



Aviation Investigation Final Report

Location:	Rialto, California	Accident Number:	WPR09LA025
Date & Time:	October 26, 2008, 12:30 Local	Registration:	N44848
Aircraft:	NAVAL AIRCRAFT FACTORY N3N-3	Aircraft Damage:	Substantial
Defining Event:	Loss of engine power (total)	Injuries:	1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot performed a preflight inspection of the company airplane in preparation for a local area round-robin flight. After all systems appeared to function normally, the pilot took off and flew to his first intended landing site. Then, the pilot took off for the return flight. According to the pilot, during the ensuing takeoff, the "engine power output and acceleration were normal." However, upon climbing about 150 feet above the runway, "the engine smoothly lost power....The power loss felt like the throttle lever [was] being smoothly closed from takeoff power to idle. There was no engine roughness, vibration, or perceived reduced power output preceding the loss of power, and no backfiring or sputtering [was] associated with the power loss." The pilot made a forced landing in an open field ahead of the airplane. The airplane collided with vegetation during the landing rollout. A teardown examination of the airplane's carburetor was performed, and internal anomalies were found regarding its assembly. The main fuel jets were found too small for the engine application, and the mixture shaft was improperly keyed and/or out of alignment with its respective track. This anomaly likely resulted in unreliable mixture settings and an interruption of fuel flow to the engine.

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 initial climb due to an interruption in fuel flow through an improperly assembled carburetor.

Findings

Aircraft	Fuel control/carburetor - Incorrect service/maintenance
Environmental issues	Tree(s) - Contributed to outcome

Factual Information

History of Flight

Prior to flight	Aircraft maintenance event
Initial climb	Loss of engine power (total) (Defining event)
Emergency descent	Off-field or emergency landing
Landing-landing roll	Collision with terr/obj (non-CFIT)

On October 26, 2008 about 1230 Pacific daylight time, a Naval Aircraft Factory N3N-3, N44848, experienced a total loss of engine power seconds after takeoff from runway 24 at the Rialto Municipal Airport, Rialto, California. The airplane collided with vegetation during the forced landing in an open field about 1/2-mile southwest of the airport. The airplane was substantially damaged. The commercial certificated pilot was not injured. Visual meteorological conditions prevailed during the personal flight, and no flight plan was filed. The flight was performed under the provisions of 14 Code of Federal Regulations Part 91.

The pilot reported to the National Transportation Safety Board investigator that the planned round-robin flight originated about 1205 from the Flabob Airport in Riverside. In pertinent part, the pilot reported to the Safety Board investigator that he performed a preflight inspection of the airplane, which was followed by a pretakeoff inspection. The single fuselage fuel tank was full of fuel. All systems appeared to function normally, and he initiated the planned hour-long local area flight. The pilot flew to the Rialto Municipal Airport, landed, and taxied back for takeoff.

The accident occurred during the pilot's attempted return flight to Flabob. According to the pilot, during the ensuing takeoff, the "engine power output and acceleration were normal." However, upon climbing about 150 feet above the runway, "the engine smoothly lost power....The power loss felt like the throttle lever [was] being smoothly closed from takeoff power to idle. There was no engine roughness, vibration, or perceived reduced power output preceding the loss of power, and no backfiring or sputtering [was] associated with the power loss."

The pilot made a forced landing in a nearby field. Seconds prior to landing, the engine "momentarily and smoothly regained power" for 5 to 7 seconds. Then, it "smoothly lost power a second time, again without roughness, backfiring, or sputtering."

During rollout in the field, the airplane collided with a tree, which resulted in impact damage to the wings. Several hours later, the pilot recovered the airplane from the accident site under a police escort. The pilot reported that no fuel was added to the airplane's fuel tank. The pilot reported that he started the engine following normal procedures, and he taxied the airplane for about 15 minutes from the accident landing site to the airport, whereupon its engine was shut

down.

A company mechanic for the airplane's owner reported to the Safety Board investigator that when the owner purchased the airplane, it was equipped with the accident carburetor. Since the company's acquisition of the airplane, no maintenance had been performed to the carburetor.

The Federal Aviation Administration coordinator reported to the Safety Board investigator that the airplane's engine was externally examined, and no evidence of any mechanical malfunction was apparent. Thereafter, the airplane's carburetor was removed and a teardown examination was performed by Aero Engines, Los Angeles, California.

During the teardown examination, internal assembly anomalies were found. The owner's mechanic reported that the carburetor's "main jets were [found] too small for the engine application." This model carburetor may be installed on different models of engines. Also, the accident carburetor had been improperly assembled. The mixture shaft was improperly keyed and/or out of alignment with its respective track. This anomaly may result in unreliable mixture settings.

Pilot Information

Certificate:	Commercial	Age:	51, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Rear
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 2 With waivers/limitations	Last FAA Medical Exam:	September 10, 2007
Occupational Pilot:	No	Last Flight Review or Equivalent:	October 8, 2007
Flight Time:	895 hours (Total, all aircraft), 21 hours (Total, this make and model), 767 hours (Pilot In Command, all aircraft), 6 hours (Last 90 days, all aircraft), 3 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	NAVAL AIRCRAFT FACTORY	Registration:	N44848
Model/Series:	N3N-3	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	4477
Landing Gear Type:	Tailwheel	Seats:	2
Date/Type of Last Inspection:	September 26, 2008 Annual	Certified Max Gross Wt.:	3400 lbs
Time Since Last Inspection:	3 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	2713 Hrs at time of accident	Engine Manufacturer:	LYCOMING
ELT:	C91A installed, not activated	Engine Model/Series:	R680
Registered Owner:	On file	Rated Power:	300 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:	ONT, 944 ft msl	Distance from Accident Site:	10 Nautical Miles
Observation Time:	11:53 Local	Direction from Accident Site:	234°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	3 knots / None	Turbulence Type Forecast/Actual:	/
Wind Direction:	210°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.07 inches Hg	Temperature/Dew Point:	28°C / -4°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Rialto, CA (L67)	Type of Flight Plan Filed:	None
Destination:	Riverside, CA (RIR)	Type of Clearance:	None
Departure Time:	12:29 Local	Type of Airspace:	

Airport Information

Airport:	Rialto Municipal L67	Runway Surface Type:	Asphalt
Airport Elevation:	1455 ft msl	Runway Surface Condition:	Dry
Runway Used:	24	IFR Approach:	None
Runway Length/Width:	4500 ft / 100 ft	VFR Approach/Landing:	Forced landing

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:	34.12611,-117.416389(est)

Administrative Information

Investigator In Charge (IIC): Pollack, Wayne

Additional Participating Persons: Gabriel Serrano; Federal Aviation Administration; Riverside, CA

Original Publish Date: October 19, 2009

Last Revision Date:

Investigation Class: [Class](#)

Note:

Investigation Docket: <https://data.nts.gov/Docket?ProjectID=69359>

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](#).