



National Transportation Safety Board Aviation Accident Final Report

Location:	Gunnison, Colorado	Accident Number:	CEN17LA047
Date & Time:	December 4, 2016, 18:53 Local	Registration:	N332SE
Aircraft:	Cessna Citation 500	Aircraft Damage:	Substantial
Defining Event:	Hard landing	Injuries:	1 None
Flight Conducted Under:	Part 91: General aviation		

Analysis

The commercial pilot of the jet reported that he initially requested that 100 lbs of fuel be added to both fuel tanks. During the subsequent preflight inspection, the pilot decided that more fuel was needed, so he requested that the airplane's fuel tanks be topped off with fuel. However, he did not confirm the fuel levels or check the fuel gauges before takeoff. He departed on the flight and did not check the fuel gauges until about 1 hour after takeoff. He stated that, at that time, the fuel gauges were showing about 900-1,000 lbs of fuel per side, and he realized that the fuel tanks had not been topped off as requested. He reduced engine power to conserve fuel and to increase the airplane's flight endurance while he continued to his destination. When the fuel gauges showed about 400-500 lbs of fuel per side, the low fuel lights for both wing fuel tanks illuminated. The pilot reported to air traffic control that the airplane was low on fuel and diverted the flight to the nearest airport. The pilot reported that the airplane was high and fast on the visual approach for landing. He misjudged the height above the ground and later stated that the airplane "landed very hard." The airplane's left main landing gear and nose gear collapsed and the airplane veered off the runway, resulting in substantial damage to the left wing. The pilot reported no preaccident mechanical malfunctions or failures with the airplane that would have precluded normal operation.

Probable Cause and Findings

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

The pilot's failure to fly a stabilized approach and his inadequate landing flare, which resulted in a hard landing. Contributing to the accident was the pilot's failure to ensure that the airplane was properly serviced with fuel before departing on the flight.

Findings

Aircraft	Landing flare - Not attained/maintained
Personnel issues	Incorrect action performance - Pilot
Aircraft	Fuel - Fluid level
Personnel issues	Fuel planning - Pilot

Factual Information

On December 4, 2016, about 1853 mountain standard time, a Cessna Citation 500, N332SE, sustained substantial damage during a hard landing and runway excursion at the Gunnison-Crested Butte Airport (GUC), Gunnison, Colorado. The pilot, the sole occupant, was not injured. The airplane was registered to and operated by the pilot under the provisions of the 14 Code of Federal Regulations Part 91 as a business flight. Night visual meteorological conditions prevailed at the time of the accident, and the flight was on an instrument flight plan. The flight departed the San Jose International Airport (SJC), San Jose, California, about 1616 and Pueblo, Colorado, was the destination.

The pilot reported that he originally requested that the fixed base operator (FBO) at SJC put 100 gallons of jet fuel in each wing fuel tank. Later during his preflight, the pilot decided that more fuel was needed, so he went back into the FBO and requested that the airplane's fuel tanks be topped off with fuel. The pilot was still in the FBO when he saw the lineman fuel the airplane from the fuel truck. He paid for the fuel without looking at the receipt and then proceeded out to the airplane. The pilot reported that he did not recheck the fuel gauges before departing SJC.

The pilot reported that he departed on the flight, but it was not until about an hour after takeoff that he checked the fuel gauges. He stated that the fuel gauges were showing about 900 to 1,000 lbs of fuel per side, and he realized that the fuel tanks had not been topped off with fuel. He reduced the throttles to conserve fuel and to increase the airplane's flight endurance while he continued the flight to Pueblo, Colorado.

The pilot reported that when the fuel gauges showed about 400 to 500 lbs of fuel per side, the low fuel lights for both wing fuel tanks illuminated. About 1840, the pilot reported to air traffic control (ATC) that the airplane was low on fuel and asked to land at the nearest airport. ATC provided radar vectors to GUC and initially cleared the flight for the ILS runway 6 approach. During the approach, the pilot reported that he had the runway in sight and ATC cleared the flight for a visual approach.

The pilot reported that the airplane was high and fast on the approach. At 500 ft above ground level, the airspeed was about 120 knots. He misjudged the runway and the height above the ground and he stated, "I landed very hard on runway 24." During touchdown, the airplane bounced and then impacted the runway. The airplane's left main landing gear and nose gear collapsed and the airplane veered off the runway, resulting in substantial damage to the left wing. The pilot reported no preaccident mechanical malfunctions or failures with the airplane that would have precluded normal operation.

At 1856, the surface weather observation at GUC was: wind 340 degrees at 4 knots; visibility 10 miles; sky condition few clouds at 7,500 ft; temperature -8 degrees C; dew point -13 degrees C; altimeter 30.08 inches of mercury.

History of Flight

Landing-flare/touchdown	Hard landing (Defining event)
Landing-flare/touchdown	Runway excursion

Pilot Information

Certificate:	Commercial	Age:	66, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	4-point
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:	August 14, 2015
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	2267 hours (Total, all aircraft), 142 hours (Total, this make and model), 1703 hours (Pilot In Command, all aircraft), 22 hours (Last 90 days, all aircraft), 11 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N332SE
Model/Series:	Citation 500	Aircraft Category:	Airplane
Year of Manufacture:	1975	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	500-0332
Landing Gear Type:	Retractable - Tricycle	Seats:	8
Date/Type of Last Inspection:	August 31, 2016 AAIP	Certified Max Gross Wt.:	11850 lbs
Time Since Last Inspection:		Engines:	2 Turbo fan
Airframe Total Time:	5218 Hrs as of last inspection	Engine Manufacturer:	P&W
ELT:	Installed, not activated	Engine Model/Series:	JT-15D-1A
Registered Owner:		Rated Power:	2200 Lbs thrust
Operator:	On file	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Night
Observation Facility, Elevation:	GUC,7680 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	18:56 Local	Direction from Accident Site:	
Lowest Cloud Condition:	Few / 7500 ft AGL	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	4 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	340°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.07 inches Hg	Temperature/Dew Point:	-8° C / -13° C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	San Jose, CA (SJC)	Type of Flight Plan Filed:	IFR
Destination:	Pueblo, CO (PUB)	Type of Clearance:	IFR
Departure Time:	16:16 Local	Type of Airspace:	

Airport Information

Airport:	Gunnison-Crested Butte Airport GUC	Runway Surface Type:	Asphalt
Airport Elevation:	7680 ft msl	Runway Surface Condition:	Dry
Runway Used:	24	IFR Approach:	Global positioning system
Runway Length/Width:	9400 ft / 150 ft	VFR Approach/Landing:	Full stop

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:	38.534442,-106.931663

Administrative Information

Investigator In Charge (IIC):	Silliman, James
Additional Participating Persons:	Eric Horstmeyer; FAA Denver FSDO; Denver, CO
Original Publish Date:	June 20, 2017
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=94456

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