



Aviation Investigation Final Report

Location:	JEFFERSON, Ohio	Accident Number:	NYC00LA190
Date & Time:	July 6, 2000, 12:45 Local	Registration:	N17613
Aircraft:	Spartan 7W	Aircraft Damage:	Substantial
Defining Event:		Injuries:	2 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

As the airplane touched down, the left wing would not remain level despite inputs to the aileron. Control of the airplane was maintained for about 500 feet, then the airplane swerved left and departed the left side of the runway, onto a grass area. Examination of the airplane revealed that the left main landing gear assembly broke at the top shock strut mount. The owner forwarded components from the left main landing gear to an independent metallurgist. The fracture surface on the left main landing gear strut housing was examined under a scanning electron microscope, and the metallurgist concluded, 'the bulk of the fracture surface of the housing was a cleavage fracture which would be consistent with an overload condition coupled with the low ductility of the housing. The airplane was built in 1937, and the landing gear assembly was an original part.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The overload failure of the left main gear strut housing.

Findings

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

Findings

1. (C) LANDING GEAR,MAIN GEAR STRUT - OVERLOAD

Factual Information

On July 6, 2000, about 1245 Eastern Daylight Time, a Spartan 7W, N17613, was substantially damaged while landing at the Ashtabula County Airport, Jefferson, Ohio. The certificated private pilot and pilot rated passenger were not injured. Visual meteorological conditions prevailed and no flight plan was filed for the personal flight conducted under 14 CFR Part 91.

According to the pilot, he was on an orientation flight to become familiar with the airplane. Prior to landing on Runway 26, the landing gear and flaps were extended and everything appeared normal. As the airplane touched down, the left wing would not remain level, despite inputs to the aileron. The left wing then contacted the runway surface and the pilot inputted full right rudder followed by use of full right brake. Control of the airplane was maintained for about 500 feet, then the airplane swerved left and departed the left side of the runway, onto a grass area. The right main gear then collapsed into its wheel well and the airplane slid to a stop.

Examination of the airplane by a Federal Aviation Administration inspector revealed that the left main landing gear assembly broke at the top shock strut mount.

On August 31, 2000, the airplane's owner forwarded the components from the left main landing gear to an independent metallurgist. Components of the right main landing were also forwarded for comparison. After the fracture surface on the left main landing gear strut housing was examined under a scanning electron microscope, the metallurgist concluded, "the bulk of the fracture surface of the housing was a cleavage fracture which would be consistent with an overload condition coupled with the low ductility of the housing.

According to the airplane's owner, the airplane was built in 1937, and the landing gear assembly was an original part.

The wind conditions at the airport, about the time of the accident, were from 330 degrees at 8 knots.

Pilot Information

Certificate:	Private	Age:	48, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Right
Other Aircraft Rating(s):	Helicopter	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 Valid Medical-w/ waivers/lim	Last FAA Medical Exam:	May 21, 1999
Occupational Pilot:	UNK	Last Flight Review or Equivalent:	
Flight Time:	2008 hours (Total, all aircraft), 1854 hours (Pilot In Command, all aircraft), 98 hours (Last 90 days, all aircraft), 22 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Spartan	Registration:	N17613
Model/Series:	7W 7W	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	12
Landing Gear Type:	Retractable - Tailwheel	Seats:	4
Date/Type of Last Inspection:	June 30, 2000 Annual	Certified Max Gross Wt.:	4400 lbs
Time Since Last Inspection:	4 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	3652 Hrs	Engine Manufacturer:	P&W
ELT:	Installed, activated, did not aid in locating accident	Engine Model/Series:	R985 AN-1-148
Registered Owner:	JOHN T. VENABLE	Rated Power:	450 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:	HZY ,924 ft msl	Distance from Accident Site:	
Observation Time:	12:53 Local	Direction from Accident Site:	
Lowest Cloud Condition:	Scattered / 3600 ft AGL	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	8 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	330°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30 inches Hg	Temperature/Dew Point:	22°C / 14°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	MIDDLEFIELD , OH (7G8)	Type of Flight Plan Filed:	None
Destination:	(HZY)	Type of Clearance:	None
Departure Time:	12:15 Local	Type of Airspace:	Class G

Airport Information

Airport:	ASHTABULA COUNTY ARPT HZY	Runway Surface Type:	Asphalt
Airport Elevation:	924 ft msl	Runway Surface Condition:	Dry
Runway Used:	26	IFR Approach:	None
Runway Length/Width:	5198 ft / 100 ft	VFR Approach/Landing:	Full stop;Traffic pattern

Wreckage and Impact Information

Crew Injuries:	2 None	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 None	Latitude, Longitude:	41.539318,-81.070922(est)

Administrative Information

Investigator In Charge (IIC):	Demko, Stephen
Additional Participating Persons:	DAVID PESARCHICK; CLEVELAND , OH
Original Publish Date:	May 8, 2001
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=51282

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