



AVIATION



HIGHWAY



MARINE



RAILROAD



PIPELINE

Aviation Investigation Final Report

Location:	Vero Beach, Florida	Accident Number:	ERA18LA171
Date & Time:	June 17, 2018, 11:20 Local	Registration:	N8674Y
Aircraft:	Piper PA 30	Aircraft Damage:	Substantial
Defining Event:	Landing gear collapse	Injuries:	2 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The private pilot reported that, after a local flight, he returned to his home airport and entered the right base leg of the airport traffic pattern for landing. Due to traffic ahead of him, the pilot extended the landing gear early to decrease airspeed. He confirmed that the landing gear were extended by seeing the green light indication in the cockpit and by using the reflective mirror on the left engine nacelle to see that the nose landing gear (NLG) was extended. On short final approach, the pilot again confirmed that the landing gear were extended, and the airplane touched down near the touchdown markings. The pilot added that, after about 500 ft of landing roll, the NLG collapsed, and the airplane came to rest upright on the runway. The airplane sustained substantial damage to the underside of the fuselage.

Examination of the wreckage revealed that all three landing gear had collapsed. Further examination of the landing gear system revealed no evidence of any preimpact mechanical malfunctions or failures that would have precluded normal operation. Although the main landing extension rods were found bent, no anomalies or damage was found that would have precluded normal operation of the landing gear. Therefore, the reason for the landing gear collapse could not be determined.

Probable Cause and Findings

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

The collapse of all three landing gear for reasons that could not be determined because postaccident examination of the landing gear system revealed no evidence of any mechanical malfunctions or failures that would have precluded normal operation.

Findings

Not determined	(general) - Unknown/Not determined
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Factual Information

History of Flight

Landing-landing roll	Landing gear collapse (Defining event)
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On June 17, 2018, about 1120 eastern daylight time, a Piper PA-30, N8674Y, was substantially damaged while landing at Vero Beach Regional Airport (VRB), Vero Beach, Florida. The private pilot and passenger were not injured. The airplane was operated by the private pilot as personal flight conducted under the provisions of Title 14 Code of Federal Regulations Part 91. Visual meteorological conditions prevailed and no flight plan was filed for the local flight that departed VRB about 1040.

The pilot reported that after a local flight, he returned to VRB and entered the right base leg of the airport traffic pattern for landing on runway 4. Due to traffic ahead of him, the pilot extended the landing gear early to decrease airspeed. He confirmed that the landing gear was extended via the green light indication in the cockpit and by utilizing the reflective mirror on the left engine nacelle to see the nosegear extended. The pilot again confirmed that the landing gear was extended on short final approach and the airplane touched down near the touchdown markings. After about 500 feet of landing roll, the nosegear collapsed and the airplane came to rest upright on the runway.

Initial examination of the airplane by a Federal Aviation Administration inspector revealed that all three landing gear were collapsed. The inspector also noted substantial damage to the underside of the fuselage. The airplane was subsequently recovered to a hangar and placed on jacks. A mechanic examined the airplane for the purpose of providing a repair estimate to the insurance adjuster. During the examination, no anomalies or damage were found to the landing gear system, with the exception of bent main landing gear extension rods.

The recorded weather at VRB, at 1153, included wind from 030° at 7 knots, visibility 10 miles and clear sky.

Pilot Information

Certificate:	Private	Age:	55, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	3-point
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 With waivers/limitations	Last FAA Medical Exam:	June 14, 2018
Occupational Pilot:	No	Last Flight Review or Equivalent:	October 3, 2016
Flight Time:	449 hours (Total, all aircraft), 109 hours (Total, this make and model), 347 hours (Pilot In Command, all aircraft), 8 hours (Last 90 days, all aircraft), 2 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	Registration:	N8674Y
Model/Series:	PA 30 NO SERIES	Aircraft Category:	Airplane
Year of Manufacture:	1969	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	30-1818
Landing Gear Type:	Retractable - Tricycle	Seats:	4
Date/Type of Last Inspection:	October 5, 2017 Annual	Certified Max Gross Wt.:	2381 lbs
Time Since Last Inspection:	10 Hrs	Engines:	2 Reciprocating
Airframe Total Time:	7865 Hrs as of last inspection	Engine Manufacturer:	LYCOMING
ELT:	C91A installed, not activated	Engine Model/Series:	IO-320-B1A
Registered Owner:		Rated Power:	160 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:	VRB,24 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	11:53 Local	Direction from Accident Site:	0°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	7 knots /	Turbulence Type Forecast/Actual:	/ None
Wind Direction:	30°	Turbulence Severity Forecast/Actual:	/ N/A
Altimeter Setting:	30.13 inches Hg	Temperature/Dew Point:	31°C / 23°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Vero Beach, FL (VRB)	Type of Flight Plan Filed:	None
Destination:	Vero Beach, FL (VRB)	Type of Clearance:	None
Departure Time:	10:40 Local	Type of Airspace:	

Airport Information

Airport:	Vero Beach Regional VRB	Runway Surface Type:	Asphalt
Airport Elevation:	24 ft msl	Runway Surface Condition:	Dry
Runway Used:	4	IFR Approach:	None
Runway Length/Width:	4974 ft / 100 ft	VFR Approach/Landing:	Full stop;Traffic pattern

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	1 None	Aircraft Fire:	On-ground
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 None	Latitude, Longitude:	27.655555,-80.418052(est)

Administrative Information

Investigator In Charge (IIC):	Gretz, Robert
Additional Participating Persons:	Cory E Best; FAA/FSDO; Orlando, FL
Original Publish Date:	April 30, 2019
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=97533

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](#).