Aviation Investigation Final Report

Location:	Jean, Nevada	**Accident Number:**	WPR18FA253
Date & Time:	September 5, 2018, 21:45 Local	**Registration:**	N6064C
Aircraft:	Commander 114	**Aircraft Damage:**	Destroyed
Defining Event:	Loss of control in flight	**Injuries:**	1 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot departed on a personal cross-country flight in night visual meteorological conditions. While approaching and maneuvering to land at the destination airport, the airplane made a right turn consistent with a right base turn to the destination runway. As the airplane began the base-to-final turn, just before entering a small cloud, it entered a steep, nosedown spin. Subsequently, the airplane impacted terrain and a postimpact fire ensued.

The airplane damage and ground scars at the accident site were consistent with a near wings-level attitude at the time of impact.

Postaccident examination of the airplane and engine revealed no preimpact anomalies or malfunctions that would have precluded normal operation. It is likely that, while maneuvering to avoid the cloud, the pilot failed to maintain the proper airspeed, which resulted in the airplane entering an accelerated stall.

Probable Cause and Findings

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

The pilot failed to maintain adequate speed while maneuvering at a low attitude during night and entered an aerodynamic stall and subsequent spin.

Findings

Personnel issues	Aircraft control - Pilot
Environmental issues	Dark - Effect on personnel
Aircraft	Airspeed - Not attained/maintained

Factual Information

History of Flight

Approach-VFR pattern base	Loss of control in flight (Defining event)
Approach-VFR pattern base	Aerodynamic stall/spin

On September 5, 2018, about 2145 Pacific daylight time, a Commander Aircraft Company AC-114TC, N6064C, was destroyed when it was involved in an accident near Jean, Nevada. The private pilot was fatally injured. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 personal flight.

A review of the Nevada's Department of Transportation, traffic camera video, showed the accident airplane flying west of and parallel to Interstate 15. The airplane turned to a course consistent with a right base turn to runway 20R at Jean Airport (0L7). The airplane then began another right turn and about halfway through the turn and just before entering a small cloud, the airplane entered a steep nose-down descent and spin then impacted the ground. A post impact fire ensued that consumed most of the airplane.

Pilot Information

Certificate:	Private	**Age:**	75,Male
Airplane Rating(s):	Single-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	Unknown
Instrument Rating(s):	None	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	Yes
Medical Certification:	Class 3 With waivers/limitations	**Last FAA Medical Exam:**	September 26, 2016
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:	(Estimated) 1718 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Commander	**Registration:**	N6064C
Model/Series:	114 TC	**Aircraft Category:**	Airplane
Year of Manufacture:	1999	**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	20024
Landing Gear Type:	Retractable - Tricycle	**Seats:**	4
Date/Type of Last Inspection:	Unknown	**Certified Max Gross Wt.:**	3305 lbs
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:		**Engine Manufacturer:**	Lycoming
ELT:	Installed	**Engine Model/Series:**	IO-580-B1A
Registered Owner:		**Rated Power:**	315 Horsepower
Operator:	On file	**Operating Certificate(s) Held:**	None

The airframe and engine maintenance logbooks were not located during the investigation.

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Night/dark
Observation Facility, Elevation:	KHND,2458 ft msl	**Distance from Accident Site:**	14 Nautical Miles
Observation Time:	21:56 Local	**Direction from Accident Site:**	39°
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	6 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	190°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30.02 inches Hg	**Temperature/Dew Point:**	28°C / 9°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Riverside, CA (RAL)	**Type of Flight Plan Filed:**	None
Destination:	Jean, NV	**Type of Clearance:**	Unknown
Departure Time:	20:01 Local	**Type of Airspace:**	Class G

Airport Information

Airport:	Jean 0L7	**Runway Surface Type:**	
Airport Elevation:	2835 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	20R	**IFR Approach:**	None
Runway Length/Width:	4600 ft / 75 ft	**VFR Approach/Landing:**	Traffic pattern

According to FAA information, 0L7 had no control tower and had two runways – 2L/20R, and 2R/20L. The traffic pattern altitude was 3,635 ft msl. Runway 02L/20R had pilot activated medium intensity runway lights (MIRL) lighting. A white-green beacon was also operational from sunset to sunrise.

