Aviation Investigation Final Report

Location:	Fredericksburg, Texas	**Accident Number:**	CEN19FA028
Date & Time:	November 17, 2018, 15:15 Local	**Registration:**	N4132A
Aircraft:	North American P51	**Aircraft Damage:**	Destroyed
Defining Event:	Loss of control in flight	**Injuries:**	2 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The commercial pilot was participating in a World War II educational reenactment program with a passenger onboard. The purpose of the flight was to perform 4 to 5 passes in front of an amphitheater where the reenactment was being conducted. Witnesses at the amphitheater stated that the airplane performed a low pass before entering a climb. The airplane then entered a turn followed by a steep descent from which it did not recover before disappearing from view behind trees. Although the pilot held an authorization to fly the accident airplane at the time of the accident, he had a history of failed check rides, airspace violations, and enforcement actions. In each instance, the pilot's certificate was issued or reinstated upon reexamination.

The airplane impacted the ground in a near-vertical attitude. The propeller blades exhibited abrasions and leading-edge gouges consistent with the engine producing power at impact. All observed flight control separations exhibited features consistent with overload. No preimpact anomalies with the engine or airframe were found. Toxicology testing detected ethanol in specimens from the pilot consistent with postmortem production. Although the pilot had a history of coronary artery disease, there was no evidence that this condition contributed to the accident.

The accident pilot ran a charity that provided flights in his warbird airplane to veterans; he typically participated in the reenactment program with a veteran seated in the rear seat of his airplane. The director of the educational program stated that, in a pre-performance briefing on the day of the accident, the pilot was reminded of "all pertinent [Federal Aviation Administration] requirements," including that the fly-by be conducted no lower than 1,000 ft above ground level.

Given the available information, the pilot most likely performed a low-level maneuver with a passenger on board and was unable to recover from that maneuver before impacting terrain.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's decision to perform a low-level maneuver at an altitude where he was unable to recover the airplane before impacting terrain.

Findings

Personnel issues	Aircraft control - Pilot
Personnel issues	Decision making/judgment - Pilot

Factual Information

History of Flight

Maneuvering-aerobatics	Loss of control in flight (Defining event)
Uncontrolled descent	Collision with terr/obj (non-CFIT)

On November 17, 2018, about 1515 central standard time, a North American P-51D airplane, N4132A, was destroyed when it impacted an apartment parking lot while maneuvering near Fredericksburg, Texas. The commercial pilot and passenger sustained fatal injuries. The airplane was registered to Pea Hochso LLC and was operated by the pilot as a Title 14 *Code of Federal Regulations* Part 91 personal flight. Day visual meteorological conditions prevailed in the area about the time of the accident, and no flight plan was filed for the local flight, which originated about 1459 from Gillespie County Airport (T82), Fredericksburg, Texas.

The purpose of the flight was to perform a fly-over of a World War II educational presentation and reenactment. One witness reported that the airplane made a low-level pass and climbed out. As the airplane entered a right bank, it started to "drop." Trees blocked the witness's view and he "waited for the aircraft to climb out of the dive"; however, the airplane did not reappear from behind the trees.

Another witness reported that, following a "very low" pass, the airplane entered a climb, then "all of a sudden he did a roll." The airplane made a slight turn, then entered a vertical nose-down attitude and disappeared from view.

Pilot Information

Certificate:	Commercial	**Age:**	73,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Front
Other Aircraft Rating(s):	None	**Restraint Used:**	5-point
Instrument Rating(s):	Airplane	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	Yes
Medical Certification:	Class 2 With waivers/limitations	**Last FAA Medical Exam:**	December 5, 2017
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	July 17, 2018
Flight Time:	(Estimated) 4000 hours (Total, all aircraft)		

The 73-year-old pilot held a Federal Aviation Administration (FAA) commercial pilot certificate with ratings for airplane single- and multiengine land and instrument airplane. He also held an authorization to operate the P-51.

On December 5, 2017, the pilot was issued a special issuance second-class FAA airman medical certificate, with the following limitation(s): "Must wear corrective lenses. Limited Second Class/full Third-Class privileges. Not valid for carrying passengers or cargo for compensation except if serving as pilot of fully qualified 2-pilot crew. Not valid for any class after 12/31/2018." The pilot reported on the application for that medical certificate that he had accumulated 4,000 total hours of flight experience with 60 hours in the previous 6 months.

A review of his FAA airman certification information revealed practical test failures, a certificate suspension for violation of airspace, and a pilot deviation in July 2014, during which the pilot failed to comply with air traffic control instructions. The pilot completed reexamination flights to include one in February 2015. A summary of details from that review is appended to the docket material associated with this investigation.

Aircraft and Owner/Operator Information

Aircraft Make:	North American	**Registration:**	N4132A
Model/Series:	P51 D	**Aircraft Category:**	Airplane
Year of Manufacture:	1944	**Amateur Built:**	
Airworthiness Certificate:	Limited (Special)	**Serial Number:**	122-40985
Landing Gear Type:	Retractable - Tailwheel	**Seats:**	2
Date/Type of Last Inspection:	March 8, 2018 Annual	**Certified Max Gross Wt.:**	
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:	1812.9 Hrs as of last inspection	**Engine Manufacturer:**	Rolls Royce
ELT:		**Engine Model/Series:**	V-1650-7
Registered Owner:		**Rated Power:**	
Operator:	On file	**Operating Certificate(s) Held:**	None

The accident airplane, serial number 122-40985, was an all-metal, laminar flow, low-wing monoplane. The airplane was powered by a twelve-cylinder, overhead cam, liquid-cooled, V-type, supercharged, Rolls Royce V-1650-7 engine, serial number V-331281. According to copies of logbook entries, an annual inspection was completed on March 8, 2018. As of that inspection, the airplane had accumulated 1,812.9 hours of total time.

