



National Transportation Safety Board Aviation Accident Data Summary

Location:	Bismarck, ND	Accident Number:	CHI05LA109
Date & Time:	05/03/2005, 2100 CDT	Registration:	N2338V
Aircraft:	Piper PA-31T	Injuries:	2 None
Flight Conducted Under:	Part 91: General Aviation -		

Analysis

The airplane was substantially damaged during an emergency landing when the landing gear did not extend properly. The pilot noted that when he attempted to lower the landing gear on approach to the intended destination nothing happened. He elected to divert to an airport with additional capabilities and assistance available. The pilot stated that he executed the emergency gear extension procedure, however, this procedure was not successful. The left main landing gear appeared to be fully extended, the nose landing gear was in a "dragging" condition, and the right main landing gear was retracted when observed by the tower controller prior to landing. The pilot noted that the red gear unlocked indicator light was illuminated and the green landing gear down/locked indicators were not illuminated. Since no further options were available to extend the gear, the pilot executed an emergency landing. The airplane touched down on the left main wheel which did not collapse initially. The right wing subsequently dropped and contacted the runway. The pilot applied left wheel brakes, however, the airplane departed the right side of the runway pavement and came to rest in the grass. The left main landing gear collapsed and a runway light was damaged in the process. The post-accident inspection revealed that a hydraulic powerpak drain line (Piper part number 46138-00) was ruptured. The drain line was located in the nose section of the airplane, forward of the cabin pressure bulkhead. The rupture was approximately one-half inch long. Hydraulic fluid was observed in the vicinity of the line rupture. The hydraulic reservoir was empty.

Probable Cause

The National Transportation Safety Board determines the probable cause(s) of this accident to be: Rupture of the hydraulic powerpak drain line which resulted in a loss of hydraulic fluid and the inability to properly lower the landing gear despite the pilot's execution of the emergency extension procedures. A contributing factor was the runway light struck during the emergency landing.

Findings

Occurrence #1: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION
Phase of Operation: APPROACH

Findings

1. (C) HYDRAULIC SYSTEM,LINE - RUPTURED
2. (C) FLUID,HYDRAULIC - LOSS,PARTIAL

Occurrence #2: WHEELS UP LANDING
Phase of Operation: EMERGENCY LANDING

Findings

3. (C) GEAR EXTENSION - NOT POSSIBLE - PILOT IN COMMAND
4. REMEDIAL ACTION - ATTEMPTED - PILOT IN COMMAND

Occurrence #3: ON GROUND/WATER COLLISION WITH OBJECT
Phase of Operation: EMERGENCY LANDING

Findings

5. (F) OBJECT - RUNWAY LIGHT

Occurrence #4: ON GROUND/WATER ENCOUNTER WITH TERRAIN/WATER
Phase of Operation: EMERGENCY LANDING

Findings

6. TERRAIN CONDITION - GROUND

Pilot Information

Certificate:	Private	Age:	57
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Instrument Rating(s):	Airplane
Other Aircraft Rating(s):	None	Instructor Rating(s):	None
Flight Time:	6778 hours (Total, all aircraft), 397 hours (Total, this make and model), 6600 hours (Pilot In Command, all aircraft), 77 hours (Last 90 days, all aircraft), 42 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Manufacturer:	Piper	Registration:	N2338V
Model/Series:	PA-31T	Engines:	2 Turbo Prop
Operator:	REMC Leasing, LLC	Engine Manufacturer:	Pratt & Whitney Canada
Air Carrier Operating Certificate:	None	Engine Model/Series:	PT6A-28
Flight Conducted Under:	Part 91: General Aviation -		

Meteorological Information and Flight Plan

Observation Facility, Elevation:	BIS, 1661 ft msl	Weather Information Source:	Weather Observation Facility
Conditions at Accident Site:	Visual Conditions	Lowest Ceiling:	None
Condition of Light:	Day	Wind Speed/Gusts, Direction:	Calm, 360°
Temperature:	9°C / -13°C	Visibility	10 Miles
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Denver, CO (BJC)	Destination:	Bismark, ND (BIS)

Airport Information

Airport:	Bismarck Muni (BIS)	Runway Surface Type:	Asphalt
Runway Used:	21	Runway Surface Condition:	Dry
Runway Length/Width:	6600 ft / 100 ft		

Wreckage and Impact Information

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

Administrative Information

Investigator In Charge (IIC):	Tim Sorensen	Adopted Date:	09/13/2005
Investigation Docket:	NTSB accident and incident docket 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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