



National Transportation Safety Board Aviation Accident Final Report

Location:	Oakland, CA	Accident Number:	WPR09LA071
Date & Time:	01/03/2009, 1445 PST	Registration:	N226PF
Aircraft:	PZL PZL-104 35A	Aircraft Damage:	Substantial
Defining Event:	Fuel exhaustion	Injuries:	1 Minor
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

The pilot reported that during a local personal flight, the engine lost power as a result of fuel exhaustion. During the forced landing, he maneuvered to avoid power lines and subsequently impacted trees. The pilot related that he thought he had enough fuel for a short local flight. Post accident, the pilot stated that he did not realize he had flown the airplane for more than 4 hours since it had been refueled. The airplane's fuel endurance is about 4 hours.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: A loss of engine power due to fuel exhaustion as a result of the pilot's inadequate preflight planning.

Findings

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

Factual Information

HISTORY OF FLIGHT

On January 3, 2009, about 1445 Pacific standard time, an experimental PZL, PZL-104-35A, Wilga, N226PF, impacted trees following a loss of engine power in Redwood Regional Park, Oakland, California. The owner/pilot was operating the airplane under the provisions of 14 Code of Federal Regulations (CFR) Part 91. The commercial pilot sustained minor injuries; the airplane sustained substantial damage by impact forces. The local personal flight departed Oakland about 1435. Visual meteorological conditions prevailed, and no flight plan had been filed.

The pilot reported that while maneuvering, the engine "ran out of gas just passed the western arm of the San Leandro Reservoir." He attempted a restart without success. During the descent, he saw power lines in front of him and he turned the airplane to the north. The airplane subsequently impacted trees.

The pilot extricated himself from the wreckage and obtained transportation to a local hospital for treatment of his injuries.

The pilot thought he departed Oakland Airport with enough fuel for the local flight based on the readings of the two fuel gauges.

On January 12, 2009, the pilot contacted the National Transportation Safety Board investigator in-charge (IIC) and related that he had researched the amount of flight time he had on the accident airplane since refueling it. The airplane was refueled on October 18, 2008, to maximum capacity. The pilot reported that he had flown a total of 4.1 hours since refueling. The airplane's fuel endurance was a little more than 4 hours.

History of Flight

Prior to flight	Preflight or dispatch event
Maneuvering	Fuel exhaustion (Defining event)

Pilot Information

Certificate:	Commercial	Age:	77, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land; Single-engine Sea	Seat Occupied:	Left
Other Aircraft Rating(s):	Glider; Helicopter	Restraint Used:	
Instrument Rating(s):	Airplane; Helicopter	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 2 With Waivers/Limitations	Last Medical Exam:	04/01/2007
Occupational Pilot:	No	Last Flight Review or Equivalent:	10/18/2008
Flight Time:	11000 hours (Total, all aircraft), 50 hours (Total, this make and model), 11000 hours (Pilot In Command, all aircraft), 11 hours (Last 90 days, all aircraft), 4 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Manufacturer:	PZL	Registration:	N226PF
Model/Series:	PZL-104 35A Wilga	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Experimental	Serial Number:	15800567
Landing Gear Type:	Tailwheel	Seats:	3
Date/Type of Last Inspection:	09/12/2008, Annual	Certified Max Gross Wt.:	2868 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:		Engine Manufacturer:	Ivchenko
ELT:	Not installed	Engine Model/Series:	A1-14RA
Registered Owner:	On file	Rated Power:	260 hp
Operator:	On file	Air Carrier Operating Certificate:	None

Meteorological Information and Flight Plan

Observation Facility, Elevation:	OAK, 9 ft msl	Observation Time:	1353 PST
Distance from Accident Site:	6 Nautical Miles	Condition of Light:	Day
Direction from Accident Site:	220°	Conditions at Accident Site:	Visual Conditions
Lowest Cloud Condition:	Few / 1500 ft agl	Temperature/Dew Point:	11° C / -2° C
Lowest Ceiling:	Broken / 25000 ft agl	Visibility	10 Miles
Wind Speed/Gusts, Direction:	8 knots, 280°	Visibility (RVR):	
Altimeter Setting:	30.05 inches Hg	Visibility (RVV):	
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Oakland, CA (OAK)	Type of Flight Plan Filed:	Unknown
Destination:	Oakland, CA (OAK)	Type of Clearance:	None
Departure Time:	1435 PST	Type of Airspace:	

Wreckage and Impact Information

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

Administrative Information

Investigator In Charge (IIC):	Patrick H Jones	Adopted Date:	12/29/2009
Additional Participating Persons:	Matt Deseelhorst; Federal Aviation Administration; Oakland, CA		
Publish Date:	12/29/2009		
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/ .		

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