Aviation Investigation Final Report

Location:	Skwentna, Alaska	**Accident Number:**	ANC15LA034
Date & Time:	May 31, 2015, 20:00 Local	**Registration:**	N2828P
Aircraft:	Piper PA 22	**Aircraft Damage:**	Substantial
Defining Event:	Loss of engine power (total)	**Injuries:**	1 Minor
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot stated that he was maneuvering the airplane at low altitude to practice approaches at an unimproved airstrip. After passing over some trees in a northerly direction, the airplane began a rapid descent. The pilot applied full power in an effort to correct for the descent, but the engine power decreased. When the airplane was about 25 ft above ground level, the left wing struck a tree, and the airplane then impacted terrain in a slight left bank. The airplane slid along the ground for about 18 ft before impacting a berm, which caused the airplane to become airborne and rotate counterclockwise 180 degrees before coming to rest in a near-level pitch attitude.

A Federal Aviation Administration airworthiness directive (AD) applicable to the airplane required that a placard with the following operating limitation be placed near the throttle: "DO NOT OPEN THROTTLE RAPIDLY – (IDLE TO FULL THROTTLE, 2 SECONDS MINIMUM.)" The AD was issued to prevent power interruption and acceleration hangup that could result from abrupt throttle movement. The airplane was in compliance with the AD. The pilot stated that, when he opened the throttle, he did so rapidly, faster than the 2-second requirement. It is likely that the pilot's rapid opening of the throttle interrupted the fuel supply to the engine, which resulted in a loss of engine power.

Probable Cause and Findings

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

The pilot's failure to follow the airplane's operating limitations by rapidly opening the throttle, which resulted in a loss of engine power. Contributing to the accident was the pilot's decision to maneuver the airplane at low altitude even though he was not taking off or landing.

Findings

Aircraft	Powerplant parameters - Capability exceeded
Personnel issues	Use of equip/system - Pilot
Personnel issues	Incorrect action performance - Pilot
Personnel issues	Decision making/judgment - Pilot

Factual Information

History of Flight

Maneuvering-low-alt flying	Loss of engine power (total) (Defining event)
Emergency descent	Collision with terr/obj (non-CFIT)

On May 31, 2015, about 2000 Alaska daylight time, a tailwheel-equipped Piper PA-22 airplane, N2828P, sustained substantial damage after impacting terrain while maneuvering at low level about 17 miles southeast of Skwentna, Alaska. The student pilot and sole occupant received minor injuries. The airplane was registered to, and operated by, the pilot under the provisions of Title 14 Code of Federal Regulations (CFR) Part 91 as a personal cross-country flight. Visual meteorological conditions prevailed at the time of the accident, and no flight plan had been filed.

During an interview with the National Transportation Safety Board (NTSB) investigator-in-charge (IIC) on June 01, 2015, the pilot stated that he was maneuvering the airplane to "drag the runway" of an unimproved airstrip. After passing over some trees in a northerly direction, the airplane began a rapid descent. The pilot applied full power in an effort to correct for the descent, but the engine power decreased. About 25 feet above ground level (agl), the left wing struck a tree, and the airplane impacted terrain in a slight left bank. The airplane slid along the surface for about 18 feet before impacting a berm, which caused the airplane to become airborne and rotate counter clockwise 180 degrees before coming to rest in a near level pitch attitude. During a post-accident examination of the airplane, including maintenance records, it was discovered that Federal Aviation Administration (FAA) Airworthiness Directive (AD) 73-09-06 was applicable to Piper PA-22-150 airplanes with Lycoming O-320 series engines and Marvel Schebler Carburetors Model MA-4-SPA, part numbers 10-3678-11, 10-3678-12, and 10-3678-32. The accident airplane was equipped with a Lycoming O-320 engine and a Marvel Schebler Carburetor, model number MA-4SPA, P/N 10-3678-32, and the airplane was in compliance with the AD by having the required placard in place at the time of the accident.

The AD states, in part: "To prevent power interruption and acceleration hangup resulting from abrupt throttle movement, accomplish the following: Attach the following operating limitation placard to the instrument panel near the throttle in full view of the pilot. Use 1/8 inch min. size lettering. 'DO NOT OPEN THROTTLE RAPIDLY – (IDLE TO FULL THROTTLE, 2 SECONDS MINIMUM)' The placard may be fabricated by the owner or operator."

The pilot stated that when he advanced the throttle, he did so in a rapid motion, faster than the 2-second requirement.

The closest weather reporting facility is Skwentna Airport, about 17 miles northwest of the accident site. At 1850, an aviation routine weather report (METAR) from the Skwentna Airport was reporting in part: winds from 290 degrees at 7 knots; visibility, 30 statute miles; sky condition, few clouds at 3500 feet, scattered at 20000 feet; temperature 77 degrees F; dewpoint 37 degrees F; barometric pressure 29.74inHG.

Student pilot Information

Certificate:	Student	**Age:**	43
Airplane Rating(s):	None	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	3-point
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:**	September 19, 2014
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:	(Estimated) 55 hours (Total, all aircraft), 55 hours (Total, this make and model), 14 hours (Pilot In Command, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	**Registration:**	N2828P
Model/Series:	PA 22	**Aircraft Category:**	Airplane
Year of Manufacture:	1955	**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	22-3121
Landing Gear Type:	Tailwheel	**Seats:**	4
Date/Type of Last Inspection:	June 9, 2014 Annual	**Certified Max Gross Wt.:**	1801 lbs
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:	4082 Hrs at time of accident	**Engine Manufacturer:**	LYCOMING
ELT:	C126 installed, not activated	**Engine Model/Series:**	O-320 SERIES
Registered Owner:	LEVI S. WOOD	**Rated Power:**	150 Horsepower
Operator:	LEVI S. WOOD	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	PASW,148 ft msl	**Distance from Accident Site:**	18 Nautical Miles
Observation Time:	02:50 Local	**Direction from Accident Site:**	334°
Lowest Cloud Condition:	Few / 3500 ft AGL	**Visibility**	30 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	7 knots /	**Turbulence Type Forecast/Actual:**	/ None
Wind Direction:	290°	**Turbulence Severity Forecast/Actual:**	/ N/A
Altimeter Setting:	29.73 inches Hg	**Temperature/Dew Point:**	25°C / 3°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	SKWENTNA, AK (SKW)	**Type of Flight Plan Filed:**	None
Destination:	ANCHORAGE, AK (MRI)	**Type of Clearance:**	None
Departure Time:		**Type of Airspace:**	Class G

Wreckage and Impact Information

Crew Injuries:	1 Minor	**Aircraft Damage:**	Substantial
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 Minor	**Latitude, Longitude:**	61.701389,-150.936111

Administrative Information

Investigator In Charge (IIC):	Williams, David
Additional Participating Persons:	Charles Strange; FAA; Anchorage, AK
Original Publish Date:	September 8, 2015
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=91283