



National Transportation Safety Board Aviation Accident Final Report

Location:	Dania Beach, FL	Accident Number:	ERA10LA293
Date & Time:	06/01/2010, 1932 EDT	Registration:	N1435F
Aircraft:	CESSNA 172H	Aircraft Damage:	Substantial
Defining Event:	Fuel exhaustion	Injuries:	2 Minor
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

The pilot turned the airplane onto the final approach leg of the traffic pattern and shortly thereafter the engine experienced a total loss of power. After unsuccessfully attempting to restart the engine, the pilot elected to perform a forced landing to a field near the airport. During the forced landing, the airplane impacted the ground, collapsing the main landing gear; the wingtips contacted the ground and the nose and fuselage incurred substantial damage. A postaccident examination revealed that there was half a gallon of fuel in the right tank, and no fuel was present in the left tank. There was no evidence of additional fuel at accident site. During an engine run test, the engine started on the initial attempt and operated up to full power. The examination disclosed no evidence of a mechanical malfunction.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's improper fuel management, which resulted in a loss of engine power due to fuel exhaustion.

Findings

Aircraft	Fuel - Fluid management (Cause)
Personnel issues	Fuel planning - Pilot (Cause)

Factual Information

On June 1, 2010, at about 1932 eastern daylight time, a Cessna 172H, N1435F, owned by F and J Aviation Corporation and operated by a private individual, incurred substantial damaged during a forced landing into a field in Dania Beach, Florida, following a loss of engine power while on final approach for runway 9 right at the Ft. Lauderdale/Hollywood International Airport (FLL). The private pilot and passenger sustained minor injuries. Visual meteorological conditions prevailed for the Title 14 Code of Federal Regulations Part 91, personal flight.

The responding Federal Aviation Administration (FAA) inspector stated that the pilot and passenger said they had started their cross country flight from New Orleans at about 0920 that morning. They stopped in Panama City, Florida and at the Williston Municipal Airport (X60), Williston, Florida, where the airplane was fueled prior to the flight to FLL. They departed X60 at 1608. The route of flight from X60 was south along the west coast of Florida until they reached the Naples, Florida area before turning east toward FLL. The pilot stated that the airplane experienced a total loss of engine power when the airplane was about ¾ of a mile from the approach end of runway 9 right at FLL. After an unsuccessful attempt to restart the engine, the pilot made a 360 degree turn and elected to land in a field near the airport. A witness located within the FLL property stated that “the aircraft seemed to have lost speed but the approach altitude seemed appropriate” for landing before the crash. He observed the airplane in a nose up attitude in a right turn before it disappeared behind a line of trees.

The airplane came to rest upright with substantial damage to its fuselage, windshield, and nose section. The wingtips were bent upward and the nose gear collapsed and separated from the airplane. The main landing gear was bent aft and the lower section of the engine cowling was crushed. The engine’s inlet airbox, carburetor, exhaust pipe and muffler were damaged on impact.

A wreckage examination was conducted by the FAA. Both wing tanks were intact and fuel caps secured. The fuel selector lever was found in the both tank position. One half gallon of aviation fuel was drained from the right wing tank and no fuel was found in the left wing tank. There was no evidence of fuel leakage from the airplane in flight or at the accident site after the accident. The Type Certificate Data Sheet (TCDS) for the accident model Cessna 172 states that the airplane holds 39 gallons of fuel, with 36 gallons usable.

A post accident engine run was conducted with National Transportation Safety Board and FAA oversight. The engine started on the initial attempt and operated up to full power with no evidence of failure or malfunction.

History of Flight

Approach-VFR pattern final	Fuel exhaustion (Defining event) Loss of engine power (total)
Emergency descent	Off-field or emergency landing
Landing	Collision with terr/obj (non-CFIT)

Pilot Information

Certificate:	Private	Age:	59, Male
Airplane Rating(s):	Single-engine Land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 With Waivers/Limitations	Last Medical Exam:	05/14/2010
Occupational Pilot:	No	Last Flight Review or Equivalent:	05/14/2010
Flight Time:	1295 hours (Total, all aircraft), 1292 hours (Total, this make and model), 1170 hours (Pilot In Command, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Manufacturer:	CESSNA	Registration:	N1435F
Model/Series:	172H	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	17254930
Landing Gear Type:	Tricycle	Seats:	4
Date/Type of Last Inspection:	03/16/2010, Annual	Certified Max Gross Wt.:	2300 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	4463 Hours	Engine Manufacturer:	Lycoming
ELT:	C91 installed, not activated	Engine Model/Series:	O-360-A4M
Registered Owner:	F AND J AVIATION CORP	Rated Power:	180 hp
Operator:	On file	Air Carrier Operating Certificate:	None

Meteorological Information and Flight Plan

Observation Facility, Elevation:	FLL, 9 ft msl	Observation Time:	1853 EDT
Distance from Accident Site:	1 Nautical Miles	Condition of Light:	Dusk
Direction from Accident Site:	270°	Conditions at Accident Site:	Visual Conditions
Lowest Cloud Condition:	Few / 2500 ft agl	Temperature/Dew Point:	28° C / 23° C
Lowest Ceiling:		Visibility	10 Miles
Wind Speed/Gusts, Direction:	12 knots, 130°	Visibility (RVR):	
Altimeter Setting:	29.95 inches Hg	Visibility (RVV):	
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Williston, FL (X60)	Type of Flight Plan Filed:	None
Destination:	Dania Beach, FL (FLL)	Type of Clearance:	VFR
Departure Time:	1608 EDT	Type of Airspace:	

Airport Information

Airport:	Ft. Lauderdale-Hollywood (FLL)	Runway Surface Type:	
Airport Elevation:	9 ft	Runway Surface Condition:	
Runway Used:	N/A	IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	Forced Landing

Wreckage and Impact Information

Crew Injuries:	1 Minor	Aircraft Damage:	Substantial
Passenger Injuries:	1 Minor	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 Minor		

Administrative Information

Investigator In Charge (IIC):	Jose Obregon	Adopted Date:	05/11/2011
Additional Participating Persons:	Luigi Palma; FAA/FSDO; Miramar, FL		
Publish Date:	05/11/2011		
Investigation Docket:	http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=76194		

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