Aviation Investigation Final Report

Location:	Pompano Beach, Florida	**Accident Number:**	MIA06LA108
Date & Time:	May 14, 2006, 16:47 Local	**Registration:**	N79NS
Aircraft:	Cessna 414A	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	2 None
Flight Conducted Under:	Part 91: General aviation - Executive/Corporate		

Analysis

The pilot-in-command (PIC) stated that the flight departed with 45 gallons of fuel, proceeded toward the destination airport, and when the flight was approximately 3 miles north of the destination airport, the right engine began to surge. At that time, the left and right fuel gauges and noted they indicated "...just below 20 gallons..." and "...10-15 gallons" respectively. He began troubleshooting the problem with the right engine, requested "...priority to land" with the tower, and started turning toward the field. The controller asked him if he was declaring an emergency, he advised he was not. The controller advised him not to turn base because he would be on top of another airplane. He turned back onto the downwind leg and at that time, the left engine began experiencing problems. He then declared an emergency and turned towards the airport but recognized he was unable to reach the airport. He landed on a road. The PIC further stated that fire rescue set up sand barriers, with the largest containing fuel from the airplane. The barrier that contained the spilled fuel was approximately 5 feet long by 3-4 feet wide, and the depth of fuel inside the barrier was approximately 4-5 inches deep. Fire rescue personnel reported estimating 5-10 gallons of fuel leakage. Postaccident examination of the airplane by an FAA inspector revealed no visible fuel in the left wing fuel tank, and no fuel when the left wing sump drain was opened. Following recovery of the airplane, fuel lines in each engine compartment were examined and no fuel was found at the left engine fuel manifold valve, while "...trace amounts of fuel..." were found at the right engine fuel manifold valve. No fuel was detected at "...either left or right fuel inlet lines at engine driven fuel pumps" nor at the outlet side of the left engine driven fuel pump. Only a "...small amount..." of fuel was found in the outlet side of the right engine driven fuel pump. Only "...small amounts of fuel..." were found in the fuel inlet housing at each servo fuel injector (fuel servo). The total unusable fuel quantity is 9.4 gallons.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's inadequate preflight/planning due to his failure to assure an adequate supply of fuel was available for the flight, resulting in the loss of engine power in both engines due to fuel exhaustion.

Findings

Occurrence #1: LOSS OF ENGINE POWER
Phase of Operation: APPROACH - VFR PATTERN - DOWNWIND

Findings
1. 2 ENGINES
2. (C) FLUID,FUEL - EXHAUSTION
3. (C) PREFLIGHT PLANNING/PREPARATION - INADEQUATE - PILOT IN COMMAND

Occurrence #2: FORCED LANDING
Phase of Operation: EMERGENCY DESCENT/LANDING

Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: EMERGENCY DESCENT/LANDING

Findings
4. TERRAIN CONDITION - ROADWAY/HIGHWAY

Factual Information

On May 14, 2006, about 1647 eastern daylight time, a Cessna 414A, N79NS, registered to and operated by Coral AirShare, LLC., experienced a loss of engine power from both engines while on approach to the Fort Lauderdale Executive Airport (KFXE), and was substantially damaged during a forced landing on a road in Pompano Beach, Florida. Visual meteorological conditions prevailed at the time and no flight plan was filed for the 14 CFR Part 91 corporate/executive flight from Witham Field Airport, Stuart, Florida, to Fort Lauderdale Executive Airport. The commercial-rated pilot, and pilot-rated additional crew member (ACM) were not injured. The flight originated about 1617, from Witham Field Airport.

The pilot-in-command (PIC) stated that before departure, he requested and confirmed a total of 10 gallons of fuel were added to the airplane's fuel tanks. The flight departed with 45 gallons of fuel, was flown at 3,000 feet, and the fuel flow rate was 19 gallons per hour per engine. The flight proceeded towards the destination airport and was uneventful until about 3 miles north of there. The right engine began to surge and at that time, he glanced at the left and right fuel gauges and noted they indicated "...just below 20 Gallons..." and "...10-15 gallons" respectively. He began troubleshooting the problem with the right engine and requested "...priority to land" with the KFXE air traffic control tower (ATCT). He started turning towards the field and the controller asked him if he was declaring an emergency. He advised the controller he was not and the controller advised him not to turn base because he would be on top of another airplane. He turned back onto the downwind leg and at that time, the left engine began experiencing problems. He then declared an emergency and turned towards the airport but recognized he was unable to reach the airport. He landed on a road, exited the airplane, and after fire rescue arrived, they set up sand barriers to keep fuel from going down the storm drains. The (PIC) further stated that 3 sand barriers were set up, with the largest containing fuel from the airplane. The barrier that contained the spilled fuel was approximately 5 feet long by 3-4 feet wide, and the depth of fuel inside the barrier was approximately 4-5 inches deep.

