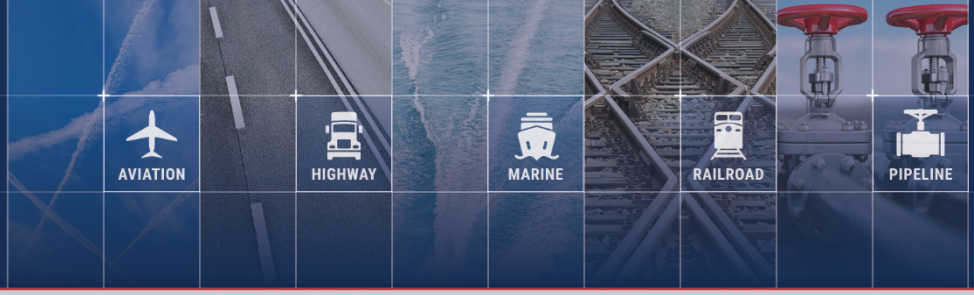

Aviation Investigation Final Report

Location:	Big Lake, Alaska	**Accident Number:**	ANC16LA035
Date & Time:	June 25, 2016, 18:00 Local	**Registration:**	N9063K
Aircraft:	UNIVERSAL STINSON 108	**Aircraft Damage:**	Substantial
Defining Event:	Loss of engine power (partial)	**Injuries:**	2 Minor, 1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The private pilot stated that, about 35 minutes into the personal, local flight and while circling a friend's cabin about 550 ft above ground level, the engine began to "sputter," followed by a total loss of engine power. He subsequently made a forced landing in an area of densely populated trees, during which the airplane sustained substantial damage to the wings and fuselage.

A postaccident examination of the airframe and engine revealed no mechanical malfunctions or anomalies that would have precluded normal operation. Although the wing fuel tanks had been modified and no Federal Aviation Administration major repair and alteration form nor entry in the airplane's maintenance records were found regarding the modification, no evidence was found indicating that the modification led to the loss of engine power. The reason for the loss of engine power could not be determined.

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 during cruise flight for reasons that could not be determined because postaccident examination of the airframe and engine revealed no mechanical malfunctions or failures that would have precluded normal operation.

Findings

Not determined	(general) - Unknown/Not determined
Environmental issues	Tree(s) - Contributed to outcome

Factual Information

History of Flight

Enroute-cruise	Loss of engine power (partial) (Defining event)
Enroute-cruise	Loss of engine power (total)
Emergency descent	Collision with terr/obj (non-CFIT)

On June 25, 2016, about 1800 Alaska daylight time, a Stinson 108 airplane, N9063K, sustained substantial damage during a forced landing, following a loss of engine power near Big Lake, AK. The airplane was registered to and operated by the pilot, as a visual flight rules (VFR) flight under the provisions of 14 Code of Federal Regulations (CFR) Part 91 when the accident occurred. Of the three people on board, the certificated private pilot and one passenger sustained minor injuries and one passenger was uninjured. Visual meteorological conditions prevailed, and no flight plan had been filed. The flight departed Merrill Field Airport (PAMR), Anchorage, Alaska, at about 1725.

During a telephone conversation with the National Transportation Safety Board (NTSB) investigator-in-charge (IIC) on June 25, the pilot stated that the purpose of the flight was to take two family members, who were visiting from out of town, on a sightseeing flight. About 35 minutes into the flight, while circling a friend's cabin at about 550 feet above ground level, the engine began to "sputter" followed by a total loss of engine power. He made a forced landing in an area of densely populated spruce and birch trees. During the forced landing, the airplane sustained substantial damage to wings and fuselage.

On October 12, 2016, the NTSB IIC, along with a Federal Aviation Administration (FAA) safety inspector from the Anchorage Flight Standards District Office examined the airframe and engine at the facilities of Alaska Claims Services, Inc., Wasilla, Alaska.

The propeller remained attached to the engine crankshaft. Both propeller blades exhibited aft bending with minimal torsional "S" twisting.

Examination of the Continental O-470R engine revealed no anomalies, contamination, or evidence of malfunction in any of the engine accessories. The cylinders, pistons, valve train, crankshaft, and other internal components were all without evidence of anomaly or malfunction. The engine was rotated by the propeller. When the engine was rotated, blue spark was observed on the top ignition leads.

Examination of the airplane's wing fuel tanks revealed that the tanks had been modified. An additional section had been welded on to the factory fuel tank with lightening holes drilled in the factory end. Each tank was placarded near the filler cap on the exterior of the wing "FUEL 80/87 MINIMUM GRADE 20 GALLONS." The fuel selector inside the cockpit was placarded "18 GAL." No FAA form 337 (major repair and alteration) or logbook entry was located in the airplane's maintenance records for the modification of the fuel system.

The examination of the airframe and engine revealed no evidence of mechanical malfunctions or failures that would have precluded normal operation.

The closest weather reporting facility was Wasilla Airport, Wasilla, AK, about 19 miles east of the accident site. At 1756, a weather observation from Wasilla Airport was reporting, in part: wind from 080 degrees at 4 knots; visibility, 10 statute miles; clouds and sky condition, few clouds at 4,600 feet, scattered clouds at 5,500 feet, broken clouds at 7,500 feet; temperature, 66°F; dew point 48 °F; altimeter, 29.89 inHG.

After repeated attempts, the pilot did not submit an NTSB Pilot/Operator Accident Report form (NTSB Form 6120.1) as required.

Pilot Information

Certificate:	Private	**Age:**	44,Male
Airplane Rating(s):	Single-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	None	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	Class 3 With waivers/limitations	**Last FAA Medical Exam:**	June 24, 2015
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:	460 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	UNIVERSAL STINSON	**Registration:**	N9063K
Model/Series:	108	**Aircraft Category:**	Airplane
Year of Manufacture:	1947	**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	108-2063
Landing Gear Type:	Tailwheel	**Seats:**	
Date/Type of Last Inspection:		**Certified Max Gross Wt.:**	2150 lbs
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:		**Engine Manufacturer:**	CONT MOTOR
ELT:		**Engine Model/Series:**	O 470R
Registered Owner:	On file	**Rated Power:**	230 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:	PAWS	**Distance from Accident Site:**	19 Nautical Miles
Observation Time:	01:56 Local	**Direction from Accident Site:**	90°
Lowest Cloud Condition:	Few / 4600 ft AGL	**Visibility**	10 miles
Lowest Ceiling:	Broken / 7500 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	4 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	80°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29.88 inches Hg	**Temperature/Dew Point:**	19°C / 9°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Anchorage, AK (PAMR)	**Type of Flight Plan Filed:**	None
Destination:	Anchorage, AK (PAMR)	**Type of Clearance:**	None
Departure Time:		**Type of Airspace:**	Class G

Wreckage and Impact Information

Crew Injuries:	1 Minor	**Aircraft Damage:**	Substantial
Passenger Injuries:	1 Minor, 1 None	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	2 Minor, 1 None	**Latitude, Longitude:**	61.610553,-150.084442(est)

Administrative Information

Investigator In Charge (IIC):	Banning, David
Additional Participating Persons:	Spencer Leonard; Federal Aviation Administration; Anchorage, AK
Original Publish Date:	October 17, 2017
Last Revision Date:	
Investigation Class:	Class
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=93481