



National Transportation Safety Board Aviation Accident Factual Report

Location:	COLORADO SPGS, CO	Accident Number:	FTW95LA374
Date & Time:	09/01/1995, 0737 MDT	Registration:	N4814F
Aircraft:	CESSNA 172N	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	2 Serious
Flight Conducted Under:	Part 91: General Aviation - Personal		

On September 1, 1995, at 0737 mountain daylight time, a Cessna 172N, N4814F, was destroyed when it collided with terrain after taking off from Colorado Springs, Colorado. The commercial pilot and passenger were seriously injured. Visual meteorological conditions prevailed, and no flight plan was filed for the personal flight being conducted under Title 14 CFR Part 91. The flight was originating when the accident occurred.

In the Pilot/Operator Report, the pilot could not recall any of the accident details other than having initiated a left turn "back towards the runway." The pilot's father recalled that there had been a power loss, "as if the power had been brought back to idle." Control tower personnel observed the airplane take off on runway 35L, but it did not appear to be climbing. They asked the pilot if he was having difficulty or if he wanted to land. The pilot said he did not need any help. The left wing was then seen to drop and the airplane collided with terrain.

The on-scene examination by a Federal Aviation Administration operations inspector disclosed the mixture control was in the "FULL RICH" position. A piece of baffle seal material, measuring approximately 4 inches by 3/8 inch was found lodged upstream from the venturi in the air intake side of the carburetor throat, between the accelerator pump discharge tube and the power jet. A similar piece of material was found missing from the carburetor heat air box. The elevation at Colorado Springs Municipal Airport is 6,172 feet above mean sea level (MSL).

The undisturbed carburetor and carburetor heat air box were sent to Textron-Lycoming to be functionally tested. According to Textron-Lycoming's report, the baffle seal material obstructed air flow to the fuel discharge nozzle in the middle of the venturi. Although the accident engine was an O-320-H2AD, for test purposes the carburetor was mounted on a O-320-D3G engine. According to a Textron-Lycoming spokesman, there are internal differences between the two engines, but the test curves are the same. The engine was started and, according to one test engineer, operated "extremely rich." When the mixture was leaned, approximately 90 percent power (2,664 RPM) was attained. Full power (an air flow of 900 pounds per hour) could not be achieved due to the obstruction. Elevation at Williamsport, Pennsylvania, the test site, is approximately 529 feet MSL.

A flight instructor, who was the last person to fly N4814F, said the airplane and engine operated normally for him on the day before the accident. The instructor, who owns a Cessna 172, said he had noticed that N4814F required "more leaning" than other Cessna 172s he has flown.

One renter pilot, who had flown N4814F two weeks before the accident, stated that he made a night takeoff from Colorado Springs en route to Englewood, Colorado, and noticed the engine noise was "low" and the rate of climb was between 200 and 250 feet per minute (fpm). When he prepared to depart Englewood for the return trip, he performed an "extended" engine runup and made sure the mixture control was set properly and everything checked "normal." After takeoff and at an altitude of 15 to 20 feet above the ground, the airplane settled back towards the runway. The pilot was able to fly in ground effect until the airspeed increased. The airplane then climbed out at 100 fpm. He reported this to the operator the next morning, and the operator performed a cylinder compression check, finding nothing amiss, he returned the airplane to service.

Pilot Information

Certificate:	Commercial; Military	Age:	30, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 2 Valid Medical--w/ waivers/lim.	Last FAA Medical Exam:	08/23/1994
Occupational Pilot:		Last Flight Review or Equivalent:	
Flight Time:	2100 hours (Total, all aircraft), 3 hours (Total, this make and model), 671 hours (Pilot In Command, all aircraft), 108 hours (Last 90 days, all aircraft), 35 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	CESSNA	Registration:	N4814F
Model/Series:	172N 172N	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	17273085
Landing Gear Type:	Tricycle	Seats:	4
Date/Type of Last Inspection:	08/24/1995, 100 Hour	Certified Max Gross Wt.:	2300 lbs
Time Since Last Inspection:	7 Hours	Engines:	1 Reciprocating
Airframe Total Time:	8595 Hours	Engine Manufacturer:	LYCOMING
ELT:	Installed	Engine Model/Series:	O-320-H2AD
Registered Owner:	FALCON RENTALS	Rated Power:	160 hp
Operator:	FALCON RENTALS	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	COS, 6172 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	0744 MDT	Direction from Accident Site:	0°
Lowest Cloud Condition:	Clear / 0 ft agl	Visibility	10 Miles
Lowest Ceiling:	None / 0 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	6 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	100°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	17° C / 11° C
Precipitation and Obscuration:			
Departure Point:	(COS)	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	VFR
Departure Time:	0737 MDT	Type of Airspace:	Class C

Airport Information

Airport:	COLORADO SPGS MUNICIPAL (COS)	Runway Surface Type:	Asphalt
Airport Elevation:	6172 ft	Runway Surface Condition:	Dry
Runway Used:	35L	IFR Approach:	None
Runway Length/Width:	11021 ft / 150 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 Serious	Aircraft Damage:	Destroyed
Passenger Injuries:	1 Serious	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 Serious	Latitude, Longitude:	

Administrative Information

Investigator In Charge (IIC):	ARNOLD W SCOTT
Additional Participating Persons:	MICHAEL F DAVEY; DENVER, CO
Investigation Docket:	NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at pubinq@ntsb.gov , or at 800-877-6799. Dockets released after this date are available at http://dms.nts.gov/pubdms/ .