



Wreckage Examination Summary

NTSB ACCIDENT NUMBER: ANC20FA017

AIRCRAFT REGISTRATION/AIRCRAFT TYPE: N7632C, Piper PA-32R
ACCIDENT LOCATION: Tuntutuliak, Alaska

HISTORY OF FLIGHT

On February 6, 2020, about 1110 Alaska standard time, a Piper PA-32R-300 airplane, N7632C, sustained substantial damage during impact with terrain about 12 miles west of Tuntutuliak Airport (A61), Tuntutuliak, Alaska. The commercial pilot and four passengers were fatally injured. The airplane was operated by Paklook Air Inc., doing business as Yute Commuter Service, under the provisions of Title 14 Code of Federal Regulations Part 135 as a scheduled visual flight rules (VFR) commuter flight. Instrument meteorological conditions prevailed at the departure and arrival airports at the time of the accident, and a company flight plan was filed. The flight originated from Bethel Airport (PABE), Bethel, Alaska, about 1040, and was destined for Kipnuk Airport (PAKI), Kipnuk, Alaska.

The pilot was conducting a scheduled flight from PABE to PAKI, then Chefornek Airport (PACK) and back to PABE with mail and passengers. The first flight segment was about 100 nautical miles (nm) to the southwest coastal village of Kipnuk. According to the company flight following log, the pilot called outbound at 1034. A pilot from another company stated that the accident airplane departed right before his airplane under a special VFR departure clearance and the cloud ceiling was 600 ft overcast.

Search and rescue personnel reported low ceilings, reduced visibility, and flat light conditions along the accident airplane's flight route.

ANC20FA017 N7632C Piper PA-32R



Initial aerial photo of accident scene.
Courtesy Alaska Department of Safety.



Initial on scene photo of accident site.

PERSONNEL INFORMATION

The pilot, age 24, was hired by the company on January 7, 2020, about one month before the accident. At the time of hire, he had accumulated 611 total flight hours. He completed a pilot competency check ride on January 27 and initial operating experience requirements on January 30. The accident flight was

ANC20FA017 N7632C Piper PA-32R

his fourth line flight and he had accumulated about 34 hours in the accident airplane make and model before the accident.

According to the Pilot/Operator report (NTSB form 6120.1/2) submitted by the operator, the pilot's aeronautical experience consisted of 646 flight hours, of which 34 hours were accrued in the accident airplane make and model. In the preceding 30 days prior to the accident, the report listed a total of 34 flight hours, of which 2 flight hours were accrued within the last 24 hours.

AIRCRAFT INFORMATION

- The airplane, a Piper PA-32R, N7632C, MSN: 32R-7680054, had accumulated a total time in service of approximately 7,826 flight hours. An examination of the maintenance records revealed the most recent annual/100 hr. inspection of the engine and airframe was accomplished on October 7, 2019, about 60 hours before the accident.

ENGINE INFORMATION

- Lycoming IO-540-K1G5D
- MSN: L-19203-48A
- Engine time since O/H: about 783 flight hours.

PROPELLER INFORMATION

- Hartzell – Two Blade
- Model: HC-C2YK-1BF/F8475D-4

METEOROLOGICAL INFORMATION

- Departure Airport:

The accident airplane departed from Bethel Airport (PABE), Bethel, Alaska, at approximately 1042 AST. The airport lists an elevation of 129 ft and had an Automated Surface Observation System (ASOS), which was augmented by FAA personnel. Immediately surrounding the time the accident airplane departed the following conditions were being reported.

Special weather observation for PABE at 1030 AKST, wind from 300 at 3 knots, visibility 4 miles, runway 19R visual range 5,000 ft variable to better than 6,000 ft, mist, ceiling overcast at 600 ft agl, temperature -16° Celsius (C), dew point temperature -18° C, altimeter 29.68 inches of mercury (Hg). Remarks: automated station with a precipitation discriminator, temperature -16.1° C, dew point -17.3° C, maintenance indicator on.

- Intended destination:

The planned destination was Kipnuk Airport (PAKI), Kipnuk, Alaska, located 39 miles southwest of the accident site at an elevation of 20 ft. The airport had an Automated Weather Observation System, which was not augmented by any human observers. The following conditions were reported at the approximate time of the accident.

Weather observation for PAKI at 1056 AKST, automated, wind from 020° at 17 knots, visibility 9 miles in light snow, ceiling overcast at 600 ft agl, temperature -22° C, dew point -24° C, altimeter 29.70 inches of Hg. Remarks: automated station with a precipitation discriminator, snow began at

ANC20FA017 N7632C Piper PA-32R

1048 AST, sea level pressure 1005.9-hPa, hourly precipitation less than 0.01 inches, temperature - 22.2° C, dew point -24.4° C, freezing rain sensor inoperative.

NOTE: Search pilots reported overcast conditions, with flat and snow-covered tundra terrain, which made it very difficult to discern topographical features.

WRECKAGE AND IMPACT INFORMATION

Wreckage Location:

The accident site was located at latitude **60.35172° N** and longitude **163.02301° W**.

The NTSB IIC's on-scene examination, on February 7, 2020, revealed the airplane's highly fragmented wreckage along a west, south-westerly track about 390 ft long in an area of snow-covered, featureless, tundra, at a GPS elevation of 37 ft.

All of the airplane's major components were located at the main wreckage site. Flight control system continuity could not be confirmed due to extensive impact related damage, and airframe fragmentation.

