



National Transportation Safety Board Aviation Accident Final Report

Location:	APPLETON, WI	Accident Number:	CHI87LA200
Date & Time:	09/02/1987, 1215 CDT	Registration:	N9168N
Aircraft:	AERO COMMANDER 690	Aircraft Damage:	Substantial
Defining Event:		Injuries:	5 None
Flight Conducted Under:	Part 135: Air Taxi & Commuter - Non-scheduled		

Analysis

THE PLT RPRTD THAT AFTER THE ACFT WAS AT CRUISE FLT, THERE WAS A RAPID LOSS OF HYDRAULIC PRESSURE. HE RETURNED TO THE DEP ARPT, BUT WAS UNABLE TO GET THE LEFT MAIN GEAR TO LOCK DOWN. SUBSEQUENTLY, THE LEFT MAIN GEAR COLLAPSED WHEN THE ACFT WAS LANDED. AN INVESTIGATION REVEALED A HYDRAULIC LINE IN THE LEFT WING HAD FAILED WHICH HAD ALLOWED A LOSS OF HYDRAULIC FLUID & PRESSURE. ALSO, THERE WAS A STICKING PRIORITY VALVE. WITH THESE PROBLEMS, THE GEAR COULD NOT BE EXTENDED WITH EITHER THE NORMAL OR EMERG SYS.

Probable Cause and Findings

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

Findings

Occurrence #1: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION
Phase of Operation: CRUISE - NORMAL

Findings

1. (C) HYDRAULIC SYSTEM,LINE - RUPTURED
2. (C) HYDRAULIC SYSTEM,BYPASS VALVE - BINDING(MECHANICAL)

Occurrence #2: MAIN GEAR COLLAPSED
Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings

3. EMERGENCY PROCEDURE - ATTEMPTED
4. GEAR DOWN AND LOCKED - NOT POSSIBLE
5. WHEELS UP LANDING

Factual Information

Pilot Information

Certificate:	Airline Transport	Age:	45, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land; Single-engine Sea	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 2 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	10/09/1986
Occupational Pilot:		Last Flight Review or Equivalent:	
Flight Time:	10000 hours (Total, all aircraft), 2405 hours (Total, this make and model), 105 hours (Last 90 days, all aircraft), 4 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	AERO COMMANDER	Registration:	N9168N
Model/Series:	690 690	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	11068
Landing Gear Type:	Retractable - Tricycle	Seats:	8
Date/Type of Last Inspection:	08/25/1987, Continuous Airworthiness	Certified Max Gross Wt.:	9400 lbs
Time Since Last Inspection:		Engines:	2 Turbo Prop
Airframe Total Time:	5632 Hours	Engine Manufacturer:	AIRESEARCH
ELT:	Installed, not activated	Engine Model/Series:	TPE-331
Registered Owner:	MAXAIR, INC.	Rated Power:	718 hp
Operator:	MAXAIR	Operating Certificate(s) Held:	On-demand Air Taxi (135)

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	ATW, 918 ft msl	Distance from Accident Site:	5 Nautical Miles
Observation Time:	1220 CDT	Direction from Accident Site:	70°
Lowest Cloud Condition:	Thin Broken / 12000 ft agl	Visibility	20 Miles
Lowest Ceiling:	None / 0 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	6 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	330°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	17° C / -18° C
Precipitation and Obscuration:			
Departure Point:	(ATW)	Type of Flight Plan Filed:	IFR
Destination:	ST. LOUIS, MO (STL)	Type of Clearance:	VFR
Departure Time:	0848 CDT	Type of Airspace:	Class D

Airport Information

Airport:	OUTAGAMIE COUNTY (ATW)	Runway Surface Type:	Concrete
Airport Elevation:	918 ft	Runway Surface Condition:	Dry
Runway Used:	3	IFR Approach:	None
Runway Length/Width:	7001 ft / 150 ft	VFR Approach/Landing:	Traffic Pattern

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	4 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	5 None	Latitude, Longitude:	

Administrative Information

Investigator In Charge (IIC):	STEVE WILSON	Report Date:	10/25/1988
Additional Participating Persons:	E C BERT; MILWAUKEE, WI		
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 pubinquiry@ntsb.gov , or at 800-877-6799. Dockets released after this date are available at http://dms.nts.gov/pubdms/ .		

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The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).