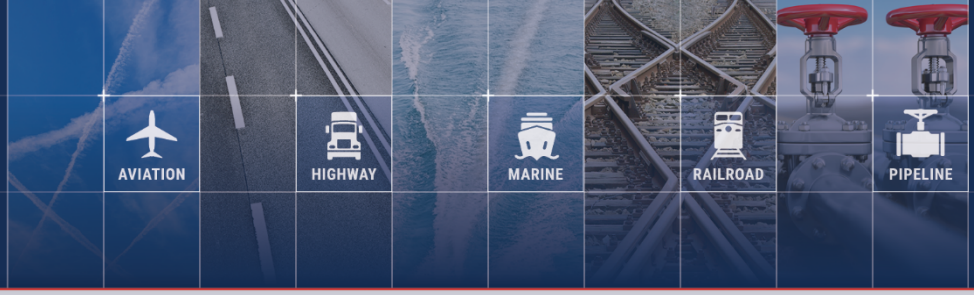

Aviation Investigation Final Report

Location:	Highgate, Vermont	**Accident Number:**	ERA24LA046
Date & Time:	October 29, 2023, 11:56 Local	**Registration:**	N289WW
Aircraft:	Piper PA-39	**Aircraft Damage:**	Substantial
Defining Event:	Landing gear not configured	**Injuries:**	4 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot reported that during the landing rollout on a 3,001-ft-long, asphalt runway, he intended to retract the flaps, but instead he retracted the landing gear. The result was that all three of the landing gear assemblies retracted into their respective wheel wells during the landing roll. The lower fuselage stringers were substantially damaged. The pilot added that there were no preimpact mechanical malfunctions with the airplane.

The airplane was equipped with a squat switch on the left main landing gear that was designed to prevent the landing gear from inadvertently retracting; however, the switch required that sufficient weight be on the landing gear in order to work effectively. The pilot stated, and a video of the landing confirmed, that the airplane was still moving at relatively high speed when he selected the landing gear handle to the retracted position. The pilot reported that the squat switch was tested at the last annual inspection and that it operated normally during the inspection. Based on this information, it is likely that the airplane's wings were still generating lift when the landing gear handle was selected to the retracted position and the gear struts was not compressed enough to activate the squat switch.

Probable Cause and Findings

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

The pilot's inadvertent retraction of the landing gear during landing rollout, which resulted in a landing gear collapse.

Findings

Personnel issues	Incorrect action selection - Pilot
Aircraft	Gear extension and retract sys - Unintentional use/operation

Factual Information

History of Flight

Landing-landing roll	Landing gear not configured (Defining event)
Landing-landing roll	Landing gear collapse
Landing-landing roll	Abnormal runway contact

Pilot Information

Certificate:	Airline transport	**Age:**	64,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:**	
Medical Certification:	Class 1 With waivers/limitations	**Last FAA Medical Exam:**	September 8, 2023
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	April 22, 2023
Flight Time:	25600 hours (Total, all aircraft), 154 hours (Total, this make and model), 20800 hours (Pilot In Command, all aircraft), 108.5 hours (Last 90 days, all aircraft), 44.9 hours (Last 30 days, all aircraft), 0 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	**Registration:**	N289WW
Model/Series:	PA-39 NO SERIES	**Aircraft Category:**	Airplane
Year of Manufacture:	1971	**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	39-84
Landing Gear Type:	Retractable - Tricycle	**Seats:**	4
Date/Type of Last Inspection:	November 15, 2022 Annual	**Certified Max Gross Wt.:**	3600 lbs
Time Since Last Inspection:	76.6 Hrs	**Engines:**	2 Reciprocating
Airframe Total Time:	7836.5 Hrs at time of accident	**Engine Manufacturer:**	Lycoming
ELT:	C126 installed, not activated	**Engine Model/Series:**	IO-320-B1A
Registered Owner:	On file	**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:	FSO,2279 ft msl	**Distance from Accident Site:**	0 Nautical Miles
Observation Time:	11:55 Local	**Direction from Accident Site:**	0°
Lowest Cloud Condition:	Scattered / 4300 ft AGL	**Visibility**	9 miles
Lowest Ceiling:	Overcast / 5000 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	3 knots /	**Turbulence Type Forecast/Actual:**	None / None
Wind Direction:	70°	**Turbulence Severity Forecast/Actual:**	N/A / N/A
Altimeter Setting:	30.24 inches Hg	**Temperature/Dew Point:**	4.7°C / -0.7°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Highgate, VT (FSO)	**Type of Flight Plan Filed:**	None
Destination:	Highgate, VT (FSO)	**Type of Clearance:**	None
Departure Time:	11:56 Local	**Type of Airspace:**	Class G

Airport Information

Airport:	FRANKLIN COUNTY STATE FSO	**Runway Surface Type:**	Asphalt
Airport Elevation:	227 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	01/19	**IFR Approach:**	None
Runway Length/Width:	3001 ft / 60 ft	**VFR Approach/Landing:**	Full stop;Straight-in

Wreckage and Impact Information

Crew Injuries:	1 None	**Aircraft Damage:**	Substantial
Passenger Injuries:	3 None	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	4 None	**Latitude, Longitude:**	44.940278,-73.097472(est)

Administrative Information

Investigator In Charge (IIC):	Gibson, Kurt
Additional Participating Persons:	John Keefe; FAA/FSDO; Portland, ME
Original Publish Date:	January 25, 2024
Last Revision Date:	
Investigation Class:	Class 4
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=193415