



# Aviation Investigation Final Report

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<b>Location:</b>	RUSSELLVILLE, Arkansas	<b>Accident Number:</b>	FTW92LA210
<b>Date &amp; Time:</b>	August 17, 1992, 15:45 Local	<b>Registration:</b>	N5981P
<b>Aircraft:</b>	PIPER PA-24-180	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	1 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Other work use		

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## Analysis

THE PILOT, WHO WAS ALSO THE MECHANIC, WAS PERFORMING AN IN FLIGHT RIGGING CHECK OF THE AIRPLANE. DURING CLIMB, A POP SOUND WAS HEARD AND PROPELLER THRUST WAS LOST. MOVEMENT OF THE PROPELLER CONTROL HAD NO EFFECT AND AN EMERGENCY DESCENT WAS INITIATED BY THE PILOT. A 35 TO 40 DEGREE NOSE DOWN ATTITUDE WAS REQUIRED TO MAINTAIN 85 KNOTS DURING THE FORCED LANDING TO A ROAD. THE ENGINE WAS NOT SECURED BY THE PILOT. A HARD LANDING OCCURRED AT AN ESTIMATED 1,800 FEET PER MINUTE DESCENT RATE, ACCORDING TO THE PILOT. THE PROPELLER SYSTEM WAS TORN DOWN AND TWO STAKING PINS WERE MISSING. THE GUIDE COLLAR, ROD, FORK, AND PISTON HAD ROTATED AROUND THE HUB. THE PROPELLER BLADES WERE DISCONNECTED FROM THE PITCH CHANGE MECHANISM. THE PROPELLER ASSEMBLY HAD BEEN OVERHAULED AND INSTALLED ON THE AIRCRAFT APPROXIMATELY 31.7 HOURS PRIOR TO THE FAILURE.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: THE PILOT'S IMPROPER FLARE. FACTORS WERE THE PROPELLER SYSTEM'S PITCH CHANGE MECHANISM DISCONNECTED DUE TO IMPROPER OVERHAUL AND FAILURE TO INSTALL THE STAKING PINS BY OTHER MAINTENANCE PERSONNEL.

## Findings

Occurrence #1: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION

Phase of Operation: CLIMB

### Findings

1. (F) PROPELLER SYSTEM/ACCESSORIES,PITCH CHANGE MECH - DISCONNECTED
2. (F) MAINTENANCE,OVERHAUL - IMPROPER - OTHER MAINTENANCE PERSONNEL

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Occurrence #2: FORCED LANDING

Phase of Operation: DESCENT - EMERGENCY

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Occurrence #3: HARD LANDING

Phase of Operation: LANDING - FLARE/TOUCHDOWN

### Findings

3. PROPER DESCENT RATE - EXCEEDED - PILOT IN COMMAND
4. (C) FLARE - IMPROPER - PILOT IN COMMAND

## Factual Information

### Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	43, Male
<b>Airplane Rating(s):</b>	Single-engine land; Single-engine sea; Multi-engine land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 2 Valid Medical--w/ waivers/lim	<b>Last FAA Medical Exam:</b>	December 10, 1990
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	9350 hours (Total, all aircraft), 100 hours (Total, this make and model), 9300 hours (Pilot In Command, all aircraft), 140 hours (Last 90 days, all aircraft), 20 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	PIPER	<b>Registration:</b>	N5981P
<b>Model/Series:</b>	PA-24-180 PA-24-180	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	24-1074
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	4
<b>Date/Type of Last Inspection:</b>	August 7, 1992 Annual	<b>Certified Max Gross Wt.:</b>	2550 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	2265 Hrs	<b>Engine Manufacturer:</b>	LYCOMING
<b>ELT:</b>	Installed, not activated	<b>Engine Model/Series:</b>	O-360-A1A
<b>Registered Owner:</b>	HARGUS, HERBERT H.	<b>Rated Power:</b>	180 Horsepower
<b>Operator:</b>	HARGUS, HERBERT H.	<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>	Day
<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>	Scattered / 4500 ft AGL	<b>Visibility</b>	10 miles
<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>	30 inches Hg	<b>Temperature/Dew Point:</b>	29°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	(M06)	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>		<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	15:35 Local	<b>Type of Airspace:</b>	Class G

## Airport Information

<b>Airport:</b>		<b>Runway Surface Type:</b>	
<b>Airport Elevation:</b>		<b>Runway Surface Condition:</b>	
<b>Runway Used:</b>	0	<b>IFR Approach:</b>	
<b>Runway Length/Width:</b>		<b>VFR Approach/Landing:</b>	Forced landing

## 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>	35.270076,-93.139625(est)

## Administrative Information

**Investigator In Charge (IIC):** Wall, Ray  
**Additional Participating Persons:** DAVID HALL; LITTLE ROCK , AR

**Original Publish Date:** September 14, 1993

**Last Revision Date:**

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

**Note:**

**Investigation Docket:** <https://data.ntsb.gov/Docket?ProjectID=18555>

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