Runway 20R was 4,600 ft long and 75 ft wide.

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Destroyed
Passenger Injuries:		**Aircraft Fire:**	On-ground
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 Fatal	**Latitude, Longitude:**	35.790832,-115.319442(est)

The airplane impacted desert terrain populated with light vegetation about 1 mile north of 0L7.

The site was surveyed by the National Transportation Safety Board (NTSB) drone support team. The debris field was determined to be about 280 ft in length. The first point of impact was a large disturbance in the ground which was consistent with the front of the airplane and wings impacting terrain at a near wings level attitude. The area of disturb dirt measured about 10 ft lengthwise, 28 ft wide, and 2 ft in depth at the middle portion and 6 inches in depth where the wings impacted terrain. Several parts of the airplane's fuselage and wings were located within the disturbance. Parts of the left-wing tip were observed on the left edge of the ground disturbance. A burnt fan pattern was observed on the desert sand forward of each wing, consistent with fuel being sprayed out during impact and then being ignited.

All major structural components and primary flight controls of the airplane were located at the accident site. The main wreckage consisted of the fuselage, engine, wings, and empennage. The fuselage was mostly consumed by the postimpact fire. The engine remained attached to the fuselage. The front of the aircraft and cabin area were destroyed during the impact sequence and the postimpact fire. The empennage was folded under the left wing and remained partially attached to the fuselage; the tail cone had separated. The airplane was identified by the registration plate located in the aft fuselage.

The leading edges of the wings displayed compression and impact damage. The vertical stabilizer was almost entirely consumed by the fire. The rudder remained attached to the vertical stabilizer. The elevators remained attached to the empennage, and the elevator trim was observed near the neutral position. Flight control continuity was established from the ailerons to the cockpit controls. Flight control continuity was also established to the rudder and elevator despite observed overload separations of flight control cables.

Both the left and right wings remained attached to the fuselage. Both ailerons and flaps were attached. The right aileron remained partially attached only by the outboard connection.

The engine displayed impact and thermal damage. The three-bladed propeller remained attached and one blade was bent aft near the hub. Another blade was intact and was bent and curled near the tip. The third blade was intact and exhibited gouging, torsional twisting, and chordwise striations across the cambered surface and trailing edge.

The landing gear was observed in the extended position. Additionally, impact marks and damage on the main landing gear assembly were consistent with the gear in the extended position.

The cockpit area sustained substantial thermal damage and no instrumentation was readable.

The fuel selector handle was not observed.

The examination of the airframe and engine revealed no evidence of mechanical malfunctions or failures that would have precluded normal operation.

Additional Information

Accident Environment

A right traffic pattern to land on runway 20R at 0L7 would place the base turn in a relative position close to where the accident site was located. Over a two-day period following the accident, several airplanes landing to the south at 07L were observed flying directly over the accident site, while on the base leg turn to land on runway 20R.

Medical and Pathological Information

The Clark County Coroner/Medical Examiner Office, Las Vegas, Nevada, conducted an autopsy on the pilot. The medical examiner determined that the cause of death was “multiple blunt force injuries.”

The FAA's Forensic Sciences Laboratory performed toxicological testing on the pilot. Testing was negative for drugs and volatiles, except for ethanol detected in the brain and muscle specimens. Some or all of the ethanol may be from sources other than consumption.

Administrative Information

Investigator In Charge (IIC):	Nixon, Albert		
Additional Participating Persons:	John Waugh; Federal Aviation Administration; Las Vegas, NV Rich Ramirez; Federal Aviation Administration; Las Vegas, NV Mark Platt; Lycoming Engines; Williamsport, PA		
Original Publish Date:	January 28, 2021	**Investigation Class:**	2
Note:	The NTSB traveled to the scene of this accident.		
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=98250		