



Aviation Investigation Final Report

Location:	FORT LAUDERDALE, Florida	Incident Number:	MIA98IA001
Date & Time:	October 1, 1997, 16:15 Local	Registration:	N168WS
Aircraft:	Grumman G-73	Aircraft Damage:	Minor
Defining Event:		Injuries:	3 None
Flight Conducted Under:	Part 91: General aviation		

Analysis

After lowering the landing gear the pilot confirmed that it was down and locked while on final approach. After touchdown during the landing roll, the nose landing gear collapsed. Post incident trouble shooting of the hydraulic system revealed that the landing gear hydraulic selector valve failed to hold pressure resulting in the collapse of the nose landing gear.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this incident to be: the partial failure of a component of the hydraulic system resulting in the collapse of the nose landing gear during the landing roll.

Findings

Occurrence #1: NOSE GEAR COLLAPSED
Phase of Operation: LANDING - ROLL

Findings

1. (C) HYDRAULIC SYSTEM - FAILURE,PARTIAL

Factual Information

On October 1, 1997, about 1615 eastern daylight time, a Grumman G-73, N168WS, registered to Pantechnicon Aviation Ltd., experienced a collapse of the nose landing gear during the landing roll at the Fort Lauderdale-Hollywood International Airport, Fort Lauderdale, Florida. Visual meteorological conditions prevailed at the time and no flight plan was filed for the 14 CFR Part 91 type-rating flight. The airplane sustained minor damage and the airline-transport rated type rating applicant/pilot, second pilot, and an FAA operations inspector were not injured. The flight originated about 1215 from the same airport.

The pilot-in-command stated that the gear operated normally during the flight which included several gear extensions and retractions. While on final approach, the landing gear indicator indicated that the gear was down which was confirmed once after landing gear extension, and again on short final. After touchdown during the landing roll at an indicated airspeed of about 40 knots, the nose landing gear collapsed.

Post incident trouble shooting of the hydraulic system revealed that the landing gear hydraulic selector valve failed to hold pressure resulting in the collapse of the nose landing gear. Pressure testing of the valve revealed that a poppet valve part number 27580, was bypassing fluid. The O-rings were replaced and the poppet valve continued to bypass fluid.

Pilot Information

Certificate:	Airline transport; Commercial; Flight instructor	Age:	35, Male
Airplane Rating(s):	Single-engine land; Multi-engine land; Multi-engine sea	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine; Instrument airplane	Toxicology Performed:	No
Medical Certification:	Class 1 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	July 25, 1997
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:	8884 hours (Total, all aircraft), 28 hours (Total, this make and model), 7156 hours (Pilot In Command, all aircraft), 70 hours (Last 90 days, all aircraft), 25 hours (Last 30 days, all aircraft), 8 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Grumman	Registration:	N168WS
Model/Series:	G-73 G-73	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	J-5
Landing Gear Type:	Amphibian	Seats:	12
Date/Type of Last Inspection:	September 5, 1997 Annual	Certified Max Gross Wt.:	12500 lbs
Time Since Last Inspection:	35 Hrs	Engines:	2 Reciprocating
Airframe Total Time:	7145 Hrs	Engine Manufacturer:	P&W
ELT:	Installed, not activated	Engine Model/Series:	R-1340
Registered Owner:	PANTECHNICON AVIATION LTD.	Rated Power:	600 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:	FLL ,11 ft msl	Distance from Accident Site:	
Observation Time:	15:48 Local	Direction from Accident Site:	
Lowest Cloud Condition:	Scattered / 2000 ft AGL	Visibility	6 miles
Lowest Ceiling:	Overcast / 20000 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	4 knots / None	Turbulence Type Forecast/Actual:	/
Wind Direction:	120°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	30°C / 21°C
Precipitation and Obscuration:	N/A - None - Haze		
Departure Point:	(FLL)	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	12:15 Local	Type of Airspace:	Class C

Airport Information

Airport:	FT. LAUDERDALE/HOLLYWOOD FLL	Runway Surface Type:	Asphalt
Airport Elevation:	11 ft msl	Runway Surface Condition:	Dry
Runway Used:	9R	IFR Approach:	
Runway Length/Width:	5276 ft / 100 ft	VFR Approach/Landing:	Full stop

Wreckage and Impact Information

Crew Injuries:	3 None	Aircraft Damage:	Minor
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	3 None	Latitude, Longitude:	26.089336,-80.149971(est)

Administrative Information

Investigator In Charge (IIC):	Monville, Timothy
Additional Participating Persons:	BILL WEAVER; FT. LAUDERDALE , FL
Original Publish Date:	May 30, 2003
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=38407

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The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).