



Aviation Investigation Final Report

Location:	San Diego/El Cajon, California	Accident Number:	WPR18LA205
Date & Time:	July 28, 2018, 10:23 Local	Registration:	N3477T
Aircraft:	Cessna 177	Aircraft Damage:	Substantial
Defining Event:	Miscellaneous/other	Injuries:	2 Minor
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot reported that, while departing on a cross-country flight from the 2,738-ft-long runway, the engine lost partial power about 100 ft above ground level during the initial climb. He lowered the airplane's nose, which appeared to restore engine power, then raised the nose again as the airplane approached the end of the runway. The engine then experienced a "severe" loss of power and the airplane subsequently impacted a dirt field at the departure end of the runway. Postaccident examination of the airframe and engine revealed no preimpact anomalies that would have precluded normal operation, and review of data from the onboard engine monitor revealed that the engine was producing full power throughout the takeoff.

A Federal Aviation Administration inspector spoke to several witnesses who saw the pilot fill a truck bed with belongings from the accident airplane, including wooden crates full of avocados. The pilot confirmed that he had a "substantial amount" of cargo on board, and that he did not calculate the airplane's weight and balance for the flight.

Based on the available information, it is likely that the pilot's inadequate preflight planning resulted in his exceedance of the airplane's maximum gross weight, which lead to the the airplane's poor climb performance, the perceived loss of engine power, and the subsequent loss of control and impact with terrain.

Probable Cause and Findings

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

The pilot's inadequate preflight planning, which resulted in his exceedance of the airplane's maximum gross weight, which lead to the airplane's poor climb performance, and a subsequent loss of control and impact with terrain.

Findings

Aircraft	Maximum weight - Capability exceeded
Personnel issues	Weight/balance calculations - Pilot
Personnel issues	Decision making/judgment - Pilot

Factual Information

History of Flight

Initial climb	Miscellaneous/other (Defining event)
Initial climb	Dragged wing/rotor/float/other
Initial climb	Collision with terr/obj (non-CFIT)

On July 28, 2018, about 1023 Pacific daylight time, a Cessna 177 airplane, N3477T, was substantially damaged when it was involved in an accident near San Diego/El Cajon, California. The private pilot and passenger received minor injuries. The airplane was operated as a Title 14 *Code of Federal Regulations* (CFR) Part 91 personal flight.

The pilot reported that the takeoff and initial climb were normal until about 100 ft above ground level, when the engine began to lose power. He lowered the airplane's nose to prevent a stall, which "resulted in a return to full power." As the airplane neared the end of the 2,738-ft-long runway, the pilot raised the nose again; the engine experienced a "severe" loss of power and the airplane impacted a dirt field at the departure end of the runway. The airplane continued to slide on the ground about 100 yards before coming to rest adjacent to a taxiway.

Postaccident examination of the airframe and engine revealed no preimpact anomalies that would have precluded normal operation.

Review of data from the airplane's engine monitor revealed that engine power was increased to a takeoff setting of 2,550 rpm; the engine maintained that setting or higher for about 30 seconds. The final data points showed a fuel flow of zero, consistent with the engine being shut off.

A Federal Aviation Administration inspector spoke to several witnesses who were at the scene of the accident and saw the pilot fill up a truck bed with belongings from the accident airplane. Most notable of the cargo were wooden crates full of avocados. The pilot confirmed that he had a "substantial amount" of cargo on board the airplane and stated that he did not calculate a weight and balance for the flight.

Pilot Information

Certificate:	Private	Age:	74,Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Lap only
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 13, 2017
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	(Estimated) 242 hours (Total, all aircraft), 47 hours (Total, this make and model), 242 hours (Pilot In Command, all aircraft)		

Passenger Information

Certificate:		Age:	Female
Airplane Rating(s):		Seat Occupied:	Right
Other Aircraft Rating(s):		Restraint Used:	4-point
Instrument Rating(s):		Second Pilot Present:	No
Instructor Rating(s):		Toxicology Performed:	
Medical Certification:		Last FAA Medical Exam:	
Occupational Pilot:		Last Flight Review or Equivalent:	
Flight Time:			

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N3477T
Model/Series:	177 Undesignat	Aircraft Category:	Airplane
Year of Manufacture:	1968	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	17700777
Landing Gear Type:	Tricycle	Seats:	4
Date/Type of Last Inspection:	August 1, 2017 Annual	Certified Max Gross Wt.:	2350 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	4127.23 Hrs as of last inspection	Engine Manufacturer:	Lycoming
ELT:	Installed	Engine Model/Series:	O-360 SERIES
Registered Owner:		Rated Power:	180 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:	SEE, 387 ft msl	Distance from Accident Site:	
Observation Time:	17:47 Local	Direction from Accident Site:	
Lowest Cloud Condition:	Clear	Visibility	9 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	4 knots /	Turbulence Type Forecast/Actual:	None / None
Wind Direction:	200°	Turbulence Severity Forecast/Actual:	N/A / N/A
Altimeter Setting:	29.95 inches Hg	Temperature/Dew Point:	26°C / 19°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	San Diego/El Cajon, CA (SEE)	Type of Flight Plan Filed:	None
Destination:	Lompoc, CA (LPC)	Type of Clearance:	VFR
Departure Time:	10:23 Local	Type of Airspace:	

Airport Information

Airport:	Gillespie Field SEE	Runway Surface Type:	Asphalt
Airport Elevation:	387 ft msl	Runway Surface Condition:	Dry
Runway Used:	27L	IFR Approach:	None
Runway Length/Width:	2738 ft / 60 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 Minor	Aircraft Damage:	Substantial
Passenger Injuries:	1 Minor	Aircraft Fire:	None
Ground Injuries:		Aircraft Explosion:	None
Total Injuries:	2 Minor	Latitude, Longitude:	32.82611,-116.9725(est)

Administrative Information

Investigator In Charge (IIC):	Nixon, Albert		
Additional Participating Persons:	Ryan Armenta; FAA; San Diego, CA		
Original Publish Date:	June 24, 2021	Investigation Class:	3
Note:	The NTSB did not travel to the scene of this accident.		
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=97908		

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).