



AVIATION



HIGHWAY



MARINE



RAILROAD



PIPELINE

Aviation Investigation Final Report

Location:	Elko, Nevada	Accident Number:	WPR23LA282
Date & Time:	July 20, 2023, 09:40 Local	Registration:	N4149J
Aircraft:	Piper PA-28-140	Aircraft Damage:	Substantial
Defining Event:	Collision during takeoff/land	Injuries:	2 Minor
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot reported that the density altitude conditions were increasing but were within takeoff performance limits. During taxi to his planned departure runway, he was informed that the runway was closed, so he chose to depart from a different runway about 4,400 ft shorter than originally planned for. During takeoff the airplane did not have the performance necessary to attain rotation speed before the end of the runway, but the pilot did not abort the takeoff. He rotated the airplane 5-10 knots too slow and was unable to clear a fence off the departure end of the runway. The airplane sustained substantial damage to the wings and fuselage. The pilot reported there were no preaccident mechanical malfunctions or failures that would preclude normal operation.

Probable Cause and Findings

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

The pilot's failure to ensure adequate airplane performance before taking off from a significantly shorter runway than originally planned for.

Findings

Personnel issues	Performance calculations - Pilot
Environmental issues	High density altitude - Contributed to outcome
Aircraft	Takeoff distance - Capability exceeded
Personnel issues	Incorrect action selection - Pilot

Factual Information

History of Flight

Prior to flight	Preflight or dispatch event
Takeoff	Collision during takeoff/land (Defining event)

Pilot Information

Certificate:	Private	Age:	61,Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Lap only
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	
Medical Certification:	Class 3 Without waivers/limitations	Last FAA Medical Exam:	March 12, 2020
Occupational Pilot:	No	Last Flight Review or Equivalent:	September 1, 2022
Flight Time:	263 hours (Total, all aircraft), 142 hours (Total, this make and model), 180 hours (Pilot In Command, all aircraft), 4 hours (Last 90 days, all aircraft), 2 hours (Last 30 days, all aircraft)		

Passenger Information

Certificate:		Age:	Male
Airplane Rating(s):		Seat Occupied:	Right
Other Aircraft Rating(s):		Restraint Used:	Lap only
Instrument Rating(s):		Second Pilot Present:	No
Instructor Rating(s):		Toxicology Performed:	
Medical Certification:		Last FAA Medical Exam:	
Occupational Pilot:	UNK	Last Flight Review or Equivalent:	
Flight Time:			

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	Registration:	N4149J
Model/Series:	PA-28-140	Aircraft Category:	Airplane
Year of Manufacture:	1966	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	28-22474
Landing Gear Type:	Tricycle	Seats:	4
Date/Type of Last Inspection:	May 1, 2023 Annual	Certified Max Gross Wt.:	2440 lbs
Time Since Last Inspection:	48 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	4697 Hrs at time of accident	Engine Manufacturer:	Lycoming
ELT:	Installed, not activated	Engine Model/Series:	O-320-E2A
Registered Owner:	Elko Aviation Group, LLC	Rated Power:	150 Horsepower
Operator:	On file	Operating Certificate(s) Held:	None
Operator Does Business As:	self	Operator Designator Code:	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	KEKO, 5054 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	09:56 Local	Direction from Accident Site:	104°
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	3 knots /	Turbulence Type Forecast/Actual:	None /
Wind Direction:	40°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.27 inches Hg	Temperature/Dew Point:	26°C / 12°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Elko, NV	Type of Flight Plan Filed:	None
Destination:	Elko, NV	Type of Clearance:	VFR
Departure Time:		Type of Airspace:	Class E

Airport Information

Airport:	Elko Regional Airport KEKO	Runway Surface Type:	Asphalt
Airport Elevation:	5140 ft msl	Runway Surface Condition:	Dry
Runway Used:	30	IFR Approach:	None
Runway Length/Width:	3015 ft / 60 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	2 Minor	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:		Aircraft Explosion:	None
Total Injuries:	2 Minor	Latitude, Longitude:	40.824999,-115.79133

Administrative Information

Investigator In Charge (IIC):	Blum, Contessa
Additional Participating Persons:	Tom Wainscoat; FAA; Reno, NV
Original Publish Date:	November 2, 2023
Last Revision Date:	
Investigation Class:	Class 4
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=192686

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](#).