



Aviation Investigation Factual Report

Location:	Mesquite, Texas	Accident Number:	CEN12FA425
Date & Time:	July 5, 2012, 16:00 Local	Registration:	N8308Y
Aircraft:	Piper PA-28RT-201	Aircraft Damage:	Substantial
Defining Event:	Landing gear collapse	Injuries:	2 Minor
Flight Conducted Under:	Part 91: General aviation - Personal		

Factual Information

HISTORY OF FLIGHT

On July 5, 2012, about 1600 central daylight time, a Piper PA-28RT-201, N8308Y, was substantially damaged during landing at Mesquite Metro Airport (KHQZ), Mesquite, Texas. The pilot and one passenger sustained minor injuries. The personal flight was conducted by a private individual under the provisions of 14 Code of Federal Regulations Part 91 without a flight plan. Visual meteorological conditions prevailed during the flight. The local flight departed KHQZ at 1515.

The pilot extended the landing gear while on downwind in preparation for his fifth landing that afternoon. He noted that the right main landing gear sensor did not appear to be functioning properly, as the light was "flickering" green. The pilot continued with this pattern and sought visual confirmation of landing gear position from another pilot flying behind his airplane on downwind, as well as from a pilot waiting for takeoff on the ground. Both these pilots radioed to the accident pilot that the airplane's landing gear appeared to be down. The pilot then made the decision to land the airplane without any further action. The pilot stated that his rationales for not attempting emergency procedures in the pilot operating handbook were his perception that the landing gear sensor was at fault and the visual confirmations of landing gear position he had received from the other two pilots. During the landing roll, the right main landing gear collapsed and the airplane departed the right side of runway. Substantial damage to the airplane included buckling of the left and right sections of the forward fuselage near the firewall, and the engine mounts were pushed aft through the firewall.

PERSONNEL INFORMATION

The pilot, age 46, held a private pilot certificate for airplane single-engine land issued February 26, 2012, and a third class airman medical certificate issued May 1, 2012, with no limitations. As of the accident, the pilot's total flight time was 146 hours, pilot-in-command flight time was 94 hours, flight time in last 90 days was 23 hours, and flight time in make and model was 6.8 hours.

AIRCRAFT INFORMATION

The four seat, low-wing, retractable gear airplane, serial number 28R-8118039, was manufactured in 1981. Airplane records indicate that the last annual inspection occurred on January 20, 2012, with 9114 hours total time in service. The airplane was compliant with airworthiness directives and no inspections were due at the time of the accident. No recent landing gear maintenance was identified in the maintenance records.

WRECKAGE AND IMPACT INFORMATION

The airplane came to rest approximately 120 feet right of the runway 17 centerline in a sloped, grassy water drainage area with a 3- to 4-foot dropoff. Ground scarring on the runway tracked in a right arcing direction from near the runway centerline to the airplane.

TESTS AND RESEARCH

Examination of the airplane revealed evidence of corrosion and a lack of lubrication to the landing gear components. During testing, the right main landing gear would not “freefall down.” Following lubrication of the right landing gear, the gear was able to “freefall down” into the down and locked position normally.

According to the Piper maintenance manual, the gear down limit switch should be adjusted to allow it to actuate when the down lock hook has entered the locked position and is within 0.025 to 0.035 inch of contacting the down lock pin. At that point, the gear indicator light in the cockpit will illuminate. During examination, the gear down limit switch was found to have a gap measurement of 0.235 inches between the down lock hook and down lock pin.

ADDITIONAL INFORMATION

Section 3 Emergency Procedures of the PA-28RT pilot operating handbook contains an Emergency Landing Gear Extension checklist. Actions in this checklist include: “if landing gear has failed to lock down, yaw the airplane abruptly from side to side with the rudder” as well as “if landing gear does not check down, recycle gear through up position and then select gear down.”

Pilot Information

Certificate:	Private	Age:	46,Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 Without waivers/limitations	Last FAA Medical Exam:	May 1, 2012
Occupational Pilot:	No	Last Flight Review or Equivalent:	February 6, 2012
Flight Time:	146 hours (Total, all aircraft), 6 hours (Total, this make and model), 94 hours (Pilot In Command, all aircraft), 23 hours (Last 90 days, all aircraft), 9 hours (Last 30 days, all aircraft), 0 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	Registration:	N8308Y
Model/Series:	PA-28RT-201	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	28R-8118039
Landing Gear Type:	Retractable - Tricycle	Seats:	4
Date/Type of Last Inspection:	January 20, 2012 100 hour	Certified Max Gross Wt.:	2750 lbs
Time Since Last Inspection:	78 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	9193 Hrs at time of accident	Engine Manufacturer:	LYCOMING
ELT:	Installed, activated, did not aid in locating accident	Engine Model/Series:	I0360 SER A&C
Registered Owner:	JLINN AVIATION INC	Rated Power:	200 Horsepower
Operator:	JLINN AVIATION INC	Operating Certificate(s) Held:	None
Operator Does Business As:	Mesquite Aviation	Operator Designator Code:	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	khqz, 447 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	15:00 Local	Direction from Accident Site:	
Lowest Cloud Condition:	Scattered / 12000 ft AGL	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	10 knots / 16 knots	Turbulence Type Forecast/Actual:	/
Wind Direction:	160°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.03 inches Hg	Temperature/Dew Point:	35°C / 16°C
Precipitation and Obscuration:			
Departure Point:	Mesquite, TX (KHQZ)	Type of Flight Plan Filed:	None
Destination:	Mesquite, TX (KHQZ)	Type of Clearance:	None
Departure Time:	15:15 Local	Type of Airspace:	

Airport Information

Airport:	Mesquite Metro Airport KHQZ	Runway Surface Type:	Concrete
Airport Elevation:	447 ft msl	Runway Surface Condition:	Dry
Runway Used:	17	IFR Approach:	None
Runway Length/Width:	5999 ft / 100 ft	VFR Approach/Landing:	Full stop;Traffic pattern

Wreckage and Impact Information

Crew Injuries:	1 Minor	Aircraft Damage:	Substantial
Passenger Injuries:	1 Minor	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 Minor	Latitude, Longitude:	32.74139,-96.524719(est)

Administrative Information

Investigator In Charge (IIC):	Folkerts, Michael
Additional Participating Persons:	Brian Rochester; FAA; Dallas, TX Mike McClure; Piper Aircraft; Dallas , TX
Report Date:	December 31, 2012
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=84236

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

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](#).