The wings were separated from the fuselage, with extensive damage to the right wing, which was in three sections. The main wreckage was at the west end of the debris pattern and consisted of the upright fuselage, empennage, and engine sections. The engine and forward fuselage were displaced 80° to the right with extensive fore to aft crush damage.

Cockpit/Fuselage

Fuselage exhibited extensive impact damage. The forward cabin and cockpit, forward baggage area, and engine remained connected, but all sustained significant impact damage. The forward cabin roof was impact separated from the cabin at the tops of the window frames, and the windows were shattered. The forward cabin door was impact separated and fragmented. The nose baggage door was impact separated from the baggage compartment. The nose gear remained mounted to the engine mount and appeared to be in the retracted position. The aft cabin doors remained attached to their respective door frames. The main wing spar carry through was fragmented through the spar webs.

The instrument panel was impact damaged, and many instruments had impact separated. The engine control levers were impact damaged; the throttle was noted in the mid-travel position, and the propeller and mixture levers were fully forward. The alternate air lever was in the off position. The magneto switch was impact damaged. The key remained in the magneto switch, but damage precluded determination of its position.

Continuity of the primary control cables could be established to a point of impact and airframe fragmentation. The control yokes and yoke shafts remained in place through the instrument panel. The control tee bar was impact damaged but remained in place forward of the instrument panel. The aileron control chain was displaced from the tee bar sprockets and there was an impact separation in the center of the chain. The aileron control cables remained connected to the ends of the aileron chain and could be traced through the cabin to broomstick separations near the turnbuckles adjacent to the main wing spar carry through. The stabilator control cables remained attached to the tee bar and could be traced aft of the main wing spar carry through. The rudder pedal bar was impact damaged, and the co-pilot's right pedal was impact separated. The rudder cables remained attached to the pedal bar and could be traced to the main wing spar carry through. The flap handle remained mounted to the cabin floor and was found in the stowed (flaps retracted) position.



Left Wing

The left wing was impact separated from the fuselage at the wing root. The main wing spar separation surfaces displayed uniformly matte, dull faces. The wing leading edge displayed aft crushing. Both fuel tanks remained attached to the wing and were crushed and voided. The left main landing gear remained mounted to the wing and was in the extended position. The fiberglass wingtip was impact separated. The wing leading edge near the wing root was impact separated and crushed. The left aileron remained mounted to the wing and was impact damaged. The bellcrank remained in place within the wing and appeared undamaged. The aileron control and balance cables remained attached to the bellcrank and could be traced to broomstraw separations at the wing root. The flap remained attached to the wing and was wrinkled.

Right Wing

The right wing was impact separated from the fuselage at the wing root and was fragmented into multiple pieces. The wing displayed some aft bending, and the wing outboard of Wing Station (WS) 116 was impact separated from the inboard wing section. The leading-edge skins were impact separated. The fuel tanks were impact separated and voided. The right main landing gear was impact damaged but remained within the gear well. The aileron was impact separated from the outboard wing section and was deformed. The aileron control bellcrank had impact separated and displaced inboard. The balance cable attachment tang had impact separated, with uniformly matte, granular fracture surfaces noted. The aileron control and balance cables remained attached to the bellcrank attachment tangs, with both cables displaying broomstraw separations at their ends. The length of right-wing balance cable included the turnbuckle.

Empennage

The empennage was buckled and crushed. The ELT bracket remained mounted within the empennage interior.



Engine & Propeller

The engine sustained extensive impact to the underside, and front portion of the engine. The exhaust tubes were extensively crushed, bent, and folded, producing sharp creases that were not cracked or broken along the creases. The engine remained attached to the crushed engine mount. Additional impact damage was observed to the oil sump and #2-cylinder head. The fuel servo was impact separated from the engine. The dual magneto, vacuum pump, and propeller governor remained mounted to their respective mounting pads and appeared undamaged.

The propeller remained mounted to the engine. The dome was impact separated. One propeller blade was bent aft about 90° and was twisted. The other propeller blade was bent aft about 30° and twisted.

ANC20FA017 N7632C Piper PA-32R



Aircraft Wreckage Recovery

NOTE: Wreckage recovery efforts were delayed first due to weather and helicopter availability. Significant additional delays were encountered due to COVID-19 travel and social distancing restrictions. The fragmented wreckage was eventually recovered from the accident site and transported to Bethel, then transported to Wasilla, Alaska.

On October 20, 2020, a detailed NTSB wreckage layout and exam was conducted at the Alaska Claims Services facility, Wasilla.

- Photo of wreckage as received in Wasilla, Alaska



ANC20FA017 N7632C Piper PA-32R

- Photo of wreckage after unpackaging



- Engine assembly, firewall, nose landing gear, and portion of cockpit area



ANC20FA017 N7632C Piper PA-32R

- Cockpit and instrument panel



- Engine and Propeller



Engine Data Monitor



An Electronics International CGR-30P engine data monitor unit, S/N: 157626, was recovered and sent to the NTSB's Vehicle Recorder Division for download (see Engine Monitoring Device - Specialist Factual Report located in the docket for this accident).

Engine Exam

The engine, a Lycoming IO-540-K1G5D, MSN: L-19203-48A, was disassembled and examined on May 21, 2021, at Custom Aircraft Engines, Palmer, Alaska, and under the auspices of the National Transportation Safety Board investigator-in-charge.

The powerplant is a six-cylinder, air cooled, direct drive, horizontally opposed, normally aspirated, fuel injected, internal combustion engine.

No preimpact mechanical problems were found during the examination.