



Aviation Investigation Final Report

| | | | |
|--------------------------------|--------------------------------------|-------------------------|-------------|
| Location: | Palmer, Alaska | Accident Number: | ANC22LA049 |
| Date & Time: | June 20, 2022, 12:45 Local | Registration: | N7048K |
| Aircraft: | Piper PA-20 | Aircraft Damage: | Substantial |
| Defining Event: | Powerplant sys/comp malf/fail | Injuries: | 2 None |
| Flight Conducted Under: | Part 91: General aviation - Personal | | |

Analysis

The pilot reported that he was departing from a remote unimproved landing site. During takeoff, at about 200 feet above ground level, the engine lost all power. The pilot made a forced landing to a gravel sand bar, which resulted in substantial damage to the fuselage and both wing lift struts. The pilot stated that he believed that the carburetor developed ice as weather conditions were conducive to carburetor icing and he failed to apply carburetor heat. The pilot reported that there were no pre-accident mechanical malfunctions or failures with the airplane that would have precluded normal operation.

Probable Cause and Findings

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

The loss of engine power due to carburetor icing and the pilot’s failure to utilize carburetor heat.

Findings

| | |
|-----------------------------|-----------------------------------------------------|
| Personnel issues | Lack of action - Pilot |
| Aircraft | Intake anti-ice, deice - Not used/operated |
| Environmental issues | Conducive to carburetor icing - Effect on equipment |

Factual Information

History of Flight

| | |
|----------------|------------------------------------------------|
| Takeoff | Powerplant sys/comp malf/fail (Defining event) |
|----------------|------------------------------------------------|

Pilot Information

| | | | |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|--------------|
| Certificate: | Commercial | Age: | 32, Male |
| Airplane Rating(s): | Single-engine land; Single-engine sea; Multi-engine land | Seat Occupied: | Left |
| Other Aircraft Rating(s): | None | Restraint Used: | 3-point |
| Instrument Rating(s): | Airplane | Second Pilot Present: | |
| Instructor Rating(s): | None | Toxicology Performed: | |
| Medical Certification: | Class 1 Without waivers/limitations | Last FAA Medical Exam: | June 6, 2022 |
| Occupational Pilot: | No | Last Flight Review or Equivalent: | June 4, 2022 |
| Flight Time: | 374.3 hours (Total, all aircraft), 215.18 hours (Total, this make and model), 278.3 hours (Pilot In Command, all aircraft), 60 hours (Last 90 days, all aircraft), 20 hours (Last 30 days, all aircraft) | | |

Passenger Information

| | | | |
|----------------------------------|-----|------------------------------------------|---------|
| Certificate: | | Age: | |
| Airplane Rating(s): | | Seat Occupied: | Right |
| Other Aircraft Rating(s): | | Restraint Used: | 3-point |
| Instrument Rating(s): | | Second Pilot Present: | |
| 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: | Piper | Registration: | N7048K |
| Model/Series: | PA-20 | Aircraft Category: | Airplane |
| Year of Manufacture: | 1950 | Amateur Built: | |
| Airworthiness Certificate: | Normal | Serial Number: | 20-155 |
| Landing Gear Type: | Tailwheel | Seats: | 2 |
| Date/Type of Last Inspection: | July 25, 2021 Annual | Certified Max Gross Wt.: | 1800 lbs |
| Time Since Last Inspection: | 33 Hrs | Engines: | 1 Reciprocating |
| Airframe Total Time: | 2865 Hrs as of last inspection | Engine Manufacturer: | LYCOMING |
| ELT: | C91 installed, not activated | Engine Model/Series: | O-290 SERIES |
| Registered Owner: | On file | Rated Power: | 135 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: | PAAQ,233 ft msl | Distance from Accident Site: | 11 Nautical Miles |
| Observation Time: | 12:53 Local | Direction from Accident Site: | 315° |
| Lowest Cloud Condition: | Scattered / 6500 ft AGL | Visibility | 10 miles |
| Lowest Ceiling: | | Visibility (RVR): | |
| Wind Speed/Gusts: | 8 knots / | Turbulence Type Forecast/Actual: | None / None |
| Wind Direction: | 210° | Turbulence Severity Forecast/Actual: | N/A / N/A |
| Altimeter Setting: | 30.03 inches Hg | Temperature/Dew Point: | 19°C / 6°C |
| Precipitation and Obscuration: | No Obscuration; No Precipitation | | |
| Departure Point: | palmer, AK (PAAQ) | Type of Flight Plan Filed: | None |
| Destination: | palmer, AK (PAAQ) | Type of Clearance: | VFR;Traffic advisory |
| Departure Time: | 12:20 Local | Type of Airspace: | Class G |

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: | 61.47,-148.83 |

Administrative Information

| | |
|------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Investigator In Charge (IIC): | Ward, Mark |
| Additional Participating Persons: | Scott Smith; FAA; Anchorage, AK |
| Original Publish Date: | September 8, 2022 |
| Last Revision Date: | |
| Investigation Class: | Class 4 |
| Note: | The NTSB did not travel to the scene of this accident. |
| Investigation Docket: | https://data.ntsb.gov/Docket?ProjectID=105390 |

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

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](#).