOR INCH RADIUS SCALLOPS. THESE SCALLOPS ALLOW FOR INSPECTION OF THE GEAR AND CRANKSHAFT ASSEMBLY.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: A LOSS OF ENGINE POWER DUE TO AN IMPROPER OVERHAUL.

Findings

Occurrence #1: LOSS OF ENGINE POWER(TOTAL) - MECH FAILURE/MALF
Phase of Operation: CRUISE - NORMAL

Findings

1. (F) ENGINE ASSEMBLY, OTHER - FATIGUE
2. (C) ACCESSORY DRIVE ASSY, DRIVE GEAR - FAILURE, TOTAL
3. (C) MAINTENANCE, OVERHAUL - IMPROPER - OTHER MAINTENANCE PERSONNEL
4. (F) MAINTENANCE, SERVICE BULLETIN/LETTER - NOT FOLLOWED - OTHER MAINTENANCE PERSONNEL

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

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

Findings
5. OBJECT - BUILDING(NONRESIDENTIAL)

Factual Information

Pilot Information

Certificate:	Commercial	Age:	39, Male
Airplane Rating(s):	Single-engine land; Single-engine sea	Seat Occupied:	Unknown
Other Aircraft Rating(s):	Helicopter	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):		Toxicology Performed:	No
Medical Certification:	Class 2 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	October 18, 1989
Occupational Pilot:	UNK	Last Flight Review or Equivalent:	
Flight Time:	667 hours (Total, all aircraft), 18 hours (Total, this make and model), 537 hours (Pilot In Command, all aircraft), 18 hours (Last 90 days, all aircraft), 18 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	PIPER	Registration:	N6044P
Model/Series:	PA-24-250 PA-24-250	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:		Serial Number:	24-1140
Landing Gear Type:	Retractable - Tricycle	Seats:	4
Date/Type of Last Inspection:	March 14, 1990 100 hour	Certified Max Gross Wt.:	2900 lbs
Time Since Last Inspection:	83 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	3651 Hrs	Engine Manufacturer:	LYCOMING
ELT:	Installed, activated	Engine Model/Series:	O-540-A1C5
Registered Owner:	NICHOLS BROTHERS BOATBUILDERS	Rated Power:	250 Horsepower
Operator:	NICHOLS BROTHERS BOATBUILDERS	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:	TDO ,371 ft msl	Distance from Accident Site:	14 Nautical Miles
Observation Time:	07:47 Local	Direction from Accident Site:	133°
Lowest Cloud Condition:	Unknown	Visibility	10 miles
Lowest Ceiling:	Overcast / 1500 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	4 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	210°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	6°C / 6°C
Precipitation and Obscuration:	Light - None - Drizzle		
Departure Point:	EVERETT , WA (PAE)	Type of Flight Plan Filed:	None
Destination:	VANCOUVER , WA (59S)	Type of Clearance:	None
Departure Time:	07:00 Local	Type of Airspace:	

Airport Information

Airport:		Runway Surface Type:	
Airport Elevation:		Runway Surface Condition:	
Runway Used:	0	IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 Serious	Aircraft Damage:	Destroyed
Passenger Injuries:	1 Fatal	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Fatal, 1 Serious	Latitude, Longitude:	46.620117,-122.99932(est)

Administrative Information

Investigator In Charge (IIC):	Eckrote, Debra
Additional Participating Persons:	KEN ZIEMER; RENTON , WA CHARLES LITTLE; WILLIAMSPORT , PA LEW MASON; VERO BEACH , FL
Original Publish Date:	July 13, 1993
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=41312

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The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).