



National Transportation Safety Board Aviation Accident Data Summary

Location:	Long Beach, CA	Accident Number:	LAX03LA020
Date & Time:	11/02/2002, 1051 PST	Registration:	N184TA
Aircraft:	Cessna T182T	Injuries:	2 None
Flight Conducted Under:	Part 91: General Aviation - Instructional		

Analysis

During the takeoff roll portion of a touch-and-go, the airplane veered off the runway and collided with a taxiway sign. The CFI said the first two circuits around the traffic pattern were uneventful, and the student performed satisfactorily. During the third touch-and-go landing the student indicated that the airplane turned right without his application of right rudder pressure. The CFI responded by instructing her student in the proper usage of the rudder pedal. The flight continued around the traffic pattern. The student then performed a normal power on approach with 30 degrees of wing flaps extended for another touch-and-go landing. The touchdown was not hard, and no vibrations or unusual noises were noted. As the student increased the engine power to takeoff and was raising the wing flaps, the airplane again started an uncommanded right turn. The student told the CFI to take control of the airplane and she immediately took the controls and applied left rudder to redirect the airplane back onto the runway. The CFI said that when she pushed on the left pedal the airplane veered even more toward the right, and it collided with a taxiway sign. Thereafter, the CFI elected to continue the takeoff, full engine power was developed, and the airplane took off. During the climb out both pilots had difficulty maintaining control of the airplane. The CFI made an emergency landing at the airport on runway 30. The touchdown, rollout, and taxi to parking were accomplished by the CFI without difficulty. No unusual sounds, vibrations, or braking problems were noted. All of the tires remained inflated and an exhaustive examination of the control system, nose wheel steering mechanism and brakes/tires found no evidence of an anomaly. A series of low and high-speed taxi tests up to 55 knots were performed with the accident airplane under the supervision of FAA Inspectors and the airplane operated normally with no difficulty maintaining directional control. Cessna Aircraft Company personnel subsequently performed a ground steering test on an exemplar airplane to determine the nose gear operating characteristics as the nose gear (tire) is lifted off the ground. When the nose strut extends to the point where the tire is no longer resting on the ground, the strut/wheel is designed to center and lock out rudder pedal steering. The test results noted three specific pitch attitudes: 1) with the center of the leading edge of the elevator approximately 34 inches above the ground, the nose wheel is on the ground, and the strut and wheel turn when the rudder pedals were operated; 2) When the center of the leading edge of the elevator is 29.5 inches above the ground, the nose tire is just touching the ground, and the nose wheel does not turn with application of rudder pedals; 3) when the center of the leading edge of the elevator was about 16 inches above the ground (tailcone tiedown also contacting the ground), the nose wheel was also off the ground and would not move using the ruder pedals. The FAA reported that the top of the "J2" sign was about 34 inches above ground level. In a normal 3-point resting attitude the airplane's elevator is about 41 inches above ground level. To contact the top of the taxiway sign, a Cessna T182T needs to pitch upward such that its elevator lowers 7 inches.

Probable Cause

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

The student's failure to maintain directional control and the instructor's inadequate supervision of the flight by his delayed remedial action.

Findings

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

Phase of Operation: TAKEOFF - ROLL/RUN

Findings

1. (C) DIRECTIONAL CONTROL - NOT MAINTAINED - DUAL STUDENT
2. (C) SUPERVISION - INADEQUATE - PILOT IN COMMAND(CFI)
3. (C) REMEDIAL ACTION - DELAYED - PILOT IN COMMAND(CFI)

Occurrence #2: ON GROUND/WATER COLLISION WITH OBJECT

Phase of Operation: TAKEOFF - ROLL/RUN

Findings

4. OBJECT - AIRPORT SIGN/MARKER

Flight Instructor Information

Certificate:	Flight Instructor; Commercial	Age:	39
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Instrument Rating(s):	Airplane
Other Aircraft Rating(s):	None	Instructor Rating(s):	Airplane Single-engine
Flight Time:	1556 hours (Total, all aircraft), 63 hours (Total, this make and model), 1420 hours (Pilot In Command, all aircraft), 205 hours (Last 90 days, all aircraft), 71 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft)		

Student Pilot Information

Certificate:	Student	Age:	40
Airplane Rating(s):	None	Instrument Rating(s):	None
Other Aircraft Rating(s):	None	Instructor Rating(s):	None
Flight Time:	16 hours (Total, all aircraft), 16 hours (Total, this make and model), 0 hours (Pilot In Command, all aircraft), 16 hours (Last 90 days, all aircraft), 11 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N184TA
Model/Series:	T182T	Engines:	1 Reciprocating
Operator:	Flight Pros, Inc.	Engine Manufacturer:	Lycoming
Operating Certificate(s) Held:	None	Engine Model/Series:	TIO-540AKIA
Flight Conducted Under:	Part 91: General Aviation - Instructional		

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	LGB, 58 ft msl	Weather Information Source:	Weather Observation Facility
Lowest Ceiling:	None	Wind Speed/Gusts, Direction:	6 knots / , 320°
Temperature:	19° C	Visibility	3 Miles
Precipitation and Obscuration:			
Departure Point:	Long Beach, CA (LGB)	Destination:	Long Beach, CA (LGB)

Airport Information

Airport:	Long Beach (LGB)	Runway Surface Type:	Asphalt
Runway Used:	25L	Runway Surface Condition:	Dry
Runway Length/Width:	5420 ft / 150 ft		

Wreckage and Impact Information

Crew Injuries:	2 None	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Latitude, Longitude:	33.817778, -118.151667		

Administrative Information

Investigator In Charge (IIC):	Wayne Pollack	Adopted Date:	10/28/2004
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/ .		

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