



# Aviation Investigation Final Report

<b>Location:</b>	Harvey, North Dakota	<b>Accident Number:</b>	CHI03LA160
<b>Date &amp; Time:</b>	June 13, 2003, 14:45 Local	<b>Registration:</b>	N21533
<b>Aircraft:</b>	Piper PA-24	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	1 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

## Analysis

The airplane impacted terrain during takeoff when it came over the edge of a drop off located at the end of a 1,400 foot long grass runway. The pilot stated that during the takeoff roll, the airplane did not accelerate and he lowered the nose an additional amount in attempt to gain acceleration. The pilot stated that there were no mechanical problems with the airplane.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The aborted takeoff not performed by the pilot. The inadequate short field takeoff procedure by the pilot and the short grass runway were contributing factors.

## Findings

Occurrence #1: IN FLIGHT COLLISION WITH TERRAIN/WATER  
Phase of Operation: TAKEOFF

### Findings

1. (F) AIRPORT FACILITIES, RUNWAY/LANDING AREA CONDITION - OTHER
2. (F) SHORT FIELD TAKEOFF/PROCEDURE - INADEQUATE - PILOT IN COMMAND
3. (C) ABORTED TAKEOFF - NOT PERFORMED - PILOT IN COMMAND

## Factual Information

On June 13, 2003, at 1445 central daylight time, a Piper PA-24, N21533, owned and piloted by a private pilot, sustained substantial damage when it impacted terrain on takeoff from a private airstrip about two miles south of Harvey, North Dakota. Visual meteorological conditions prevailed at the time of the accident. The 14 CFR Part 91 personal flight was not operating on a flight plan. The pilot was uninjured. The local flight departed about 1445.

The pilot stated that he started the takeoff roll on a north-south runway (1,400 feet by 75 feet, grass) with one notch of flaps selected.

During the takeoff, he stated that he rotated and lowered the nose to accelerate, but the airplane would not accelerate. He then lowered the nose an additional amount, and the airplane "washed" to the left slightly and still was not accelerating. The airplane came over the edge of a drop off at the end of the runway and began to settle. He tried to make a normal landing but the nose landing gear collapsed and the right main landing gear folded, spinning the airplane in a counterclockwise direction.

The pilot reported that there were no mechanical problems with the airplane prior to the accident.

### Pilot Information

<b>Certificate:</b>	Private	<b>Age:</b>	32, 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>	
<b>Instrument Rating(s):</b>	None	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 2 Unknown	<b>Last FAA Medical Exam:</b>	March 8, 2001
<b>Occupational Pilot:</b>	UNK	<b>Last Flight Review or Equivalent:</b>	May 25, 2002
<b>Flight Time:</b>	1100 hours (Total, all aircraft), 250 hours (Total, this make and model), 870 hours (Pilot In Command, all aircraft), 37 hours (Last 90 days, all aircraft), 8 hours (Last 30 days, all aircraft), 0 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Piper	<b>Registration:</b>	N21533
<b>Model/Series:</b>	PA-24	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	24-1187
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	4
<b>Date/Type of Last Inspection:</b>	October 4, 2002 Annual	<b>Certified Max Gross Wt.:</b>	2550 lbs
<b>Time Since Last Inspection:</b>	2.6 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	3117.6 Hrs at time of accident	<b>Engine Manufacturer:</b>	Lycoming
<b>ELT:</b>	Installed, activated, did not aid in locating accident	<b>Engine Model/Series:</b>	O-360-A1A
<b>Registered Owner:</b>	On file	<b>Rated Power:</b>	180 Horsepower
<b>Operator:</b>	On file	<b>Operating Certificate(s) Held:</b>	None

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	DVL,1455 ft msl	<b>Distance from Accident Site:</b>	60 Nautical Miles
<b>Observation Time:</b>	14:15 Local	<b>Direction from Accident Site:</b>	45°
<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>	5 knots / 0 knots	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	270°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	29.97 inches Hg	<b>Temperature/Dew Point:</b>	23°C / 12°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Harvey, ND (PVT )	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	(PVT )	<b>Type of Clearance:</b>	Unknown
<b>Departure Time:</b>	14:45 Local	<b>Type of Airspace:</b>	Unknown

## Airport Information

<b>Airport:</b>	Private PVT	<b>Runway Surface Type:</b>	Grass/turf
<b>Airport Elevation:</b>	1647 ft msl	<b>Runway Surface Condition:</b>	Unknown
<b>Runway Used:</b>	360	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	1400 ft / 75 ft	<b>VFR Approach/Landing:</b>	None

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>		<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	1 None	<b>Latitude, Longitude:</b>	47.769863,-99.930091(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Gallo, Mitchell
<b>Additional Participating Persons:</b>	Verl W Addison; FAA- Fargo FSDO; Fargo, ND
<b>Original Publish Date:</b>	March 2, 2004
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	
<b>Investigation Docket:</b>	<a href="https://data.ntsb.gov/Docket?ProjectID=57223">https://data.ntsb.gov/Docket?ProjectID=57223</a>

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