



National Transportation Safety Board Aviation Accident Final Report

Location:	Elk City, OK	Accident Number:	CEN14LA129
Date & Time:	02/03/2014, 2300 CST	Registration:	N61YP
Aircraft:	CESSNA 525	Aircraft Damage:	Substantial
Defining Event:	Controlled flight into terr/obj (CFIT)	Injuries:	7 None
Flight Conducted Under:	Part 91: General Aviation - Business		

Analysis

The airline transport pilot was conducting a business flight with six passengers on board. Radar data showed that, after crossing the final approach fix for an instrument approach at the destination airport, the airplane descended below the minimum descent altitude (MDA) of 2,480 ft mean sea level (msl); dark night, instrument meteorological conditions existed at that time. Subsequently, when the airplane was about 2 miles from the airport and about 2,070 ft msl, the airplane impacted a utility pole, which was 10 ft above ground level (agl). After impacting the pole, the pilot executed a missed approach, and about 40 minutes later, he landed the airplane without further incident at another airport. On-scene examination showed that the impact had scattered debris from the separated utility pole for about 200 ft into a snow-covered field. Examination of the airplane revealed that the impact resulted in substantial damage to the nose structure, lower and upper fuselage, and horizontal stabilizer. Further examinations of the airplane, including its static system, both altimeters, both vertical speed indicators, and the radar altimeter system revealed no evidence of preaccident mechanical malfunctions or failures that would have precluded normal operation.

The pilot reported that he thought he had leveled the airplane at an altitude above the MDA and that at no time during the descent and approach did the airplane's radar altimeter sound an alert indicating that the airplane was below 400 ft agl radar altitude. He also reported that he never saw the terrain, any obstructions, nor the runway lights or airport environment. Despite the pilot's statement, given the radar data and the impact evidence, it is apparent that he descended the airplane below the MDA, which resulted in the subsequent impact with the utility pole. It could not be determined why the radar altimeter did not alert the pilot that the airplane was only 10 ft above the ground.

The pilot's second-class medical certificate, which had been issued more than 20 months before the accident, had expired. The medical certificate limitation section in the expired certificate stated, "Not valid for night flying or by color signal control." There is no evidence that these restrictions contributed to the accident.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:
The pilot's descent below the published minimum descent altitude for the instrument approach procedure, which resulted in impact with a utility pole.

Findings

Aircraft	Descent/approach/glide path - Not attained/maintained (Cause)
Personnel issues	Use of equip/system - Pilot (Cause)
Environmental issues	Dark - Not specified Low ceiling - Not specified Low visibility - Not specified

Factual Information

On February 3, 2014, at 2300 central standard time, N61YP, a Cessna 525, multi-engine turboprop airplane, was substantially damaged after striking an obstruction during an instrument approach at Elk City Regional Business Airport (ELK), Elk City, Oklahoma. The pilot and 6 passengers were not injured. The airplane was registered to Yankee Papa, LLC, and operated by Brink Constructors, Inc., both in Rapid City, South Dakota. Dark night instrument meteorological conditions (IMC) prevailed at the time of the accident and an instrument flight rules flight plan had been filed for the 14 Code of Federal Regulations (CFR) Part 91 business flight. The airplane departed Rapid City Regional Airport (RAP), Rapid City, South Dakota, about 2000 mountain standard time and was destined for ELK.

The airplane was on an instrument approach to runway 17 when it impacted a 29-foot tall electric utility pole about 10 feet 7 inches above ground level (agl) at a GPS estimated elevation of 2,070 feet mean sea level (msl). The impact scattered debris from the separated utility pole for about 200 feet into a snow covered wheat field. Evidence at the scene showed the airplane did not touch the surface of the ground during the accident sequence and the unbroken electric wires remained attached to the top portion of the completely separated utility pole. After impact with the pole the pilot successfully executed a missed approach. About 2340 the airplane landed without further incident at Will Rogers World Airport (OKC), Oklahoma, City, Oklahoma.

Federal Aviation Administration air traffic control radar data showed that after crossing the final approach fix the southbound airplane descended below the minimum descent altitude of 2,480 feet msl. At 2300:23 the airplane was at a transponder reported altitude of 2,100 feet msl when the airplane was about 0.3 mile north of the accident location. 24 seconds later radar data showed the airplane was 0.5 mile south of the accident location at a transponder reported altitude of 2,200 feet msl. The radar data showed the airplane then continued to climb to an altitude of about 12,000 feet msl while proceeding eastbound toward OKC.

The pilot reported that he thought he had leveled the airplane at an indicated altitude 2,500 feet msl and at no time during the descent and approach did the airplane's radar altimeter sound an alert indicating that he was below 400 feet agl radar altitude. He also reported that he never saw the terrain, never saw any obstructions, and he never saw the runway lights or airport environment.

An examination of the airplane after landing at OKC showed substantial damage to the nose structure, lower and upper fuselage, and the left side of the horizontal stabilizer. The right side of the radome had impact damage and there was a penetrating impact in the right side of the forward avionics bay. There was also evidence that both engines had ingested foreign objects, but there was not a resulting significant loss of engine power. Evidence at the accident scene showed that one separated and impact damaged navigation receiver from the airplane and several paint chips were recovered from the wheat field south of the impact point.

