Aviation Investigation Final Report

Location:	Midlothian, Texas	**Accident Number:**	CEN12LA214
Date & Time:	March 29, 2012, 17:15 Local	**Registration:**	N480SP
Aircraft:	Cessna 172S	**Aircraft Damage:**	Substantial
Defining Event:	Loss of control on ground	**Injuries:**	1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot stated that there was a 5 to 10 knot left crosswind while landing. He reported that he had no difficulty maintaining the runway centerline alignment during the final approach and touchdown. An uneventful touchdown was made on the runway centerline; however, during the landing roll, the airplane began to veer to the left. The pilot stated that despite his increased use of right rudder to regain directional control, the airplane departed the left side of the runway and impacted a ditch. The nose landing gear collapsed when the airplane impacted the ditch. The pilot further noted that he had not experienced any ground-handling difficulties during the two takeoffs and one landing completed earlier that day.

A postaccident examination confirmed that the cockpit rudder pedals were operating properly. Additionally, no mechanical anomalies were revealed during a functional test of the brake system. A postaccident review of available wind data indicated that the accident airplane likely landed in a left quartering crosswind of about 5 knots with no appreciable gusts. In the absence of any significant crosswind or wind gust, and coupled with the lack of any preimpact mechanical malfunctions of the nose wheel steering or brake systems, the pilot should have been able to maintain directional control during the landing roll.

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 roll.

Findings

Aircraft	Directional control - Not attained/maintained
Personnel issues	Aircraft control - Pilot

Factual Information

History of Flight

Landing-landing roll	Loss of control on ground (Defining event)
Landing-landing roll	Runway excursion
Landing-landing roll	Collision with terr/obj (non-CFIT)
Landing-landing roll	Landing gear collapse

On March 29, 2012, at 1715 central daylight time, a Cessna 172S airplane, N480SP, was substantially damaged while landing at Mid-Way Regional Airport (KJWY), Midlothian, Texas. The private pilot was not injured. The airplane was registered to and operated by the pilot under the provisions of 14 Code of Federal Regulations Part 91 without a flight plan. Day visual meteorological conditions prevailed for the personal flight. The flight departed Sportsman's World Airport (TA65), Palo Pinto, Texas, about 1615 with KJWY as the intended destination.

The pilot stated that there was a 5-10 knot left crosswind while landing on runway 18 (6,500 feet by 100 feet, asphalt). He reported that he had no difficulty maintaining runway centerline alignment during the final approach and touchdown. An uneventful touchdown was made on the runway centerline; however, during the landing roll, the airplane began to veer to the left. The pilot stated that despite his increased use of right rudder to regain directional control, the airplane departed off the left side of the runway and impacted a ditch. The nose landing gear collapsed when the airplane impacted the ditch. He further noted that he had not experienced any ground-handling difficulties during the 2 takeoffs and 1 landing completed earlier that day.

A postaccident examination was completed by inspectors with the Federal Aviation Administration. The examination revealed substantial damage to the right wing primary structure and engine firewall. Although the nose wheel steering linkages had fractured when the nose gear collapsed, movement of the cockpit rudder pedals confirmed their proper operation. Additionally, no mechanical anomalies were found during a function test of the brake system. The postaccident examination did not reveal any preimpact mechanical malfunctions or failures that would have precluded normal operation of the airplane.

At 1715, the airport's automated surface observing system reported the following weather conditions: wind 120 degrees at 6 knots; visibility 10 miles; scattered clouds at 2,800 and 3,300 feet above ground level; temperature 25 degrees Celsius; dew point 17 degrees Celsius; altimeter setting 29.84 inches of mercury.

Pilot Information

Certificate:	Private	**Age:**	47,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 With waivers/limitations	**Last FAA Medical Exam:**	December 1, 2011
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	January 12, 2012
Flight Time:	463 hours (Total, all aircraft), 61 hours (Total, this make and model), 4 hours (Last 90 days, all aircraft), 2 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	**Registration:**	N480SP
Model/Series:	172S	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	172S8025
Landing Gear Type:	Tricycle	**Seats:**	4
Date/Type of Last Inspection:	March 22, 2012 Annual	**Certified Max Gross Wt.:**	2550 lbs
Time Since Last Inspection:	2 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	1341 Hrs as of last inspection	**Engine Manufacturer:**	Lycoming
ELT:	Installed, not activated	**Engine Model/Series:**	IO-360-L2A
Registered Owner:	On file	**Rated Power:**	180 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:	KJWY,727 ft msl	**Distance from Accident Site:**	0 Nautical Miles
Observation Time:	17:15 Local	**Direction from Accident Site:**	
Lowest Cloud Condition:	Scattered / 2800 ft AGL	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	6 knots / None	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	120°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29.84 inches Hg	**Temperature/Dew Point:**	25°C / 17°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Palo Pinto, TX (TA65)	**Type of Flight Plan Filed:**	None
Destination:	Midlothian, TX (KJWY)	**Type of Clearance:**	None
Departure Time:	16:15 Local	**Type of Airspace:**	Class G

Airport Information

Airport:	Mid-Way Regional Airport KJWY	**Runway Surface Type:**	Asphalt
Airport Elevation:	727 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	18	**IFR Approach:**	None
Runway Length/Width:	6500 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:**	32.458332,-96.912498(est)

Administrative Information

Investigator In Charge (IIC):	Fox, Andrew
Additional Participating Persons:	Michael D Hastings; Federal Aviation Administration - Dallas FSDO; Dallas, TX
Original Publish Date:	October 9, 2012
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=83251

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