Aviation Investigation Final Report

Location:	FORT PIERCE, Florida	**Accident Number:**	MIA98LA117
Date & Time:	April 2, 1998, 14:00 Local	**Registration:**	DECTB
Aircraft:	Beech F33A	**Aircraft Damage:**	Destroyed
Defining Event:		**Injuries:**	1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The flight had departed runway 14, and had reached an altitude of about 200 feet, when the pilot reported a loss of engine power. The pilot elected to make a forced landing straight ahead into trees. After impact, the pilot closed off the fuel valve. Examination of the wreckage after the accident revealed that the fuel tanks had fuel. The pilot said the fuel selector was on the left tank when the loss of power occurred. Observation of the engine at the crash site did not reveal any obvious discrepancies. The engine was removed from the airframe and examined at the NTSB's request, and under the supervision of the FAA, on June 24, 1998. The engine examination revealed that the fuel control system exhibited fluid leakage at the fuel pump and throttle shaft. Detailed examination of the fuel pump showed that the pump leaked fluid at the rear high speed adjusting needle at the seal to the pump body. There was no evidence of impact damage observed on the fuel pump. In addition, the throttle/metering unit leaked fluid at the throttle shaft into the metering unit. The leak at the throttle shaft was severe enough that no flow test was possible. The throttle arm displayed impact damage. The throttle shaft was removed from the unit, and the 'O' ring seal was found flat from wear. The 'O' ring was replaced and the leakage stopped. The unit was then flow tested to manufacturer's standards. No other discrepancies were found during the engine examination

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 leakage at the fuel control, resulting in a forced landing, and subsequent impact with trees.

Findings

Occurrence #1: LOSS OF ENGINE POWER
Phase of Operation: CLIMB

Findings
1. (C) FUEL SYSTEM,FUEL CONTROL - LEAK

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

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

Findings
2. OBJECT - TREE(S)

Factual Information

On April 2, 1998, about 1400 eastern standard time, a Beech F33A, D-ECTB (German), registered to a private individual, operating as a Title 14 CFR Part 91 local personal flight, impacted with trees during a forced landing near Fort Pierce, Florida. Visual meteorological conditions prevailed, and no flight plan was filed. The airplane was destroyed. The private-rated pilot was not injured. The flight was originating from the Fort Pierce Airport at the time.

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Observation of the engine at the crash site did not reveal any obvious discrepancies. The engine was removed from the airframe and shipped to Continental Motor's facilities, Mobile, Alabama, and examined at the NTSB's request, and under the supervision of the FAA, on June 24, 1998. The engine examination revealed that the fuel control system exhibited fluid leakage at the fuel pump and throttle shaft. Detailed examination of the fuel pump showed that the pump leaked fluid at the rear high speed adjusting needle at the seal to the pump body. There was no evidence of impact damage observed on the fuel pump. In addition, the throttle/metering unit leaked fluid at the throttle shaft into the metering unit. The leak at the throttle shaft was severe enough that no flow test was possible. The throttle arm displayed impact damage. The throttle shaft was removed from the unit, and the "O" ring seal was found flat from wear. The ring was replaced and the leakage stopped. The unit was then flow tested to manufacturer's standards. No other discrepancies were found during the engine examination (see TCM Analytical report Page 3).

At the airplane owner's request, the engine was shipped to Fort Pierce, Florida, on July 23, 1998, directly from TCM, Mobile, Alabama.

Pilot Information

Certificate:	Private	**Age:**	60,Male
Airplane Rating(s):	Single-engine land; Single-engine sea	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	None	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	Class 3 Valid Medical--w/ waivers/lim	**Last FAA Medical Exam:**	April 1, 1998
Occupational Pilot:	UNK	**Last Flight Review or Equivalent:**	
Flight Time:	1100 hours (Total, all aircraft), 23 hours (Total, this make and model), 1100 hours (Pilot In Command, all aircraft), 45 hours (Last 90 days, all aircraft), 21 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Beech	**Registration:**	DECTB
Model/Series:	F33A F33A	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	375
Landing Gear Type:	Retractable - Tricycle	**Seats:**	4
Date/Type of Last Inspection:	Annual	**Certified Max Gross Wt.:**	3400 lbs
Time Since Last Inspection:	43 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	1257 Hrs	**Engine Manufacturer:**	Continental
ELT:	Installed, not activated	**Engine Model/Series:**	IO-520BA
Registered Owner:	DIETER H. KNOPPLE	**Rated Power:**	285 Horsepower
Operator:		**Operating Certificate(s) Held:**	None
Operator Does Business As:		**Operator Designator Code:**	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	FPR ,25 ft msl	**Distance from Accident Site:**	1 Nautical Miles
Observation Time:	14:04 Local	**Direction from Accident Site:**	220°
Lowest Cloud Condition:	Scattered / 4000 ft AGL	**Visibility**	12 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	12 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	130°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29 inches Hg	**Temperature/Dew Point:**	27°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	(FPR)	**Type of Flight Plan Filed:**	None
Destination:	PALM BEACH , FL (F45)	**Type of Clearance:**	None
Departure Time:	14:00 Local	**Type of Airspace:**	

Airport Information

Airport:	ST. LUCIE INTERNATIONAL FPR	**Runway Surface Type:**	Asphalt
Airport Elevation:	25 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	14	**IFR Approach:**	None
Runway Length/Width:	4756 ft / 100 ft	**VFR Approach/Landing:**	Forced landing

Wreckage and Impact Information

Crew Injuries:	1 None	**Aircraft Damage:**	Destroyed
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 None	**Latitude, Longitude:**	27.440828,-80.560646(est)

Administrative Information

Investigator In Charge (IIC):	Yurman, Alan
Additional Participating Persons:	WILLIAM G PHILLIPS; ORLANDO , FL
Original Publish Date:	February 11, 2000
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=38485