



# **Aviation Investigation Final Report**

**Location:** Norwalk, Ohio **Accident Number:** CEN12LA369

Date & Time: June 8, 2012, 13:30 Local Registration: N721R

Aircraft: RYAN AERONAUTICAL ST3KR Aircraft Damage: Substantial

**Defining Event:** Loss of control on ground **Injuries:** 2 None

Flight Conducted Under: Part 91: General aviation - Personal

#### **Analysis**

The pilot reported that, upon touchdown, the tailwheel-equipped airplane's right brake "locked up" and the airplane then veered off the right side of the runway. The airplane struck a 3-foot-wide drainage ditch about 66 feet from the edge of the runway, which resulted in substantial damage to the left wing. The examination of the accident site revealed runway skid marks and a wingtip scrape, which indicated that the right wheel was not on the ground until shortly before it contacted the ditch. The right brake successfully passed the acceptance test procedure with no visual indication of fluid leakage around the piston. The pilot had 997 total flight hours with 1 hour logged in the accident airplane. The accident flight was the first flight he had in the airplane, and it was his first landing in the accident airplane. The surface weather observation at an airport located about 18 nautical miles from the accident site indicated the wind was 320 degrees at 9 knots. The airplane landed on the runway at 280 degrees, which indicates that a 6-knot crosswind existed at the time of the accident.

### **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 of the airplane while landing in a crosswind.

### **Findings**

Aircraft Directional control - Not attained/maintained

Personnel issues Total experience w/ equipment - Pilot

Environmental issues Crosswind - Contributed to outcome

Personnel issues Aircraft control - Pilot

Page 2 of 6 CEN12LA369

#### **Factual Information**

#### **History of Flight**

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

On June 8, 2012, at 1330 eastern daylight time, a Ryan Aeronautical ST3KR, N721R, sustained substantial damage when it lost directional control during landing at the Norwalk-Huron County Airport (5A1), Norwalk, Ohio. The pilot and passenger were not injured. The airplane was registered and operated by a private individual under the provisions of the 14 Code of Federal Regulations Part 91 as a personal flight. Visual meteorological conditions prevailed at the time of the accident, and no flight plan was filed. The airplane departed Geauga County Airport (7G8), Middlefield, Ohio, at 1230.

The pilot reported that the tailwheel equipped airplane was landing on runway 28 (4,210 feet by 75 feet, asphalt). He reported that the right brake "locked up" upon touchdown causing the airplane to veer off the runway. The airplane struck a 3-foot wide drainage ditch that was about 66 feet from the edge of the runway and ran parallel to the runway, which resulted in sustained substantial damage to the left wing.

A Federal Aviation Administration (FAA) inspector examined the accident site. He reported that the runway skid marks and the wingtip scrape indicated that the right wheel was not on the ground until shortly before contacting the ditch. The inspector reported that the airplane had a very narrow wheel stance and limited forward visibility in the landing attitude.

The right brake was tested at the brake manufacturer's facility with FAA oversight. The brake successfully passed the acceptance test procedure, and there was no visual indication of fluid leakage around the piston.

The pilot had 997 total flight hours with 1 hour logged in the accident airplane. The accident flight was the first flight he had in the airplane, and it was his first landing in the accident airplane.

At 1353, the surface weather observation at the Lorain County Regional Airport (LPR), Lorain, Ohio, located about 18 nautical miles east of 5A1, was: wind 320 degrees at 9 knots; 10 miles visibility; sky clear; temperature 26 degrees Celsius; dew point 7 degrees Celsius; altimeter 30.05 inches of mercury.

