



National Transportation Safety Board

Aviation Incident Data Summary

Location:	FAIRBANKS, AK	Incident Number:	ANC92IA001
Date & Time:	10/02/1991, 1320 AKD	Registration:	N200AK
Aircraft:	PIPER PA-31-350	Injuries:	5 None
Flight Conducted Under:	Part 135: Air Taxi & Commuter - Scheduled		

Analysis

DURING CRUISE FLIGHT, THE LEFT ENGINE LOST POWER AND OIL PRESSURE. AN ENGINE TEARDOWN ANALYSIS SHOWED THAT THE CRANKSHAFT COUNTERWEIGHTS HAD TWO INCORRECT OF THE FOUR INSTALLED ROLLERS. ALL FOUR ROLLERS WERE PART NO. 73648. ACCORDING TO TEXTRON LYCOMING, THE CORRECT ROLLER CONFIGURATION SHOULD HAVE BEEN 'TWO PART NO. 73648 5.1 ORDER AND TWO PART NO. 76788 6.3 ORDER ROLLERS.' AS CONFIGURED, THE ENGINE WOULD EXPERIENCE UNACCEPTABLE 6TH ORDER TORSIONAL VIBRATIONS.

Probable Cause

The National Transportation Safety Board determines the probable cause(s) of this incident to be: INCORRECT INSTALLATION OF CRANKSHAFT COUNTERWEIGHT ROLLERS BY THE MANUFACTURER DURING REMANUFACTURE OF THE ENGINE. FACTOR WAS THE INADEQUATE SURVEILLANCE OF THE ENGINE ASSEMBLY PROCESS BY THE MANUFACTURER.

Findings

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

Findings

1. (C) ENG ASSEMBLY, CRANKSHAFT COUNTERWEIGHTS/VIB DAMPER - IMPROPER
2. (C) MAINTENANCE, REBUILD/REMANUFACTURE - IMPROPER - MANUFACTURER
3. (F) INADEQUATE SURVEILLANCE OF OPERATION - MANUFACTURER

Pilot Information

Certificate:	Airline Transport; Private	Age:	35
Airplane Rating(s):	Multi-engine Land; Single-engine Land; Single-engine Sea	Instrument Rating(s):	Airplane
Other Aircraft Rating(s):	None	Instructor Rating(s):	None
Flight Time:	8000 hours (Total, all aircraft), 6000 hours (Total, this make and model), 7800 hours (Pilot In Command, all aircraft), 300 hours (Last 90 days, all aircraft), 100 hours (Last 30 days, all aircraft), 6 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	PIPER	Registration:	N200AK
Model/Series:	PA-31-350 PA-31-350	Engines:	2 Reciprocating
Operator:	FRONTIER FLYING SERVICE INC.	Engine Manufacturer:	LYCOMING
Operating Certificate(s) Held:	Commuter Air Carrier (135)	Engine Model/Series:	TIO-540J2BD
Flight Conducted Under:	Part 135: Air Taxi & Commuter - Scheduled		

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	, 0 ft msl	Weather Information Source:	Pilot
Lowest Ceiling:	None / 0 ft agl	Wind Speed/Gusts, Direction:	/ ,
Temperature:	4° C	Visibility	99 Miles
Precipitation and Obscuration:			
Departure Point:	FAIRBANKS, AK (FAI)	Destination:	COLDFOOT, AK (CXF)

Airport Information

Airport:		Runway Surface Type:	N/A
Runway Used:	0	Runway Surface Condition:	
Runway Length/Width:			

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Minor
Passenger Injuries:	4 None	Aircraft Fire:	In-Flight
Ground Injuries:	N/A	Aircraft Explosion:	In-Flight

Latitude, Longitude:

Administrative Information

Investigator In Charge (IIC):	GEORGE KOBELNYK	Adopted Date:	05/05/1993
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/ .		

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report.