



AVIATION



HIGHWAY



MARINE



RAILROAD



PIPELINE

# Aviation Investigation Final Report

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

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

## Factual Information

### History of Flight

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

### Pilot Information

<b>Certificate:</b>	Private	<b>Age:</b>	61,Male
<b>Airplane Rating(s):</b>	Single-engine land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	Lap only
<b>Instrument Rating(s):</b>	None	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	
<b>Medical Certification:</b>	Class 3 Without waivers/limitations	<b>Last FAA Medical Exam:</b>	March 12, 2020
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	September 1, 2022
<b>Flight Time:</b>	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

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

## Aircraft and Owner/Operator Information

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

## Meteorological Information and Flight Plan

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

## Airport Information

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

## Wreckage and Impact Information

<b>Crew Injuries:</b>	2 Minor	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>		<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>		<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	2 Minor	<b>Latitude, Longitude:</b>	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:	<a href="#">Class 4</a>
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	<a href="https://data.nts.gov/Docket?ProjectID=192686">https://data.nts.gov/Docket?ProjectID=192686</a>

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](#).