Page 3 of 6 CEN12LA369

#### **Pilot Information**

| Certificate:              | Private   | Age:                              | 45                |
|---------------------------|---|-----------------------------------|-------------------|
| Airplane Rating(s):       | Single-engine land; Single-engine sea                                 | Seat Occupied:                    | Rear              |
| 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 Without waivers/limitations                                   | Last FAA Medical Exam:            | August 31, 2010   |
| Occupational Pilot:       | No  | Last Flight Review or Equivalent: | September 2, 2010 |
| Flight Time:              | 997 hours (Total, all aircraft), 1 hours (Total, this make and model) |                                   |                   |

## **Aircraft and Owner/Operator Information**

| Aircraft Make:                | RYAN AERONAUTICAL              | Registration:                     | N721R           |
|-------------------------------|--------------------------------|-----------------------------------|-----------------|
| Model/Series:                 | ST3KR                          | Aircraft Category:                | Airplane        |
| Year of Manufacture:          | 1942                           | Amateur Built:                    |                 |
| Airworthiness Certificate:    | Normal                         | Serial Number:                    | 1840            |
| Landing Gear Type:            | Tailwheel                      | Seats:                            | 2               |
| Date/Type of Last Inspection: | May 14, 2012 Annual            | Certified Max Gross Wt.:          | 1885 lbs        |
| Time Since Last Inspection:   |                                | Engines:                          | 1 Reciprocating |
| Airframe Total Time:          | 1946 Hrs as of last inspection | Engine Manufacturer:              | Ranger          |
| ELT:                          | Not installed                  | Engine Model/Series:              | 6-440-C5        |
| Registered Owner:             | Roger Parshall                 | Rated Power:                      | 200 Horsepower  |
| Operator:                     | Roger Parshall                 | Operating Certificate(s)<br>Held: | None            |

Page 4 of 6 CEN12LA369

## Meteorological Information and Flight Plan

| Conditions at Accident Site:     | Visual (VMC)                     | Condition of Light:                  | Day               |
|----------------------------------|----------------------------------|--------------------------------------|-------------------|
| Observation Facility, Elevation: | LPR,793 ft msl                   | Distance from Accident Site:         | 18 Nautical Miles |
| Observation Time:                | 13:53 Local                      | Direction from Accident Site:        | 90°               |
| <b>Lowest Cloud Condition:</b>   | Clear                            | Visibility                           | 10 miles          |
| Lowest Ceiling:                  | None                             | Visibility (RVR):                    |                   |
| Wind Speed/Gusts:                | 9 knots /                        | Turbulence Type<br>Forecast/Actual:  | /                 |
| Wind Direction:                  | 320°                             | Turbulence Severity Forecast/Actual: | /                 |
| Altimeter Setting:               | 30.04 inches Hg                  | Temperature/Dew Point:               | 26°C / 7°C        |
| Precipitation and Obscuration:   | No Obscuration; No Precipitation |                                      |                   |
| Departure Point:                 | Middleton, OH (K7G8)             | Type of Flight Plan Filed:           | None              |
| Destination:                     | Norwalk, OH (K5A1)               | Type of Clearance:                   | None              |
| Departure Time:                  | 12:30 Local                      | Type of Airspace:                    |                   |

### **Airport Information**

| Airport:             | Norwald-Huron County K5A1 | Runway Surface Type:             | Asphalt   |
|----------------------|---------------------------|----------------------------------|-----------|
| Airport Elevation:   | 852 ft msl                | <b>Runway Surface Condition:</b> | Dry       |
| Runway Used:         | 28                        | IFR Approach:                    | None      |
| Runway Length/Width: | 4210 ft / 75 ft           | VFR Approach/Landing:            | Full stop |

## Wreckage and Impact Information

| Crew Injuries:         | 1 None | Aircraft Damage:        | Substantial              |
|------------------------|--------|-------------------------|--------------------------|
| Passenger<br>Injuries: | 1 None | Aircraft Fire:          | None                     |
| Ground Injuries:       | N/A    | Aircraft Explosion:     | None                     |
| Total Injuries:        | 2 None | Latitude,<br>Longitude: | 41.24472,-82.551109(est) |

Page 5 of 6 CEN12LA369

#### **Administrative Information**

Investigator In Charge (IIC): Silliman, James

Additional Participating Persons: Thomas Leahy; FAA Cleveland FSDO; Cleveland, OH

Original Publish Date: July 30, 2014

Last Revision Date: Investigation Class: Class

Note: Investigation Docket: https://data.ntsb.gov/Docket?ProjectID=83975

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.

Page 6 of 6 CEN12LA369