



Aviation Investigation Final Report

Location:	Nebraska City, Nebraska	Accident Number:	CHI06CA159
Date & Time:	June 18, 2006, 16:30 Local	Registration:	N1270C
Aircraft:	Piper PA-22-135	Aircraft Damage:	Substantial
Defining Event:		Injuries:	1 Minor, 1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The airplane was substantially damaged when the pilot lost directional control during the landing rollout. The airplane subsequently ground looped causing the left wing to contact the ground and the left main landing gear to collapse. The pilot reported that he flew a "normal downwind to final" with a "very good touchdown followed by the start of a smooth rollout." He stated that the tail wheel began to "wobble (chatter)" and the airplane drifted to the left side of the runway. He added engine power as the airplane reached the edge of the runway and applied rudder correction to return to the runway centerline. The pilot stated, "Too much right rudder started the ground loop which finished with the airplane having turned 180 [degrees]." When the airplane came to rest, the "left wing was down in the dirt with the left main folded under the airplane," according to the pilot. He noted no malfunctions with the airplane. He also commented that more patience with the tail wheel "chatter" may have prevented the over controlling which led to the ground loop.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's failure to maintain directional control during the landing rollout and the resulting ground loop. A contributing factor was the excessive tail wheel steering (rudder) input by the pilot.

Findings

Occurrence #1: LOSS OF CONTROL - ON GROUND/WATER

Phase of Operation: LANDING - ROLL

Findings

1. (F) RUDDER - IMPROPER USE OF - PILOT IN COMMAND
2. (C) DIRECTIONAL CONTROL - NOT MAINTAINED - PILOT IN COMMAND
3. (C) GROUND LOOP/SWERVE - INADVERTENT - PILOT IN COMMAND

Occurrence #2: ON GROUND/WATER ENCOUNTER WITH TERRAIN/WATER

Phase of Operation: LANDING - ROLL

Occurrence #3: MAIN GEAR COLLAPSED

Phase of Operation: LANDING - ROLL

Factual Information

The airplane was substantially damaged when the pilot lost directional control during landing rollout. The airplane subsequently ground looped causing the left wing to contact the ground and the left main landing gear to collapse. The pilot reported that he flew a "normal downwind to final" with a "very good touchdown followed by the start of a smooth rollout." He stated that the tail wheel began to "wobble (chatter)" and the airplane drifted to the left side of the runway. He added engine power as the airplane reached the edge of the runway and applied rudder correction to return to the runway centerline. The pilot stated, "Too much right rudder started the ground loop which finished with the airplane having turned 180 [degrees]." When the airplane came to rest, the "left wing was down in the dirt with the left main folded under the airplane," according to the pilot. He noted no malfunctions with the airplane. He also commented that more patience with the tail wheel "chatter" may have prevented the over controlling which led to the ground loop.

Pilot Information

Certificate:	Commercial; Flight instructor	Age:	83, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine; Instrument airplane	Toxicology Performed:	No
Medical Certification:	Class 3 With waivers/limitations	Last FAA Medical Exam:	August 1, 2005
Occupational Pilot:	No	Last Flight Review or Equivalent:	June 1, 2005
Flight Time:	10475 hours (Total, all aircraft), 1000 hours (Total, this make and model), 10265 hours (Pilot In Command, all aircraft), 20 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

Aircraft Make:	Piper	Registration:	N1270C
Model/Series:	PA-22-135	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	22-1063
Landing Gear Type:	Tailwheel	Seats:	4
Date/Type of Last Inspection:	July 1, 2005 Annual	Certified Max Gross Wt.:	2000 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	2727 Hrs as of last inspection	Engine Manufacturer:	Lycoming
ELT:	Installed, activated, did not aid in locating accident	Engine Model/Series:	O-320-A2B
Registered Owner:	On file	Rated Power:	150 Horsepower
Operator:	On file	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	AFK,1162 ft msl	Distance from Accident Site:	
Observation Time:	16:50 Local	Direction from Accident Site:	
Lowest Cloud Condition:	Scattered / 12000 ft AGL	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	3 knots / 0 knots	Turbulence Type Forecast/Actual:	/
Wind Direction:	280°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29.94 inches Hg	Temperature/Dew Point:	30°C / 13°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Plattsmouth, NE (PMV)	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	15:30 Local	Type of Airspace:	

Airport Information

Airport:	Nebraska City Muni AFK	Runway Surface Type:	Concrete
Airport Elevation:	1162 ft msl	Runway Surface Condition:	Dry
Runway Used:	33	IFR Approach:	None
Runway Length/Width:	4500 ft / 75 ft	VFR Approach/Landing:	Stop and go

Wreckage and Impact Information

Crew Injuries:	1 Minor	Aircraft Damage:	Substantial
Passenger Injuries:	1 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Minor, 1 None	Latitude, Longitude:	40.607223,-95.865554

Administrative Information

Investigator In Charge (IIC):	Sorensen, Timothy
Additional Participating Persons:	Larry Becherer; FAA-Lincoln FSDO
Original Publish Date:	October 3, 2006
Last Revision Date:	
Investigation Class:	Class
Note:	This accident report documents the factual circumstances of this accident as described to the NTSB.
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=64090

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](#).