



Aviation Investigation Final Report

Location:	BROOMFIELD, Colorado	Accident Number:	DEN88LA027
Date & Time:	November 23, 1987, 11:30 Local	Registration:	N7291P
Aircraft:	PIPER PA-24-180	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

THE PRIVATE PILOT WAS FLYING TO BUILD TIME. AFTER AN HOUR OF FLIGHT, THE PLT RETURNED TO THE HOME AIRPORT AND ATTEMPTED TO LAND. LANDING GEAR WOULD NOT EXTEND PROPERLY AND MANUAL GEAR EXTENSION DID NOT HELP. ALL GEAR WAS PARTIALLY EXTENDED AND WOULD NOT RETRACT. A LANDING WAS MADE ON RUNWAY 11L. A POST ACCIDENT INSPECTION REVEALED EVIDENCE OF IMPROPER AND UNDOCUMENTED MAINTENANCE IN THE LANDING GEAR SYSTEM.

Probable Cause and Findings

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

Findings

Occurrence #1: GEAR NOT EXTENDED
Phase of Operation: LANDING

Findings

1. (C) LANDING GEAR - FAILURE,PARTIAL
 2. (C) MAINTENANCE - IMPROPER - UNQUALIFIED PERSON
 3. (C) LANDING GEAR,EMERGENCY EXTENSION ASSEMBLY - BINDING(MECHANICAL)
 4. MAINTENANCE,RECORDKEEPING - INADEQUATE - PILOT IN COMMAND
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Occurrence #2: COMPLETE GEAR COLLAPSED
Phase of Operation: LANDING - FLARE/TOUCHDOWN

Factual Information

Pilot Information

Certificate:	Private	Age:	54, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	September 4, 1986
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	1900 hours (Total, all aircraft), 25 hours (Total, this make and model), 1900 hours (Pilot In Command, all aircraft), 8 hours (Last 90 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	PIPER	Registration:	N7291P
Model/Series:	PA-24-180 PA-24-180	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	242469
Landing Gear Type:	Retractable - Tricycle	Seats:	4
Date/Type of Last Inspection:	July 1, 1987 Annual	Certified Max Gross Wt.:	2550 lbs
Time Since Last Inspection:	14 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	1348 Hrs	Engine Manufacturer:	LYCOMING
ELT:	Installed, not activated	Engine Model/Series:	O-360-A1A
Registered Owner:	ROBERT A FORD	Rated Power:	180 Horsepower
Operator:	FORD, ROBERT A.	Operating Certificate(s) Held:	None
Operator Does Business As:		Operator Designator Code:	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	BJC ,5654 ft msl	Distance from Accident Site:	1 Nautical Miles
Observation Time:	11:28 Local	Direction from Accident Site:	360°
Lowest Cloud Condition:	Scattered / 7000 ft AGL	Visibility	10 miles
Lowest Ceiling:	Broken / 20000 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	7 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	50°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	4°C / -3°C
Precipitation and Obscuration:	N/A - None - Smoke		
Departure Point:		Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	10:30 Local	Type of Airspace:	Class D

Airport Information

Airport:	JEFFERSON COUNTY BJC	Runway Surface Type:	Asphalt
Airport Elevation:	5654 ft msl	Runway Surface Condition:	Dry
Runway Used:	11L	IFR Approach:	None
Runway Length/Width:	7498 ft / 100 ft	VFR Approach/Landing:	Full stop;Traffic pattern

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 None	Latitude, Longitude:	39.939434,-105.059272(est)

Administrative Information

Investigator In Charge (IIC):	Collins, Robert
Additional Participating Persons:	JOE JORDAN; AURORA , CO
Original Publish Date:	December 27, 1988
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=17419

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](#).