The surface weather observation site at ELK, was located 2 miles south of the accident site, at an elevation of 2,013 feet msl. At 2245 the surface weather observation site at ELK reported wind from 130 degrees at 4 knots, visibility of 4 miles in mist, and overcast clouds at 500 feet agl, temperature and dewpoint at -1 degree Celsius (C), with an altimeter setting of 30.05 inches of Mercury.

At 2305, the surface weather observation site at ELK, reported wind from 110 degrees at 5 knots, visibility of 2 and 1/2 miles in mist, and overcast clouds at 500 feet agl.

The next closest surface weather observation site at Clinton-Sherman Airport (CSM), Clinton, Oklahoma, was located 11 miles east-southeast from the accident site at an elevation of 1,922 feet msl.

At 2253, the surface weather observation site at CSM reported wind from 100 at 5 knots, visibility of 2 and 1/2 miles in light freezing rain, overcast clouds at 600 feet agl, with an altimeter setting of 30.02 inches of Mercury. Remarks indicated that freezing rain began at 2253 and the ceiling was variable between 200 feet and 600 feet.

At 2256, the surface weather observation site at CSM reported wind from 100 at 6 knots, visibility of 1 and 3/4 miles in light freezing rain, and overcast clouds at 600 feet agl.

At 2310, the surface weather observation site at CSM reported wind from 090 at 5 knots, visibility of 3/4 mile in light freezing rain, and overcast clouds at 200 feet agl.

Data from the U. S. Naval Observatory showed that sunset occurred at 1808 and moonset occurred at 2248. At the time of the accident both the sun and moon were more than 15 degrees below the horizon and provided no illumination.

ADDITIONAL INFORMATION:

The pilot held an FAA airline transport pilot certificate with ratings in airplane single and multi-engine land and he held pilot type ratings in CE-500, CE-525S, and CE-650 airplanes. He had satisfactorily completed the proficiency check required by 14 CFR 61.58 on June 6, 2013.

The pilot's second class medical certificate was issued on May 19, 2012, and contained the limitations: "not valid for night flying or by color signal control," and, "must have available glasses for near vision."

History of Flight

Approach-IFR final approach	Altitude deviation
	Controlled flight into terr/obj (CFIT) (Defining event)
	Part(s) separation from AC

Pilot Information

Certificate:	Airline Transport	Age:	51, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land; Single-engine Sea	Seat Occupied:	Left
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 Medical Exam:	05/19/2012
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	06/06/2013
Flight Time:	(Estimated) 21550 hours (Total, all aircraft), 592 hours (Total, this make and model), 21250 hours (Pilot In Command, all aircraft), 90 hours (Last 90 days, all aircraft), 40 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Manufacturer:	CESSNA	Registration:	N61YP
Model/Series:	525	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	525-0237
Landing Gear Type:	Retractable - Tricycle	Seats:	8
Date/Type of Last Inspection:	06/04/2013, Continuous Airworthiness	Certified Max Gross Wt.:	10399 lbs
Time Since Last Inspection:	263 Hours	Engines:	2 Turbo Fan
Airframe Total Time:	4798 Hours	Engine Manufacturer:	WILLIAMS
ELT:	C126 installed, not activated	Engine Model/Series:	FJ 44-1A
Registered Owner:	YANKEE PAPA LLC	Rated Power:	1900 lbs
Operator:	BRINK CONSTRUCTORS, INC	Air Carrier Operating Certificate:	None

Meteorological Information and Flight Plan

Observation Facility, Elevation:	KELK, 2002 ft msl	Observation Time:	2245 CST
Distance from Accident Site:	2 Nautical Miles	Condition of Light:	Night/Dark
Direction from Accident Site:	188°	Conditions at Accident Site:	Instrument Conditions
Lowest Cloud Condition:	/ 500 ft agl	Temperature/Dew Point:	-1° C / -1° C
Lowest Ceiling:	Overcast / 500 ft agl	Visibility	4 Miles
Wind Speed/Gusts, Direction:	4 knots, 130°	Visibility (RVR):	
Altimeter Setting:	30.05 inches Hg	Visibility (RVV):	
Precipitation and Obscuration:	Light - Freezing - Unknown Precipitation; Mist		
Departure Point:	Rapid City, SD (RAP)	Type of Flight Plan Filed:	IFR
Destination:	Elk City, OK (ELK)	Type of Clearance:	IFR
Departure Time:	2000 MST	Type of Airspace:	Class E

Airport Information

Airport:	ELK CITY RGNL BUSINESS (ELK)	Runway Surface Type:	Concrete
Airport Elevation:	2013 ft	Runway Surface Condition:	Ice; Wet
Runway Used:	17	IFR Approach:	RNAV
Runway Length/Width:	5399 ft / 75 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	6 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	7 None		

Administrative Information

Investigator In Charge (IIC):	Thomas Latson	Adopted Date:	04/04/2016
Additional Participating Persons:	Billy D Risley; FAA Oklahoma City FSDO; Oklahoma City, OK Peter J Basile; Cessna Aircraft Company; Wichita, KS Bill Gill; Honeywell; Olathe, KS		
Publish Date:	04/04/2016		
Note:	The NTSB did not travel to the scene of this accident.		
Investigation Docket:	http://dms.ntsb.gov/pubdms/search/dockList.cfm?mKey=88766		

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