



National Transportation Safety Board Aviation Accident Data Summary

Location:	BETHEL, AK	Accident Number:	ANC92FA002
Date & Time:	10/03/1991, 1435 AKD	Registration:	N20024
Aircraft:	CESSNA 172M	Injuries:	5 None
Flight Conducted Under:	Part 135: Air Taxi & Commuter - Non-scheduled		

Analysis

DURING CRUISE FLIGHT THE PILOT HEARD A LOUD POP IN THE ENGINE COMPARTMENT AND THE ENGINE STOPPED PRODUCING POWER. DURING THE SUBSEQUENT FORCED LANDING ON THE TUNDRA, THE AIRPLANE NOSED OVER AND RECEIVED SUBSTANTIAL DAMAGE. EXAMINATION OF THE ENGINE REVEALED THAT THE CRANKSHAFT TIMING GEAR, PART NUMBER LW-15269, WAS EXTREMELY WORN AND ALL BUT NINE OF THE GEAR TEETH WERE MISSING. ACCORDING TO TEXTRON LYCOMING, THE GEAR WAS THE ORIGINAL MANUFACTURED GEAR.

Probable Cause

The National Transportation Safety Board determines the probable cause(s) of this accident to be: A POWER LOSS OVER UNSUITABLE TERRAIN WHICH RESULTED IN A NOSE OVER.

Findings

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

Findings

1. (C) ENGINE ASSEMBLY, TIMING GEAR - WORN

Occurrence #2: NOSE OVER
Phase of Operation: LANDING - ROLL

Findings

2. (F) TERRAIN CONDITION - TUNDRA

Pilot Information

Certificate:	Flight Instructor; Commercial	Age:	26
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Instrument Rating(s):	Airplane
Other Aircraft Rating(s):	None	Instructor Rating(s):	Airplane Single-engine
Flight Time:	2475 hours (Total, all aircraft), 620 hours (Total, this make and model), 2324 hours (Pilot In Command, all aircraft), 304 hours (Last 90 days, all aircraft), 124 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	CESSNA	Registration:	N20024
Model/Series:	172M 172M	Engines:	1 Reciprocating
Operator:	VILLAGE AVIATION CORP	Engine Manufacturer:	LYCOMING
Operating Certificate(s) Held:	On-demand Air Taxi (135)	Engine Model/Series:	O-320-H2AD
Flight Conducted Under:	Part 135: Air Taxi & Commuter - Non-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:	Witness
Lowest Ceiling:	Broken / 2000 ft agl	Wind Speed/Gusts, Direction:	8 knots / , 290°
Temperature:	7°C	Visibility	20 Miles
Precipitation and Obscuration:			
Departure Point:	BETHEL, AK (BET)	Destination:	AKIACHAK, AK (KKI)

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	4 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Latitude, Longitude:			

Administrative Information

Investigator In Charge (IIC):	GEORGE KOBELNYK	Adopted Date:	03/31/1993
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/ .		

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