



National Transportation Safety Board Aviation Accident Data Summary

Location:	Alliance, OH	Accident Number:	CHI08CA032
Date & Time:	11/01/2007, 1710 EDT	Registration:	N5733W
Aircraft:	Piper PA-28-151	Injuries:	2 None
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

The private pilot reported that the airplane's approach and touchdown on runway 27 (2,088 feet by 130 feet, turf) were uneventful. The airplane did not decelerate as he depressed the toe brake pedals, although he felt pressure through the pedals. He repositioned his feet and attempted to apply brake pressure again without any effect on braking performance. The pilot realized that the airplane was going to run off the end of the runway and decided to shutdown the engine and turnoff the master electrical switch. He was "standing on the brakes as hard as possible" when the airplane impacted an airport perimeter fence, traveled through a ditch, and onto a nearby road. The airplane was subsequently struck by a vehicle traveling on the road. The airplane received substantial damage to both wings and the engine firewall. Examination of the turf runway after the accident failed to reveal any skid markings that could be associated with the airplane's ground track. Local law enforcement surveyed the accident site and determined that the airplane touched down with 1,072 feet of runway remaining. According to the airplane's operating handbook, at maximum gross weight the airplane required about 600 feet to stop on a paved, level, and dry runway. The operating handbook did not provide landing performance data for a turf runway. Local weather observations indicated that the surface wind was from the west-northwest at 9 knots. The airplane was equipped with a hand brake and dual toe brakes. The hand brake can also be used as a parking brake in conjunction with a locking ratchet system. Once the hand brake lever is engaged, the use of toe brakes becomes ineffective. With the hand brake fully disengaged, the left brake system functioned properly when its corresponding toe brakes (pilot and co-pilot positions) were depressed during a postaccident examination. The right brake assembly had impact damage that prevented a functional test. The pilot stated that he had used the parking brake earlier in the day, but he had alternatively used the toe brakes during the engine run-up before departing on the accident flight. He concluded that the parking brake must have "partially engaged" sometime during the flight.

Probable Cause

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's inadvertent activation of the parking brake which resulted in the toe brakes becoming ineffective. Contributing to the accident was the airport perimeter fence, the ditch, and the vehicle.

Findings

Occurrence #1: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION
Phase of Operation: LANDING - ROLL

Findings

1. (C) LANDING GEAR,PARKING BRAKE - ENGAGED
2. (C) PARKING BRAKES - INADVERTENT ACTIVATION - PILOT IN COMMAND
3. (C) LANDING GEAR,NORMAL BRAKE SYSTEM - INOPERATIVE

 Occurrence #2: OVERRUN
 Phase of Operation: LANDING - ROLL

Occurrence #3: ON GROUND/WATER COLLISION WITH OBJECT
 Phase of Operation: LANDING - ROLL

Findings
 4. (F) OBJECT - FENCE

Occurrence #4: ON GROUND/WATER ENCOUNTER WITH TERRAIN/WATER
 Phase of Operation: LANDING - ROLL

Findings
 5. (F) TERRAIN CONDITION - DITCH

Occurrence #5: ON GROUND/WATER COLLISION WITH OBJECT
 Phase of Operation: LANDING - ROLL

Findings
 6. (F) OBJECT - VEHICLE

Pilot Information

Certificate:	Private	Age:	44
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Instrument Rating(s):	None
Other Aircraft Rating(s):	None	Instructor Rating(s):	None
Flight Time:	473 hours (Total, all aircraft), 35 hours (Total, this make and model), 437 hours (Pilot In Command, all aircraft), 13 hours (Last 90 days, all aircraft), 7 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	Registration:	N5733W
Model/Series:	PA-28-151	Engines:	1 Reciprocating
Operator:	512 Flyers, LLC.	Engine Manufacturer:	Lycoming
Operating Certificate(s) Held:	None	Engine Model/Series:	O-320
Flight Conducted Under:	Part 91: General Aviation - Personal		

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	CAK, 1228 ft msl	Weather Information Source:	Weather Observation Facility
Lowest Ceiling:	None	Wind Speed/Gusts, Direction:	9 knots / , 290°
Temperature:	11° C	Visibility	10 Miles
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	New Market, VA (8W2)	Destination:	Alliance, OH (2D1)

Airport Information

Airport:	Barber Airport (2D1)	Runway Surface Type:	Grass/turf
Runway Used:	27	Runway Surface Condition:	Dry
Runway Length/Width:	2088 ft / 130 ft		

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	1 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Latitude, Longitude:	40.970833, -81.099722		

Administrative Information

Investigator In Charge (IIC):	Andrew T Fox	Adopted Date:	01/31/2008
Note:	This accident report documents the factual circumstances of this accident as described to the NTSB.		
Investigation Docket:	NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at pubinq@ntsb.gov , or at 800-877-6799. Dockets released after this date are available at http://dms.nts.gov/pubdms/ .		

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report.