



Aviation Investigation Final Report

Location:	Simsbury, Connecticut	Accident Number:	ERA19LA030
Date & Time:	October 28, 2018, 16:45 Local	Registration:	N8132X
Aircraft:	Piper PA28	Aircraft Damage:	Substantial
Defining Event:	Part(s) separation from AC	Injuries:	1 Minor, 1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The commercial pilot was practicing approaches and touch-and-go landings. The pilot reported that, during taxi for takeoff, the wheel brakes were "sluggish"; when he was attempting a full-stop landing at the destination airport, the brakes "failed." The pilot steered the airplane off the runway to avoid a fence and collided with a ditch, which resulted in substantial damage to the left wing. A postaccident examination of the airplane revealed that the left main landing gear separated from the airplane during the ground collision, and there was evidence of pre-existing hydraulic fluid leakage where the fluid line fitting connected to the wheel brake assembly. Additionally, the right main landing gear wheel brake assembly was not attached to the trunnion by the required AN bolts, and the hydraulic fluid line fitting was not attached to the brake assembly. According to the maintenance logbooks, a 100-hour inspection was completed 18 days before the accident. The logbook entry noted servicing of all tires, wheels, brakes, and brake fluid. Given that the right main landing gear hydraulic fluid line was detached from its respective brake assembly, it is likely that maintenance personnel did not adequately inspect the wheel brake system, and the right brake failed due to a loss of hydraulic fluid.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: Maintenance personnel's inadequate inspection of the wheel brake system during the airplane's most recent 100-hour inspection, which resulted in a loss of hydraulic fluid and the pilot's inability to control the airplane during the landing.

Findings

Aircraft	Brake - Inadequate inspection
Personnel issues	Scheduled/routine inspection - Maintenance personnel
Personnel issues	Aircraft control - Pilot
Aircraft	Directional control - Attain/maintain not possible
Environmental issues	(general) - Contributed to outcome

Factual Information

History of Flight

Prior to flight	Aircraft maintenance event
Landing-landing roll	Part(s) separation from AC (Defining event)
Landing-landing roll	Runway excursion
Landing-landing roll	Collision with terr/obj (non-CFIT)

On October 28, 2018, about 1645 eastern daylight time, a Piper PA-28-161, N8132X, was substantially damaged after a runway excursion and collision with a ditch at Simsbury Airport (4B9) Simsbury, Connecticut. The commercial pilot and pilot-rated passenger were not injured. The airplane was operated by Interstate Aviation, Inc. under the provisions of 14 Code of Federal Regulations part 91 as a personal flight. Visual meteorological conditions prevailed, and no flight plan was filed for the flight that originated at Bradley International Airport (BDL), Windsor Locks, Connecticut, about 1635.

According to pilot, he was in the traffic pattern at 4B9 practicing approaches and touch-and-go landings. After touchdown on runway 21 for a full stop landing, the brakes "failed." He elected to steer the airplane to the right in an effort to avoid a fence and slow the airplane in the grass. The airplane departed the runway surface and collided with a ditch. The pilots exited the airplane and were met by first responders. The pilot also reported that, during taxi out for takeoff, the wheel brakes were "sluggish."

An inspector with the Federal Aviation Administration responded to the accident site and examined the wreckage. He reported that the left wing sustained structural damage during the landing. The left main landing gear separated and was found adjacent to the wreckage. The inboard and outboard brake pads exhibited normal wear. The brake assembly was attached in its normal position by two AN bolts. The brake assembly puck to brake pad and the brake supply hydraulic line also showed evidence of leaking hydraulic fluid.

An examination of the right main landing gear wheel brake assembly revealed that it was missing from its proper mounting position on the right gear trunnion. The assembly was not installed onto the main wheel brake rotor with the required AN bolts. The hydraulic fluid line and elbow fitting were also not attached to the brake assembly.

A review of the airplane maintenance records revealed that a 100-hr inspection was completed on October 10, 2018, or 18 days before the accident. The inspection entry included the following: "Serviced all tires, wheels, brakes, brake reservoir fluid." The main landing gear tires were also replaced during this inspection. The last maintenance entry where brake parts were replaced was on October 16, 2017.

Pilot Information

Certificate:	Commercial; Flight instructor	Age:	70,Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Right
Other Aircraft Rating(s):	None	Restraint Used:	3-point
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	Airplane single-engine; Instrument airplane	Toxicology Performed:	No
Medical Certification:	Class 2 With waivers/limitations	Last FAA Medical Exam:	June 25, 2018
Occupational Pilot:	UNK	Last Flight Review or Equivalent:	May 26, 2017
Flight Time:	(Estimated) 2866 hours (Total, all aircraft), 83 hours (Total, this make and model), 2725 hours (Pilot In Command, all aircraft)		

Pilot-rated passenger Information

Certificate:	Private	Age:	55,Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	3-point
Instrument Rating(s):	None	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	BasicMed With waivers/limitations	Last FAA Medical Exam:	November 23, 2017
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	700 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	Registration:	N8132X
Model/Series:	PA28 161	Aircraft Category:	Airplane
Year of Manufacture:	1979	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	28-8016162
Landing Gear Type:	Tricycle	Seats:	4
Date/Type of Last Inspection:	October 10, 2018 100 hour	Certified Max Gross Wt.:	2326 lbs
Time Since Last Inspection:	32 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	3198 Hrs at time of accident	Engine Manufacturer:	Lycoming
ELT:	C91 installed, not activated	Engine Model/Series:	O-320-D3G
Registered Owner:		Rated Power:	161 Horsepower
Operator:	On file	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	BDL, 195 ft msl	Distance from Accident Site:	4 Nautical Miles
Observation Time:	16:51 Local	Direction from Accident Site:	90°
Lowest Cloud Condition:		Visibility	10 miles
Lowest Ceiling:	Broken / 3500 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	5 knots /	Turbulence Type Forecast/Actual:	None / None
Wind Direction:	210°	Turbulence Severity Forecast/Actual:	N/A / N/A
Altimeter Setting:	29.75 inches Hg	Temperature/Dew Point:	10°C / 4°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Windsor Locks, CT (BDL)	Type of Flight Plan Filed:	None
Destination:	Simsbury, CT (4B9)	Type of Clearance:	VFR flight following
Departure Time:	16:35 Local	Type of Airspace:	Class G

Airport Information

Airport:	Simsbury Airport 4B9	Runway Surface Type:	Asphalt
Airport Elevation:	195 ft msl	Runway Surface Condition:	Dry
Runway Used:	21	IFR Approach:	None
Runway Length/Width:	2205 ft / 50 ft	VFR Approach/Landing:	Full stop; Traffic pattern

Wreckage and Impact Information

Crew Injuries:	1 Minor	Aircraft Damage:	Substantial
Passenger Injuries:	1 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Minor, 1 None	Latitude, Longitude:	41.91611,-72.776947(est)

Administrative Information

Investigator In Charge (IIC):	Hicks, Ralph
Additional Participating Persons:	David Carreau; FAA/FSDO; Enfield, CT
Original Publish Date:	April 20, 2020
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=98565

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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](#).