



AVIATION



HIGHWAY



MARINE



RAILROAD



PIPELINE

Aviation Investigation Final Report

Location:	Ninilchik, Alaska	Accident Number:	ANC23LA053
Date & Time:	July 12, 2023, 16:20 Local	Registration:	N83391
Aircraft:	Aeronca 7DC	Aircraft Damage:	Substantial
Defining Event:	Loss of engine power (total)	Injuries:	2 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

While en route during a scenic flight, the pilot noticed the engine was not making enough power for the set power setting and the oil pressure and oil temperature gauges both indicated zero. He started a climb to clear rising terrain when the engine started to vibrate violently and then the engine lost all power. The pilot made a forced landing on to a road and, after touching down, veered to avoid traffic. The airplane impacted a guardrail and nosed over, sustaining substantial damage to the fuselage and wings.

A postaccident examination of the engine revealed that the crankshaft's No. 1 main bearing had spun, smearing metal into the crankcase and blocking the oil port. Numerous fragments of bearing material were found inside the engine. Based on the available information, it is likely that the shift of the No. 1 main bearing resulted in a lack of lubrication and subsequent failure of the engine. The reason for the bearing shift was not determined; the owner was not able to provide maintenance records for the engine.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

A total loss of engine power due to a shift of a crankshaft main bearing, which resulted in a lack of lubrication and subsequent overheating and failure of the engine crankshaft.

Findings

Aircraft	Recip eng oil sys - Damaged/degraded
Aircraft	Recip engine power section - Damaged/degraded

Factual Information

History of Flight

Enroute	Loss of engine power (total) (Defining event)
Landing-landing roll	Collision with terr/obj (non-CFIT)
Landing-landing roll	Nose over/nose down

On July 12, 2023, about 1620 Alaska daylight time, a Aeronca 7DC airplane, N83391 sustained substantial damage when it was involved in an accident near Ninilchik, Alaska. The pilot and passenger were not injured. The airplane was operated by the pilot as a Title 14 Code of Federal Regulations Part 91 personal flight.

Pilot reported that he and a friend were on a scenic flight from the Homer Airport (HOM), Homer, Alaska, to the Soldotna Airport (SXQ), Soldotna, Alaska. En route he noticed the engine was not making enough power for the set power setting. At full throttle the engine was only producing about 2,400 rpm. He ran through checklist memory items for loss of engine power, which included applying carburetor heat; however, there was no change in the engine power. The pilot also opened both wing tanks to increase fuel in the header tank, which also resulted in no change. He then noticed the oil pressure gauge and oil temperature gauge both indicated zero. The pilot initiated a climb to clear rising terrain when the engine started to vibrate violently and then lost all power. He initiated a forced landing on to a road and, after touching down, he veered left to avoid cars. The airplane impacted a guardrail and then nosed over. The airplane sustained substantial damage to the fuselage and wings.

A postaccident examination of the engine revealed that the crankshaft’s No. 1 main bearing had spun, smearing metal into the crankcase and blocking the oil port. Numerous fragments of bearing material were found inside the case. The owner was not able to provide maintenance records for the engine.

Pilot Information

Certificate:	Private	Age:	26, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Front
Other Aircraft Rating(s):	None	Restraint Used:	3-point
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	
Medical Certification:	Class 1 With waivers/limitations	Last FAA Medical Exam:	October 27, 2022
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:	79.9 hours (Total, all aircraft), 17.9 hours (Total, this make and model), 23.5 hours (Pilot In Command, all aircraft), 50.7 hours (Last 90 days, all aircraft), 21.9 hours (Last 30 days, all aircraft), 0 hours (Last 24 hours, all aircraft)		

Passenger Information

Certificate:		Age:	
Airplane Rating(s):		Seat Occupied:	Center
Other Aircraft Rating(s):		Restraint Used:	3-point
Instrument Rating(s):		Second Pilot Present:	No
Instructor Rating(s):		Toxicology Performed:	
Medical Certification:		Last FAA Medical Exam:	
Occupational Pilot:	UNK	Last Flight Review or Equivalent:	
Flight Time:			

Aircraft and Owner/Operator Information

Aircraft Make:	Aeronca	Registration:	N83391
Model/Series:	7DC	Aircraft Category:	Airplane
Year of Manufacture:	1946	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	7AC2058
Landing Gear Type:	Tailwheel	Seats:	2
Date/Type of Last Inspection:	March 3, 2023 Annual	Certified Max Gross Wt.:	1300 lbs
Time Since Last Inspection:	55 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	4542.6 Hrs as of last inspection	Engine Manufacturer:	Continental
ELT:	Installed	Engine Model/Series:	C-85-12
Registered Owner:	On file	Rated Power:	96 Horsepower
Operator:	On file	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	PAHO	Distance from Accident Site:	
Observation Time:	15:53 Local	Direction from Accident Site:	
Lowest Cloud Condition:	Scattered / 3900 ft AGL	Visibility	10 miles
Lowest Ceiling:	Broken / 5000 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	9 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	250°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.16 inches Hg	Temperature/Dew Point:	14°C / 12°C
Precipitation and Obscuration:			
Departure Point:	Homer, AK (PAHO)	Type of Flight Plan Filed:	None
Destination:	Soldotna, AK (PASX)	Type of Clearance:	Traffic advisory
Departure Time:	15:45 Local	Type of Airspace:	Class G

Airport Information

Airport:	Soldotna PASX	Runway Surface Type:	
Airport Elevation:	113 ft msl	Runway Surface Condition:	Dry
Runway Used:		IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	Forced landing

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	1 None	Aircraft Fire:	None
Ground Injuries:		Aircraft Explosion:	None
Total Injuries:	2 None	Latitude, Longitude:	60.037204,-151.63662(est)

Administrative Information

Investigator In Charge (IIC): Ward, Mark

Additional Participating Persons: Pete Alexakis; FAA

Original Publish Date: May 16, 2024

Last Revision Date:

Investigation Class: [Class 3](#)

Note: The NTSB did not travel to the scene of this accident.

Investigation Docket: <https://data.ntsb.gov/Docket?ProjectID=192670>

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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](#).