The ACM reported that when the flight was approximately 3 miles north of KFXE, "..we began having problems with one of the engines." The pilot then began troubleshooting procedures for the engine, and shortly thereafter, "we began experiencing problems with both engines simultaneously." The pilot declared an emergency, and he (ACM) glanced at the fuel gauges and they were indicating approximately 10-15 gallons of fuel remaining. T he pilot immediately turned towards the destination airport but "...we were unable to make the field and decided to land on the road ahead of us." The ACM further stated that specific details from him of what occurred are not available due to the fact that he had never before been in a Cessna 414 airplane; therefore, he was "...very unfamiliar with this type of aircraft."

According to the fire rescue incident commander, she noticed a small fuel spill estimated to be

5-10 gallons. According to the fire rescue report, the narrative associated with "EN 88" indicates that "upon arrival engine 88 found a Cessna 414 that had crashed in the middle of road way. There was no fire and no occupants in the Cessna 414 and a strong smell of fuel."

According to the FAA Inspector who reportedly arrived on-scene within 30 minutes to 1 hour of the crash, the right wing was bent up and nearly separated at the inboard portion of the engine nacelle, adjacent to the fuselage. The right main landing gear was in the down and locked position, while the left main landing gear was collapsed. Both propellers appeared to be in the feathered position, which agreed with each propeller control setting in the cockpit. In an effort to prevent possible loss of fuel, each fuel selector was placed in the off position. The left wing fuel filler cap was removed and the tank was visually inspected; no fuel was noted. No fuel was noted at the left wing fuel sump drain.

The operator's Director of Maintenance (DOM) who helped recover the airplane on the evening of the accident reported that "...not quite a gallon of fuel..." was drained from the right wing. The right wing fuel bowl was sumped for fuel and none was found. The right wing was then removed, and the right wing and airplane were loaded onto a trailer and transported to KFXE. Two days after the accident at the request of the FAA, he and another individual examined the fuel lines located in each engine compartment for the presence of fuel. No fuel was found at the left engine fuel manifold valve, while "...trace amounts of fuel..." were found at the right engine fuel manifold valve. No fuel was detected at "...either left or right fuel inlet lines at engine driven fuel pumps" nor at the outlet side of the left engine driven fuel pump. Only a "...small amount..." of fuel was found in the outlet side of the right engine driven fuel pump. Only "...small amounts of fuel..." were found in the fuel inlet housing at each servo fuel injector (fuel servo).

A review of the airplane "Information Manual" revealed the total unusable fuel amount is 9.4 gallons.

Pilot Information

Certificate:	Commercial; Foreign; Private	**Age:**	21,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	Airplane	**Second Pilot Present:**	Yes
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	Class 1 Without waivers/limitations	**Last FAA Medical Exam:**	June 1, 2005
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	March 1, 2006
Flight Time:	1050 hours (Total, all aircraft), 327 hours (Total, this make and model), 135 hours (Last 90 days, all aircraft), 65 hours (Last 30 days, all aircraft), 11 hours (Last 24 hours, all aircraft)		

Other flight crew Information

Certificate:	Commercial	**Age:**	21,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Right
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	Airplane	**Second Pilot Present:**	Yes
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	Class 1 With waivers/limitations	**Last FAA Medical Exam:**	September 1, 2005
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	March 1, 2006
Flight Time:	220 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	**Registration:**	N79NS
Model/Series:	414A	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	414A0308
Landing Gear Type:	Retractable - Tricycle	**Seats:**	8
Date/Type of Last Inspection:	April 1, 2006 AAIP	**Certified Max Gross Wt.:**	6750 lbs
Time Since Last Inspection:	41 Hrs	**Engines:**	2 Reciprocating
Airframe Total Time:	9115 Hrs at time of accident	**Engine Manufacturer:**	Continental
ELT:	Installed, not activated	**Engine Model/Series:**	TSIO-520-NB
Registered Owner:	Coral AirShare, LLC	**Rated Power:**	310 Horsepower
Operator:		**Operating Certificate(s) Held:**	On-demand air taxi (135)

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	KFXE,13 ft msl	**Distance from Accident Site:**	2 Nautical Miles
Observation Time:	16:53 Local	**Direction from Accident Site:**	320°
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	10 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	160°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29.96 inches Hg	**Temperature/Dew Point:**	29°C / 15°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Stuart, FL (SUA)	**Type of Flight Plan Filed:**	None
Destination:	Fort Lauderdale, FL (KFXE)	**Type of Clearance:**	None
Departure Time:	16:17 Local	**Type of Airspace:**	

Airport Information

Airport:	Fort Lauderdale Executive FXE	**Runway Surface Type:**	
Airport Elevation:	13 ft msl	**Runway Surface Condition:**	
Runway Used:		**IFR Approach:**	None
Runway Length/Width:		**VFR Approach/Landing:**	Full stop;Traffic pattern

Wreckage and Impact Information

Crew Injuries:	2 None	**Aircraft Damage:**	Substantial
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	2 None	**Latitude, Longitude:**	

Administrative Information

Investigator In Charge (IIC):	Monville, Timothy
Additional Participating Persons:	Ismael Amaro-Miranda; FAA Flight Standards District Office; Fort Lauderdale, FL
Original Publish Date:	March 26, 2007
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=63701