Aviation Investigation Final Report

Location:	Wasilla, Alaska	**Accident Number:**	ANC09LA042
Date & Time:	May 16, 2009, 11:40 Local	**Registration:**	N7440P
Aircraft:	Piper PA-24-250	**Aircraft Damage:**	Substantial
Defining Event:	Loss of engine power (total)	**Injuries:**	1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The private pilot was on a Title 14, CFR Part 91, local area personal flight when the accident occurred. As he approached his destination airport he applied full carburetor heat, which resulted in a loss of engine power. After completing emergency engine procedures he was unable to restore engine power, and selected a shallow lake as a forced landing site. The airplane sustained substantial damage to the fuselage during the forced landing. The pilot reported that while the airplane was being disassembled after recovery, his mechanic removed the lower engine cowling, and discovered a worn, 4 inch by 2 inch portion of rubberized baffling material lodged inside of the carburetor air box assembly. An NTSB investigator traced the origin of the baffling to a worn, frayed, and torn section of engine cowling baffling adjacent to the carburetor heat fresh air inlet duct. The pilot/owner of the airplane reported that he was aware of the worn, frayed and torn engine baffling, and he planned to have it replaced at the airplane's next annual inspection. Given the discovery of the baffling material inside the carburetor air box, it is likely that once carburetor heat was applied, airflow pulled the baffling material into the carburetor inlet, restricting airflow to the carburetor with the resultant loss of power.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: A loss of engine power due to the blockage of the carburetor air inlet by a piece of engine baffling. Contributing to the accident was a worn engine baffle, and the pilot/owner's failure to have the engine baffle replaced.

Findings

Aircraft	Air intake - Not specified
Aircraft	Eng air baffle sec (recip.) - Damaged/degraded
Personnel issues	(general) - Pilot

Factual Information

History of Flight

Enroute-cruise	Loss of engine power (total) (Defining event)
Emergency descent	Ditching

On May 16, 2009, about 1140 Alaska daylight time, a Piper PA-24-250 airplane, N7440P, sustained substantial damage during a forced landing and ditching in Lake Lucille, Wasilla, Alaska, following a loss of engine power. The solo private pilot was not injured. The airplane was being operated as a visual flight rules personal flight under Title 14 Code of Federal Regulations Part 91 when the accident occurred. Visual meteorological conditions prevailed at the time of the accident, and no flight plan was filed. The flight originated at the Anderson Lake Airport, Wasilla, about 1040.

During a telephone conversation with the National Transportation Safety Board (NTSB) investigator-in-charge (IIC) on May 16, the pilot said that after departing the Anderson Lake Airport, he flew southeast over the Knik Glacier. He said that before returning to the Anderson Lake Airport he did a touch-and-go landing at the Wasilla Airport. After the touch-and-go landing, he climbed the airplane to 1,700 feet msl and flew east toward the Anderson Lake Airport.

The pilot reported that while in cruise level flight, he applied full carburetor heat, and all engine power was lost. After completing the emergency procedures for a loss of engine power, he was unable to restart the engine. The pilot said he initially selected a portion of the Parks Highway, a four-lane highway, as an emergency landing site, but vehicle and pedestrian traffic would not allow for a safe landing. He then selected Lake Lucille for a forced landing, which is next to the Parks Highway. The pilot said that he did not lower the airplane's landing gear, and he selected full flaps during the emergency descent to the lake. He said he ditched the airplane about 100 feet from the north shoreline of the lake. After ditching, the pilot indicated that the airplane initially floated. He said that just before the airplane sank, a small pontoon boat arrived, and took him to shore. The airplane sustained substantial damage to the fuselage during the ditching.

The airplane was equipped with a Lycoming O-540-A1D5 engine.

An FAA airworthiness inspector from the Anchorage Flight Standards District Office (FSDO), traveled to the accident site on May 19 and examined the wreckage. No preaccident mechanical anomalies were discovered during the examination.

During a telephone conversation with the NTSB IIC on May 20, the pilot/owner of the airplane reported that as his mechanic was disassembling the airplane during recovery efforts, he

removed the lower engine cowling, and discovered a 4 inch by 2 inch portion of rubberized baffling material lodged inside of the carburetor air box assembly.

On May 20, an NTSB investigator traveled to the accident site to document the mechanic's findings. The NTSB investigator traced the origin of the baffling to a worn and frayed section of engine cowling baffling that was adjacent to the carburetor heat fresh air inlet duct.

During a follow up conversation on May 20, the pilot/owner of the airplane reported that he was aware of the worn, frayed and torn engine baffling and he planned to have it replaced in the near future, or at the airplane's next annual inspection.

The closest official weather observation station is at the Wasilla Airport. At 1156, an Aviation Routine Weather Report (METAR) was reporting, in part: Wind, calm; visibility, 10 statute miles; clouds and sky condition, 4,900 feet few, 9,000 feet scattered; temperature, 54 degrees F; dew point, 36 degrees F; altimeter, 30.01 inHg.
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Pilot Information

Certificate:	Private	**Age:**	48,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:**	May 30, 2007
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	October 4, 2008
Flight Time:	1300 hours (Total, all aircraft), 38 hours (Total, this make and model), 1250 hours (Pilot In Command, all aircraft), 18 hours (Last 90 days, all aircraft), 10 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	**Registration:**	N7440P
Model/Series:	PA-24-250	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	24-2629
Landing Gear Type:	Retractable -	**Seats:**	4
Date/Type of Last Inspection:	August 13, 2008 Annual	**Certified Max Gross Wt.:**	2900 lbs
Time Since Last Inspection:	32 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	3347 Hrs at time of accident	**Engine Manufacturer:**	LYCOMING
ELT:	C91 installed, not activated	**Engine Model/Series:**	O-540-A1D5
Registered Owner:	BRUCE W. CHRISTIE	**Rated Power:**	250 Horsepower
Operator:	BRUCE W. CHRISTIE	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	IYS,354 ft msl	**Distance from Accident Site:**	6 Nautical Miles
Observation Time:	11:56 Local	**Direction from Accident Site:**	90°
Lowest Cloud Condition:	Few / 4900 ft AGL	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	/	**Turbulence Type Forecast/Actual:**	/
Wind Direction:		**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30.01 inches Hg	**Temperature/Dew Point:**	12°C / 2°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Wasilla, AK (PAWS)	**Type of Flight Plan Filed:**	None
Destination:	Wasilla, AK (0AK1)	**Type of Clearance:**	None
Departure Time:	10:40 Local	**Type of Airspace:**	Class G

Wreckage and Impact Information

Crew Injuries:	1 None	**Aircraft Damage:**	Substantial
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 None	**Latitude, Longitude:**	61.571388,-149.470275(est)

Administrative Information

Investigator In Charge (IIC):	Johnson, Clinton
Additional Participating Persons:	Charles Strange; Federal Aviation Administration (Airworthiness); Anchorage, AK
Original Publish Date:	May 11, 2010
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=73853