



Aviation Investigation Final Report

Location:	North Myrtle Beach, South Carolina	Accident Number:	ERA19LA055
Date & Time:	November 23, 2018, 11:05 Local	Registration:	N7081Q
Aircraft:	Cessna 172	Aircraft Damage:	Substantial
Defining Event:	Miscellaneous/other	Injuries:	1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot was taxiing after landing when he felt a wind gust push the tail to the right and he could not correct with full right rudder. He then applied right brake, but the right brake failed. He applied both brakes to stop, but the left turn became exaggerated, and he pulled the mixture control to stop the engine. The airplane subsequently impacted another airplane parked on the ramp. Postaccident examination of the right brake by the operator revealed damage to an O-ring or packing that allowed brake fluid to leak past the piston, rendering the right brake inoperative. The brake linings of both brakes were replaced about 389 flight hours before the accident.

Probable Cause and Findings

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

The failure of the right brake while taxiing after landing, which resulted in a loss of directional control and collision with a parked airplane.

Findings

Aircraft	Brake - Malfunction
Personnel issues	Aircraft control - Pilot

Factual Information

History of Flight

Taxi-from runway	Miscellaneous/other (Defining event)
Taxi-from runway	Loss of control on ground
Taxi-from runway	Ground collision

On November 23, 2018, about 1105 eastern standard time, a Cessna 172L, N7081Q, was substantially damaged when it was involved in an accident near North Myrtle Beach, South Carolina. The commercial pilot was not injured. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 personal flight.

The pilot stated that there were no discrepancies with the brakes at the departure airport; however, while taxiing after landing at the destination airport, he felt a wind gust push the tail to the right, which he could not correct with full right rudder. He applied right brake, and, at that time, the right brake failed. He then applied both brakes to stop, but the left turn became exaggerated. He released the left brake and pulled the mixture control to stop the engine, but, while rolling about 1 to 2 mph, the airplane impacted a parked airplane.

The owner/operator of the airplane, an airframe and powerplant mechanic with inspection authorization, examined the airplane the same day and reported seeing, "no fluid or very little fluid on the ground either under the brake or along it's [sic] path...." He removed the right brake, and no fluid drained from the separated brake line. Further inspection of the brake revealed that one lining was worn but within limits, while the other brake lining was worn to the limit. Before removing the piston from the cylinder assembly, he noted fluid on the outside of the cylinder caused by an O-ring or packing that had deteriorated.

The maintenance records reflected that the brake linings of both brakes were most recently replaced on June 18, 2018. At the time of the accident, the airplane had accrued about 389 hours since the brake lining replacement.

Pilot Information

Certificate:	Commercial	Age:	51,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	Helicopter	Restraint Used:	3-point
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 Without waivers/limitations	Last FAA Medical Exam:	June 1, 2010
Occupational Pilot:	No	Last Flight Review or Equivalent:	November 20, 2018
Flight Time:	2855 hours (Total, all aircraft), 1048 hours (Total, this make and model), 2787 hours (Pilot In Command, all aircraft), 3.7 hours (Last 90 days, all aircraft), 2.7 hours (Last 30 days, all aircraft), 1.7 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N7081Q
Model/Series:	172 L	Aircraft Category:	Airplane
Year of Manufacture:	1972	Amateur Built:	
Airworthiness Certificate:	Normal; Utility	Serial Number:	17260381
Landing Gear Type:	Tricycle	Seats:	4
Date/Type of Last Inspection:	November 9, 2018 100 hour	Certified Max Gross Wt.:	2300 lbs
Time Since Last Inspection:	31 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	10672.2 Hrs as of last inspection	Engine Manufacturer:	Lycoming
ELT:	Installed, not activated	Engine Model/Series:	O-320-E2D
Registered Owner:		Rated Power:	150 Horsepower
Operator:		Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	CRE,31 ft msl	Distance from Accident Site:	
Observation Time:	11:53 Local	Direction from Accident Site:	
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	13 knots / 19 knots	Turbulence Type Forecast/Actual:	Unknown / Clear air
Wind Direction:	40°	Turbulence Severity Forecast/Actual:	N/A / Light
Altimeter Setting:	30.36 inches Hg	Temperature/Dew Point:	11°C / 3°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Aiken, SC (AIK)	Type of Flight Plan Filed:	None
Destination:	North Myrtle Beach, SC (CRE)	Type of Clearance:	Traffic advisory;VFR flight following
Departure Time:	09:20 Local	Type of Airspace:	

Airport Information

Airport:	Grand Strand Airport CRE	Runway Surface Type:	
Airport Elevation:	31 ft msl	Runway Surface Condition:	
Runway Used:		IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	Full stop

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	33.811668,-78.723892(est)

Administrative Information

Investigator In Charge (IIC):	Monville, Timothy		
Additional Participating Persons:	James W Cook; FAA/FSDO; West Columbia, SC		
Original Publish Date:	March 9, 2022	Investigation Class:	3
Note:	The NTSB did not travel to the scene of this accident.		
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=98689		

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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](#).