



Aviation Investigation Final Report

Location:	Terrell, Texas	Accident Number:	FTW02LA100
Date & Time:	March 22, 2002, 15:30 Local	Registration:	N3687M
Aircraft:	Piper PA-12	Aircraft Damage:	Substantial
Defining Event:		Injuries:	2 Minor
Flight Conducted Under:	Part 91: General aviation - Instructional		

Analysis

During the tailwheel endorsement flight, the private pilot was performing a short field landing to the runway when tree branches hit the fuselage, and the right wing struck the trees. Subsequently, the airplane slowed, nosed down, and turned right. The flight instructor recalled applying left aileron and left rudder with little or no effect, and the airplane hit the ground. The flight instructor believed that the airplane encountered a sink rate which he did not detect. He further stated that "the deteriorating flight path went undetected" by him since he thought the airplane had cleared the area of the trees, which caused him to "under utilize visual clues more to the sides of the approach path." The pilot reported the wind was from the north-northwest at 5-15 mph and "bumpy."

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the inadequate supervision by the flight instructor resulting in the dual student's failure to maintain the proper glidepath during the short field approach. A contributing factor was the downdraft.

Findings

Occurrence #1: IN FLIGHT COLLISION WITH OBJECT
Phase of Operation: APPROACH - VFR PATTERN - FINAL APPROACH

Findings

1. OBJECT - TREE(S)
2. (C) SUPERVISION - INADEQUATE - PILOT IN COMMAND(CFI)
3. (F) WEATHER CONDITION - DOWNDRAFT
4. (C) PROPER GLIDEPATH - NOT MAINTAINED - DUAL STUDENT

Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER

Phase of Operation: DESCENT - UNCONTROLLED

Findings

5. TERRAIN CONDITION - GROUND

Factual Information

On March 22, 2002, approximately 1530 central standard time, a Piper PA-12, single-engine airplane, N3687M, sustained substantial damage when the airplane struck trees during final approach to the Terrell Municipal Airport, Terrell, Texas. The airplane was owned and operated by the flight instructor under 14 Code of Federal Regulations Part 91. The flight instructor and the private pilot, who was receiving instruction for his tailwheel endorsement, received minor injuries. Visual meteorological conditions prevailed for the local flight, and a flight plan was not filed. The flight originated from Terrell approximately 1430.

The flight instructor reported that he had flown the airplane with the private pilot earlier that day for an accumulated flight time of 3.1 hours during the completion of the private pilot's biennial flight review. No aircraft discrepancies were noted during the flights. Subsequently, the airplane was refueled for the tailwheel endorsement flight. The private pilot was performing a short field landing to runway 35 when tree branches hit the fuselage, and the right wing struck the trees. Subsequently, the aircraft slowed, nosed down, and turned right. The flight instructor recalled applying left aileron and left rudder which produced little or no effect, and the airplane hit the ground.

The flight instructor stated that he believed that the airplane encountered a sink rate which he did not detect. He further stated that "the deteriorating flight path went undetected" by him since he thought the airplane had cleared the area of the trees, which caused him to "under utilize visual clues more to the sides of the approach path."

The flight instructor reported the wind was northerly at 5-15 mph. The private pilot reported the wind from the northwest at 5-10 mph and "bumpy."

The FAA inspector, who responded to the site, found the airplane approximately 400 feet short of the runway. There were numerous tree branches broken at a height of approximately 60 feet agl. The main wreckage was found approximately 100 feet beyond the trees. The wing spars and ribs were damaged, and the firewall and fuselage were buckled. A gouge was found in the leading edge of a bent propeller blade.

Flight instructor Information

Certificate:	Airline transport; Flight instructor	Age:	61, Male
Airplane Rating(s):	Single-engine land; Single-engine sea; Multi-engine land	Seat Occupied:	Rear
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine; Instrument airplane	Toxicology Performed:	No
Medical Certification:	Class 1 Valid Medical-w/ waivers/lim	Last FAA Medical Exam:	December 10, 2001
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	February 7, 2002
Flight Time:	29633 hours (Total, all aircraft), 480 hours (Total, this make and model), 26716 hours (Pilot In Command, all aircraft), 126 hours (Last 90 days, all aircraft), 34 hours (Last 30 days, all aircraft), 5 hours (Last 24 hours, all aircraft)		

Pilot Information

Certificate:	Private	Age:	37, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Front
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 Valid Medical-no waivers/lim.	Last FAA Medical Exam:	March 12, 2002
Occupational Pilot:	UNK	Last Flight Review or Equivalent:	March 22, 2002
Flight Time:	190 hours (Total, all aircraft), 4 hours (Total, this make and model), 150 hours (Pilot In Command, all aircraft), 4 hours (Last 90 days, all aircraft), 4 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	Registration:	N3687M
Model/Series:	PA-12	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	12-2535
Landing Gear Type:	Tailwheel	Seats:	2
Date/Type of Last Inspection:	December 3, 2001 Annual	Certified Max Gross Wt.:	1750 lbs
Time Since Last Inspection:	62 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	1590 Hrs at time of accident	Engine Manufacturer:	Lycoming
ELT:	Installed, activated, did not aid in locating accident	Engine Model/Series:	O-320-B1A
Registered Owner:	George E. Toombs Jr.	Rated Power:	160 Horsepower
Operator:		Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:		Distance from Accident Site:	
Observation Time:		Direction from Accident Site:	
Lowest Cloud Condition:	Clear	Visibility	10 miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	5 knots / 15 knots	Turbulence Type Forecast/Actual:	/
Wind Direction:	360°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	16°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Terrell, TX (TRL)	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	VFR
Departure Time:	14:30 Local	Type of Airspace:	Class G

Airport Information

Airport:	Terrell Municipal TRL	Runway Surface Type:	Asphalt
Airport Elevation:	474 ft msl	Runway Surface Condition:	Dry
Runway Used:	35	IFR Approach:	None
Runway Length/Width:	4000 ft / 75 ft	VFR Approach/Landing:	Full stop

Wreckage and Impact Information

Crew Injuries:	2 Minor	Aircraft Damage:	Substantial
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 Minor	Latitude, Longitude:	32.709999,-96.267501

Administrative Information

Investigator In Charge (IIC):	Roach, Joyce
Additional Participating Persons:	Gene M Bland; FAA FSDO; Dallas, TX
Original Publish Date:	April 8, 2003
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=54391

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