



National Transportation Safety Board Aviation Accident Final Report

Location:	LEWISTOWN, MT	Accident Number:	DEN85FA131
Date & Time:	05/09/1985, 0844 MDT	Registration:	N84857
Aircraft:	Consolidated-Vultee PBY-5A	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 Fatal, 2 Minor
Flight Conducted Under:	Part 91: General Aviation - Aerial Observation		

Analysis

DURING TAXI TO TAKEOFF THE BRAKES FAILED. THE PLT ATTEMPTED TO GROUNDLOOP THE ACFT. THE ACFT ROLLED DOWN HILL AND COLLIDED WITH A GULLY. THE PLT WAS FATALLY INJURED. DURING PREFLIGHT THE CO-PLT INADVERTENTLY ADDED HYDRAULIC FLUID IN THE ALCOHOL TANK. THE HYDRAULIC PUMP CAVITATED. THE PLT FAILED TO USE THE HYDRAULIC EMERGENCY HAND PUMP OR THE A.C. ELECTRIC PUMP.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

Findings

Occurrence #1: MISCELLANEOUS/OTHER
Phase of Operation: STANDING - PRE-FLIGHT

Findings

1. (F) FLUID, HYDRAULIC - INADEQUATE
2. (C) AIRCRAFT PREFLIGHT - INADEQUATE - PILOT IN COMMAND
3. (F) ACFT/EQUIP INADEQUATE, VISUAL RESTRICTION - COPILOT/SECOND PILOT
4. (F) HYDRAULIC SYSTEM, RESERVOIR - LOW LEVEL
5. (C) AIRCRAFT SERVICE - IMPROPER - COPILOT/SECOND PILOT
6. (F) WINDOW, INSPECTION/OBSERVATION - BLOCKED(PARTIAL)
7. (F) CREW/GROUP COORDINATION - POOR - PILOT IN COMMAND
8. (F) ANTI-ICE/DEICE SYSTEM, PROPELLER - UNMARKED
9. (C) SUPERVISION - POOR - PILOT IN COMMAND

Occurrence #2: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION
Phase of Operation: TAXI - TO TAKEOFF

Findings

10. HYDRAULIC SYSTEM, PUMP - FAILURE, TOTAL
11. BRAKES(NORMAL) - SELECTED - PILOT IN COMMAND
12. (C) HYDRAULIC SYSTEM - PRESSURE TOO LOW
13. (C) BRAKES(EMERGENCY) - NOT USED - PILOT IN COMMAND
14. (C) SAFETY SYSTEM(OTHER) - NOT ENGAGED
15. (C) EMERGENCY PROCEDURE - NOT FOLLOWED - PILOT IN COMMAND

Occurrence #3: LOSS OF CONTROL - ON GROUND/WATER
Phase of Operation: TAXI - TO TAKEOFF

Findings

16. GROUND LOOP/SWERVE - ATTEMPTED - PILOT IN COMMAND

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

Findings

17. TERRAIN CONDITION - DITCH

Factual Information

Pilot Information

Certificate:	Commercial	Age:	52, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Seat Occupied:	Right
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	Airplane Multi-engine; Airplane Single-engine	Toxicology Performed:	Yes
Medical Certification:	Class 2 Valid Medical--w/ waivers/lim.	Last FAA Medical Exam:	10/17/1984
Occupational Pilot:		Last Flight Review or Equivalent:	
Flight Time:	6838 hours (Total, all aircraft), 19 hours (Total, this make and model), 24 hours (Last 90 days, all aircraft), 18 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Consolidated-Vultee	Registration:	N84857
Model/Series:	PBY-5A PBY-5A	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	1522
Landing Gear Type:	Retractable - Tricycle	Seats:	3
Date/Type of Last Inspection:	01/01/1985, Annual	Certified Max Gross Wt.:	27000 lbs
Time Since Last Inspection:	35 Hours	Engines:	2 Reciprocating
Airframe Total Time:	1481 Hours	Engine Manufacturer:	P&W
ELT:	Installed, activated, did not aid in locating accident	Engine Model/Series:	R1830-94-M2
Registered Owner:		Rated Power:	1350 hp
Operator:	GOVERNMENT OF ISRAEL	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	LWT, 4165 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	0852 MDT	Direction from Accident Site:	0°
Lowest Cloud Condition:	Unknown / 8000 ft agl	Visibility	30 Miles
Lowest Ceiling:	Broken / 8000 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	3 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	120°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	13° C / 7° C
Precipitation and Obscuration:			
Departure Point:		Type of Flight Plan Filed:	None
Destination:	RENO, NV (RNO)	Type of Clearance:	None
Departure Time:	0830 MDT	Type of Airspace:	Airport Advisory Area; Class E

Airport Information

Airport:	LEWISTOWN (LWT)	Runway Surface Type:	Asphalt
Airport Elevation:	4165 ft	Runway Surface Condition:	Dry
Runway Used:	25	IFR Approach:	None
Runway Length/Width:	7984 ft / 100 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 Fatal, 1 Minor	Aircraft Damage:	Substantial
Passenger Injuries:	1 Minor	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Fatal, 2 Minor	Latitude, Longitude:	

Administrative Information

Investigator In Charge (IIC):	ARNOLD W SCOTT	Report Date:	
Additional Participating Persons:			
Publish Date:			
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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