



# Aviation Investigation Final Report

<b>Location:</b>	HOVEN, South Dakota	<b>Accident Number:</b>	DEN88LA183
<b>Date &amp; Time:</b>	August 14, 1988, 02:15 Local	<b>Registration:</b>	N5301Z
<b>Aircraft:</b>	PIPER PA-22-108	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	2 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

## Analysis

THE PRIVATE PLT AND HIS WIFE WERE GOING TO MAKE A LOCAL FLIGHT IN THEIR AIRPLANE AT 0215. THE PLT SAID HE HAND- PROPPED THE ACFT AND MOVED TO ENTER THE CABIN AS THE ENGINE STARTED. THE ACFT BEGAN TO MOVE, AND HIS WIFE PULLED THE PARKING BRAKE LOCK, WHICH RELEASED THE PARKING BRAKE. SHE WAS FRIGHTENED AND JUMPED CLEAR OF THE ACFT. THE PLANE TAXIED OUT OF SIGHT INTO THE DARKNESS. A POST ACCIDENT INSPECTION BY AN FAA INSPECTOR PROVIDED EVIDENCE THAT THE AIRPLANE TAXIED ACROSS A GRASS PARKING AREA, THROUGH A FENCE, ONTO A ROADWAY EMBANKMENT WHERE IT BECAME AIRBORNE FOR A SHORT DISTANCE, THEN STRUCK THE TERRAIN AND NOSED OVER. THE AIRPLANE CAME TO REST WITH THE TAIL LEANING AGAINST A TREE ON AN ADJOINING FARM, 3/4 MI FROM IT'S STARTING POINT.

## Probable Cause and Findings

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

### Findings

Occurrence #1: LOSS OF CONTROL - ON GROUND/WATER  
Phase of Operation: STANDING - STARTING ENGINE(S)

#### Findings

1. (C) STARTING PROCEDURE - IMPROPER - PILOT IN COMMAND

2. (C) PASSENGER BRIEFING - INADEQUATE - PILOT IN COMMAND
3. (F) LANDING GEAR, PARKING BRAKE - UNLOCKED
4. (C) CONTROL INTERFERENCE - INADVERTENT - PASSENGER

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Occurrence #2: NOSE OVER  
Phase of Operation: TAXI

Findings

5. TERRAIN CONDITION - ROUGH/UNEVEN

## Factual Information

### Pilot Information

<b>Certificate:</b>	Private	<b>Age:</b>	26, Male
<b>Airplane Rating(s):</b>	Single-engine land	<b>Seat Occupied:</b>	Unknown
<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 3 Valid Medical--no waivers/lim.	<b>Last FAA Medical Exam:</b>	November 23, 1987
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	103 hours (Total, all aircraft), 23 hours (Total, this make and model), 50 hours (Pilot In Command, all aircraft), 3 hours (Last 90 days, all aircraft), 2 hours (Last 30 days, all aircraft)		

### Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	PIPER	<b>Registration:</b>	N5301Z
<b>Model/Series:</b>	PA-22-108 PA-22-108	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	22-9003
<b>Landing Gear Type:</b>	Tricycle	<b>Seats:</b>	2
<b>Date/Type of Last Inspection:</b>	February 17, 1988 Annual	<b>Certified Max Gross Wt.:</b>	1650 lbs
<b>Time Since Last Inspection:</b>	4 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	3007 Hrs	<b>Engine Manufacturer:</b>	LYCOMING
<b>ELT:</b>	Installed, not activated	<b>Engine Model/Series:</b>	O-235-C1B
<b>Registered Owner:</b>	ABLER, RICHARD G	<b>Rated Power:</b>	108 Horsepower
<b>Operator:</b>	AVLER, RICHARD G	<b>Operating Certificate(s) Held:</b>	None
<b>Operator Does Business As:</b>		<b>Operator Designator Code:</b>	

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Night/dark
<b>Observation Facility, Elevation:</b>		<b>Distance from Accident Site:</b>	
<b>Observation Time:</b>		<b>Direction from Accident Site:</b>	
<b>Lowest Cloud Condition:</b>	Clear	<b>Visibility</b>	
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	/	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	0°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>		<b>Temperature/Dew Point:</b>	21°C
<b>Precipitation and Obscuration:</b>			
<b>Departure Point:</b>	(SD22)	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	(SD22)	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	00:00 Local	<b>Type of Airspace:</b>	Class G

## Airport Information

<b>Airport:</b>		<b>Runway Surface Type:</b>	
<b>Airport Elevation:</b>	0 ft msl	<b>Runway Surface Condition:</b>	
<b>Runway Used:</b>	0	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	0 ft / 0 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>	1 None	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	2 None	<b>Latitude, Longitude:</b>	45.239807,-99.770652(est)

## Administrative Information

**Investigator In Charge (IIC):** Collins, Robert

**Additional Participating Persons:** LYLE W ERICKSON; RAPID CITY , SD

**Original Publish Date:** October 2, 1989

**Last Revision Date:**

**Investigation Class:** [Class](#)

**Note:**

**Investigation Docket:** <https://data.nts.gov/Docket?ProjectID=17527>

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