



# Aviation Investigation Final Report

<b>Location:</b>	Auburn, Washington	<b>Accident Number:</b>	WPR14LA307
<b>Date &amp; Time:</b>	July 22, 2014, 09:15 Local	<b>Registration:</b>	N60PB
<b>Aircraft:</b>	Piper PA 46 350P	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Landing gear collapse	<b>Injuries:</b>	4 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

## Analysis

The private pilot reported that he performed the before landing checklist and verified that there were three green landing gear indicator lights illuminated. He added that the landing was "soft" and that he held the nose gear off the runway as long as possible. When the nose gear touched down, the airplane veered sharply to the left. The pilot applied right rudder control and brakes to avoid a runway excursion. The nose gear collapsed and the airplane skidded to a stop.

The airplane was not made available for examination after the accident. A review of maintenance records indicated that a service bulletin (SB) to inspect the engine mounts for cracks, which the manufacturer considered mandatory, was not accomplished. The SB stated that cracks develop in the area of the nose gear actuator feet on the engine mount. The condition can occur when the nose landing gear is subjected to excessive loads due to hard landings, rough field operations, excessive-speed turns, improper airplane towing, or other improper operations.

It is possible that the engine mount was cracked as identified in the service bulletin, which led to the nose gear collapse; however, because the airplane was not examined following the accident, the reason for the nose gear collapse could not be determined.

## Probable Cause and Findings

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

A collapse of the nose landing gear for reasons that could not be determined based on the available information.

## Findings

<b>Not determined</b>	(general) - Unknown/Not determined
<b>Personnel issues</b>	Scheduled/routine maintenance - Other

## Factual Information

### History of Flight

Landing-landing roll	Landing gear collapse (Defining event)
----------------------	--

On July 22, 2014, about 0915 Pacific daylight time, a Piper PA-46-350 airplane, N60PB, experienced a nose landing gear collapse during the landing roll at Auburn Municipal airport (S50), Auburn, Washington. The private pilot, commercial pilot, and two passengers were not injured. The airplane sustained substantial damage to the firewall and fuselage. The airplane was registered to Ards Fly LLC and operated by the pilot as a Title 14 *Code of Federal Regulations* Part 91 personal cross-country flight. Visual meteorological conditions prevailed, and no flight plan had been filed. The flight originated from Boeing Field, Seattle, Washington, at 0900 and was destined for Auburn.

The pilot reported while in the pattern for landing, he accomplished the landing checklist and verified that the landing gear indicator lights were three green. The touchdown was soft and he held the nose gear up as long as possible during the landing roll on the main gear. When the nose gear touched down, the airplane veered sharply to the left. The pilot applied right rudder control and braking action to avoid going off the runway. The nose gear collapsed and the airplane skidded to a stop.

A review of the aircraft maintenance records indicated that the last annual inspection was accomplished on August 20, 2013. On May 29, 2014, the logbook entry indicated that the main landing gear actuator upper attach bolts, and the nose strut steering arm bolts were re-torqued. The next day, the nose landing gear sequence valve was adjusted. The landing gear was swung through several cycles and the operation was checked ok.

On June 5, 2014, Piper Aircraft issued Service Bulletin (SB) No. 1103E, which Piper considered compliance as mandatory to inspect the engine mount for cracks and replace for PA-46-350P and PA-46R-350T airplanes. There was no entry in the logbook to indicate that this Service Bulletin had been complied with. The SB indicated that cracks may develop in the area of the nose gear actuator attach feet on the engine mount. This condition can occur when the nose landing gear is subjected to excessive loads due to hard landings, rough field operations, excessive speed turns, improper towing, or other improper operations.

The airplane was not made available for examination following the accident to determine the reason for the nose landing gear collapse.

The pilot did not complete the National Transportation Safety Board Pilot/Operator Aircraft Accident/Incident Report Form 6120.1.

## Pilot Information

<b>Certificate:</b>	Private	<b>Age:</b>	44, 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>	Unknown
<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 With waivers/limitations	<b>Last FAA Medical Exam:</b>	July 17, 2009
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	June 21, 2014
<b>Flight Time:</b>	1000 hours (Total, all aircraft), 500 hours (Total, this make and model), 30 hours (Last 90 days, all aircraft)		

## Flight instructor Information

<b>Certificate:</b>	Commercial; Flight instructor	<b>Age:</b>	33, Female
<b>Airplane Rating(s):</b>	Single-engine land; Single-engine sea; Multi-engine land	<b>Seat Occupied:</b>	Right
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	Unknown
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	Airplane single-engine; Instrument airplane	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 2	<b>Last FAA Medical Exam:</b>	May 24, 2014
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	4500 hours (Total, all aircraft), 300 hours (Total, this make and model), 50 hours (Last 90 days, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Piper	<b>Registration:</b>	N60PB
<b>Model/Series:</b>	PA 46 350P	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>	2004	<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	4636362
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	
<b>Date/Type of Last Inspection:</b>	August 20, 2013 Annual	<b>Certified Max Gross Wt.:</b>	4299 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	1690 Hrs as of last inspection	<b>Engine Manufacturer:</b>	LYCOMING
<b>ELT:</b>		<b>Engine Model/Series:</b>	TIO 540 AE2A
<b>Registered Owner:</b>	On file	<b>Rated Power:</b>	310 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>	KSEA	<b>Distance from Accident Site:</b>	
<b>Observation Time:</b>	08:53 Local	<b>Direction from Accident Site:</b>	
<b>Lowest Cloud Condition:</b>	Few / 5500 ft AGL	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	Broken / 9000 ft AGL	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	4 knots /	<b>Turbulence Type Forecast/Actual:</b>	/ Unknown
<b>Wind Direction:</b>	170°	<b>Turbulence Severity Forecast/Actual:</b>	/ Unknown
<b>Altimeter Setting:</b>	30.05 inches Hg	<b>Temperature/Dew Point:</b>	15°C / 12°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Seattle, WA (BFI)	<b>Type of Flight Plan Filed:</b>	
<b>Destination:</b>	Auburn, WA (S50)	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>		<b>Type of Airspace:</b>	

## Airport Information

<b>Airport:</b>	Auburn Municipal S50	<b>Runway Surface Type:</b>	Asphalt
<b>Airport Elevation:</b>	83 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>	16	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	3400 ft / 75 ft	<b>VFR Approach/Landing:</b>	Full stop

## Wreckage and Impact Information

<b>Crew Injuries:</b>	2 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	2 None	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	4 None	<b>Latitude, Longitude:</b>	47.327777,-122.226669(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Plagens, Howard
<b>Additional Participating Persons:</b>	Dwight Ford; SEA FSDO; Renton, WA
<b>Original Publish Date:</b>	July 16, 2018
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	The NTSB did not travel to the scene of this accident.
<b>Investigation Docket:</b>	<a href="https://data.ntsb.gov/Docket?ProjectID=89714">https://data.ntsb.gov/Docket?ProjectID=89714</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](#).