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	KT82,1695 ft msl	**Distance from Accident Site:**	2 Nautical Miles
Observation Time:	15:15 Local	**Direction from Accident Site:**	195°
Lowest Cloud Condition:		**Visibility**	10 miles
Lowest Ceiling:	Broken / 3900 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	11 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	190°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30.04 inches Hg	**Temperature/Dew Point:**	20°C / 10°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Fredericksburg, TX (T82)	**Type of Flight Plan Filed:**	None
Destination:	Fredericksburg, TX (T82)	**Type of Clearance:**	None
Departure Time:	14:59 Local	**Type of Airspace:**	

At 1515, the recorded weather at T82, about 2.5 miles from the accident site, included wind from 190° at 11 knots; 10 statute miles visibility; broken clouds at 3,900 ft above ground level; temperature 20°C; dew point 10°C; altimeter 30.04 inches of mercury.

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Destroyed
Passenger Injuries:	1 Fatal	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	2 Fatal	**Latitude, Longitude:**	30.275278,-98.900001(est)

The airplane wreckage came to rest in a parking lot northeast of T82. Linear witness marks were found on the ground under the leading edges of the wings. The leading edges of both wings exhibited aft crushing. Red and green colored media consistent with glass was found near each wing's respective separated navigation light holder. The engine and propeller were found buried about 5 ft in the ground. The rear section of the engine separated from its front section. The engine's compressor blades were intact. Three of the four propeller blades separated from the propeller hub and exhibited chordwise abrasion and nearby pavement exhibited a witness mark consistent with a propeller strike. One of these separated propeller blades exhibited leading edge gouges. The propeller blade that remained attached to the hub could not be rotated by hand. The empennage was separated from the fuselage forward of the tailwheel. The empennage came to rest inverted on parked cars about 68 ft and 310° from the engine. The fuselage and cockpit were fragmented in a debris path between the engine and empennage. Flight and engine control continuity could not be established due to impact damage; however, all observed

separations exhibited features consistent with overload. The magneto switch was fragmented; its face plate indicated that it was in the "both" position. The fuel valve was found in the debris path. Some of the fuel lines were separated from the valve body. The fuel bladders were found breached. No preimpact anomalies with the engine or airframe were found.

An Appareo Stratus unit was found damaged in the wreckage; it did not contain nonvolatile memory. A GoPro camera was found within the debris field. A micro secure data (SD) card was not present in the camera but was subsequently located during recovery of the wreckage. The card was damaged and no data could be retrieved.

Additional Information

According to a representative of the Admiral Nimitz Foundation, the accident pilot began flying in support of the foundation's Living History Program (LHP) in September 2017 and had participated in 9 of the 38 shows since that time. The program, which intended to educate the public about World War II, included a reenactment of a beach landing on a Pacific island. The purpose of the P-51 overflight was to "add the aviation element to the show to increase the educational value."

The representative stated that the accident pilot ran a charity that provided veterans with flights in his P-51. The pilot typically flew with a veteran in the rear seat when participating in the LHP demonstrations.

When discussing the flyover on the day of the accident, the pilot and the LHP director discussed "all pertinent FAA requirements, including the 1,000-ft minimum-safe altitude." The flyover flight path was in front of the amphitheater and over the performance area, normally west to east. The pilot would take off about 15 minutes before he was scheduled to make his first flyover. About 1 minute before the simulated island invasion, the LHP director would radio the pilot and give him the "ok" to make the first pass. The airplane normally made 4 to 5 passes during the reenactment.

Medical and Pathological Information

An autopsy of the pilot was performed by Central Texas Autopsy, PLLC, Lockhart, Texas. The autopsy indicated that the pilot's cause of death was multiple traumatic injuries and the manner of death was accident.

Toxicology testing performed at the FAA Forensic Sciences Laboratory identified 15 mg/dL ethanol in arm muscle and none in thigh muscle. Ethanol is primarily a social drug with a powerful central nervous system depressant. After absorption, ethanol is quickly distributed throughout the body's tissues and fluids fairly uniformly. Ethanol may also be produced in the body after death. Given the toxicology findings, it is likely the ethanol was produce postmortem.

In 2002, the pilot reported having coronary artery disease to the FAA; he had a stent placed in his left anterior descending coronary artery and underwent angioplasty of the first diagonal. At the time of his

last medical certificate exam, he reported having high blood pressure and using aspirin to prevent a heart attack, and atorvastatin and ezetimibe to control his cholesterol. These drugs are not considered impairing. The pilot had a cardiology evaluation, including a stress test that did not identify any ischemia, in September 2017. No significant abnormalities were identified on the physical exam.

Administrative Information

Investigator In Charge (IIC):	Malinowski, Edward
Additional Participating Persons:	Robert Arispe; Federal Aviation Administration; San Antonio, TX Kris Garberg; Appareo Systems; Fargo, ND
Original Publish Date:	April 20, 2020
Note:	The NTSB traveled to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=98648