



Aviation Investigation Final Report

Location:	SAINT PAUL, Minnesota	Accident Number:	CHI94LA026
Date & Time:	October 27, 1993, 18:45 Local	Registration:	N6333Y
Aircraft:	BEECH F33A	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 Minor, 2 None
Flight Conducted Under:	Part 91: General aviation		

Analysis

PRIOR TO THE ACCIDENT FLIGHT THE MECHANICAL FUEL PUMP WAS REMOVED AND REPLACED TO COMPLY WITH AN AIRWORTHINESS DIRECTIVE. THE ACCIDENT FLIGHT WAS THE FIRST FLIGHT AFTER THE MAINTENANCE. WHILE IN CRUISE FLIGHT THE PILOT NOTICED A LOSS IN FUEL PRESSURE. THE PRESSURE LOSS CONTINUED UNTIL THE PILOT WAS REQUIRED TO MAKE A FORCED LANDING AT NIGHT. THE AIRPLANE CONTACTED A FENCE AND GUARD RAIL POSTS DURING THE LANDING. SUBSEQUENT EXAMINATION REVEALED THAT A 'B' NUT ATTACHING THE FUEL LINE TO THE MECHANICAL FUEL PUMP HAD BACKED OFF. NO OTHER DISCREPANCIES WERE NOTED.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: other maintenance personnel's improper maintenance installation and fuel system line fitting undertorqued. Factors related to the accident were the dark night, along with the fence and posts which were contacted.

Findings

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

Findings

1. (C) FUEL SYSTEM,LINE FITTING - UNDERTORQUED

2. (C) MAINTENANCE, INSTALLATION - IMPROPER - OTHER MAINTENANCE PERSONNEL

Occurrence #2: FORCED LANDING

Phase of Operation: DESCENT - EMERGENCY

Occurrence #3: IN FLIGHT COLLISION WITH OBJECT

Phase of Operation: DESCENT - EMERGENCY

Findings

3. (F) LIGHT CONDITION - DARK NIGHT

4. UNSUITABLE TERRAIN OR TAKEOFF/LANDING/TAXI AREA - ENCOUNTERED - PILOT IN COMMAND

5. (F) OBJECT - FENCE

6. (F) OBJECT - POLE

Factual Information

On October 27, 1993, at 1845 central daylight time, a Beech F33A, N6333Y, registered to James B. Griebel Farms of Fridley, Minnesota, and operated by an instrument rated private pilot, experienced a loss of engine power. A night forced landing was initiated and on landing the airplane impacted a fence and guard rail posts alongside a highway. The airplane sustained substantial damage. The pilot and one passenger reported no injuries. A second passenger reported minor injuries. The business 14 CFR Part 91 flight was operating in visual meteorological conditions. An IFR flight plan was on file with the intended destination of Saint Louis, Missouri. The flight departed Anoka, Minnesota, at 1820.

Prior to departure the mechanical fuel pump had been removed and replaced to comply with an Airworthiness Directive. The accident flight was the first flight after the maintenance.

The pilot stated that while the airplane was in cruise flight he noticed a drop in fuel pressure. The pressure drop continued until power was lost and it became necessary for him to make a forced landing.

On examination it was found that the fuel line "B" nut had backed all the way off the flare nut fitting at the mechanical fuel pump. During the examination the nut was hand threaded onto the fitting and no other discrepancies were noted.

Pilot Information

Certificate:	Private	Age:	47, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 Valid Medical-w/ waivers/lim	Last FAA Medical Exam:	June 2, 1993
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	1725 hours (Total, all aircraft), 1633 hours (Total, this make and model), 1622 hours (Pilot In Command, all aircraft), 69 hours (Last 90 days, all aircraft), 10 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	BEECH	Registration:	N6333Y
Model/Series:	F33A F33A	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Utility	Serial Number:	CE991
Landing Gear Type:	Retractable - Tricycle	Seats:	5
Date/Type of Last Inspection:	Annual	Certified Max Gross Wt.:	3400 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:		Engine Manufacturer:	CONTINENTAL
ELT:	Installed	Engine Model/Series:	IO-520-BB
Registered Owner:	JAMES B. GRIBEL FARMS	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:	Night/dark
Observation Facility, Elevation:	STP ,705 ft msl	Distance from Accident Site:	7 Nautical Miles
Observation Time:	19:04 Local	Direction from Accident Site:	170°
Lowest Cloud Condition:	Scattered / 7000 ft AGL	Visibility	15 miles
Lowest Ceiling:	Broken / 11000 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	6 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	190°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	7°C / -4°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	ANOKA , MN (ANE)	Type of Flight Plan Filed:	IFR
Destination:	SAINT LOUIS , MO (SUS)	Type of Clearance:	None
Departure Time:	18:30 Local	Type of Airspace:	Class E

Airport Information

Airport:		Runway Surface Type:	
Airport Elevation:		Runway Surface Condition:	
Runway Used:	0	IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	Forced landing

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	1 Minor, 1 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Minor, 2 None	Latitude, Longitude:	44.950527,-93.089439(est)

Administrative Information

Investigator In Charge (IIC):	Wilson, Stephen
Additional Participating Persons:	JAMES FULWOOD; MINNEAPOLIS , MN
Original Publish Date:	October 20, 1994
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=9422

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