



AVIATION



HIGHWAY



MARINE



RAILROAD



PIPELINE

Aviation Investigation Final Report

Location:	Anchorage, Alaska	Accident Number:	GAA16CA487
Date & Time:	September 1, 2016, 13:12 Local	Registration:	N52950
Aircraft:	Cessna 172	Aircraft Damage:	Substantial
Defining Event:	Miscellaneous/other	Injuries:	2 None
Flight Conducted Under:	Part 91: General aviation - Instructional		

Analysis

The flight instructor reported that during taxi the airplane started to lean to the right, so he looked out of his window to see if the right tire was flat. He further reported that "the ramp was opening up into a 2 foot wide dark black hole" underneath the right main landing gear. The flight instructor and student pilot egressed from the airplane without further incident.

A postaccident examination revealed substantial damage to the empennage.

The flight instructor reported no preaccident mechanical malfunctions or failures with the airplane that would have precluded normal operation.

Photographs provided by Federal Aviation Administration showed that the right main landing gear had broken through the pavement into a sink hole underneath.

Probable Cause and Findings

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

The airplane's encounter with a developing sink hole during taxi on the ramp area.

Findings

Environmental issues	(general) - Effect on equipment
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Factual Information

History of Flight

Taxi-to runway	Miscellaneous/other (Defining event)
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Pilot Information

Certificate:	Commercial; Flight instructor	Age:	33,Male
Airplane Rating(s):	Single-engine land; Multi-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 1 Without waivers/limitations	Last FAA Medical Exam:	March 23, 2016
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	May 1, 2015
Flight Time:	(Estimated) 967 hours (Total, all aircraft), 600 hours (Total, this make and model)		

Student pilot Information

Certificate:	Student	Age:	31,Male
Airplane Rating(s):	None	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:	Class 3 Without waivers/limitations	Last FAA Medical Exam:	July 11, 2016
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	(Estimated) 10 hours (Total, all aircraft), 10 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N52950
Model/Series:	172 P	Aircraft Category:	Airplane
Year of Manufacture:	1981	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	17274642
Landing Gear Type:	Tricycle	Seats:	4
Date/Type of Last Inspection:	August 19, 2016 Annual	Certified Max Gross Wt.:	2400 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:		Engine Manufacturer:	LYCOMING
ELT:	Installed, not activated	Engine Model/Series:	O-320
Registered Owner:		Rated Power:	180 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:	PAMR, 138 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	01:53 Local	Direction from Accident Site:	299°
Lowest Cloud Condition:	Few / 4900 ft AGL	Visibility	10 miles
Lowest Ceiling:	Overcast / 6500 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	3 knots /	Turbulence Type Forecast/Actual:	/ None
Wind Direction:	20°	Turbulence Severity Forecast/Actual:	/ N/A
Altimeter Setting:	30.02 inches Hg	Temperature/Dew Point:	19°C / 12°C
Precipitation and Obscuration:	Light - None - Rain		
Departure Point:	Anchorage, AK (MRI)	Type of Flight Plan Filed:	None
Destination:	Anchorage, AK (MRI)	Type of Clearance:	None
Departure Time:		Type of Airspace:	Class D

Airport Information

Airport:	MERRILL FIELD MRI	Runway Surface Type:	
Airport Elevation:	137 ft msl	Runway Surface Condition:	Dry
Runway Used:		IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	None

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:	61.213054,-149.839996(est)

Administrative Information

Investigator In Charge (IIC):	Vanover, Jackie
Additional Participating Persons:	Peter Alexakis; FAA; Anchorage, AK
Original Publish Date:	January 18, 2017
Note:	This accident report documents the factual circumstances of this accident as described to the NTSB.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=94014

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

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](#).