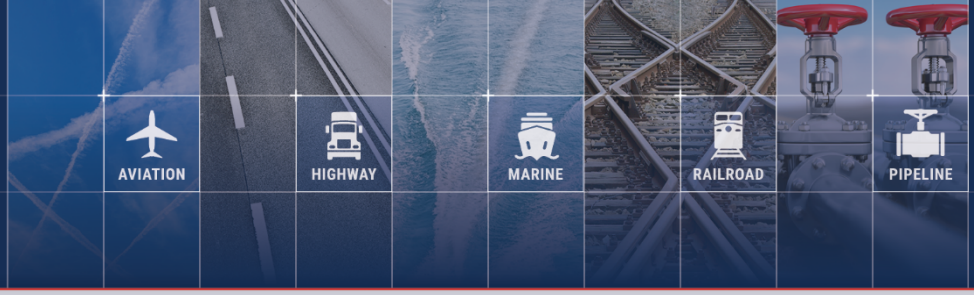


# Aviation Investigation Final Report

| | | | |
|---|---|---|---|
| **Location:** | DENTON, Texas | **Accident Number:** | FTW94LA045 |
| **Date & Time:** | December 5, 1993, 10:15 Local | **Registration:** | N2360A |
| **Aircraft:** | PIPER PA-38-112 | **Aircraft Damage:** | Substantial |
| **Defining Event:** | | **Injuries:** | 1 None |
| **Flight Conducted Under:** | Part 91: General aviation - Instructional | | |

## Analysis

THE STUDENT PILOT WAS CLEARED FOR A SUPERVISED CROSS COUNTRY SOLO FLIGHT. THE PILOT ENCOUNTERED TURBULENCE AND HE ABORTED THE CROSS COUNTRY FLIGHT AND ELECTED TO LAND AT ANOTHER AIRPORT; DURING APPOACH TO THE INTENDED LANDING POINT, HE ENCOUNTERED TURBULENCE THAT MADE AIRCRAFT CONTROL DIFFICULT. JUST PRIOR TO CROSSING THE RUNWAY THRESHOLD, THE PILOT LOST CONTROL AND IMPACTED THE GROUND 7 FEET SHORT OF THE RUNWAY.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: THE CAUSE WAS THE PILOT'S FAILURE TO COMPENSATE FOR EXISTING WIND CONDITIONS. A FACTOR WAS THE TURBULENT WEATHER.

### Findings

Occurrence #1: UNDERSHOOT
Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings
1. (F) WEATHER CONDITION - TURBULENCE
2. (C) COMPENSATION FOR WIND CONDITIONS - INADEQUATE - PILOT IN COMMAND

## Factual Information

On December 5, 1993, at 1015 central standard time, a Piper PA-38-112, N2360A, was substantially damaged while landing at the Denton Municipal Airport, near Denton, Texas. The student pilot was not injured. Visual meteorological conditions prevailed for the solo instructional flight.

According to the operator, the student pilot had been cleared to conduct a cross country flight from Addison, Texas, to Durant, Oklahoma. The student pilot stated that after becoming airborne, he contacted the flight service station to open his visual flight rules (VFR) flight plan. At that point the pilot was informed that moderate turbulence had been reported for his route of flight ahead of his present position.

The student pilot aborted his cross country flight and elected to land at the Denton Municipal Airport. He further reported that while en route to the intended airport the turbulence increased and he had difficulty controlling the airplane.

An inspection of the accident site by a Federal Aviation Administration inspector revealed that the airplane impacted the ground 7 feet short of the runway.

Damage to the airplane consisted of structural damage to the right wing, as well as the collapsing of the nose and right main landing gear. The structural support for the right landing gear attaching point was fractured.

### Pilot Information

| | | | |
|---|---|---|---|
| **Certificate:** | Student | **Age:** | Male |
| **Airplane Rating(s):** | None | **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 Valid Medical--w/ waivers/lim | **Last FAA Medical Exam:** | October 4, 1993 |
| **Occupational Pilot:** | No | **Last Flight Review or Equivalent:** | |
| **Flight Time:** | 30 hours (Total, all aircraft), 30 hours (Total, this make and model), 9 hours (Pilot In Command, all aircraft), 24 hours (Last 90 days, all aircraft), 9 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft) | | |

## Aircraft and Owner/Operator Information

| | | | |
|---|---|---|---|
| **Aircraft Make:** | PIPER | **Registration:** | N2360A |
| **Model/Series:** | PA-38-112 PA-38-112 | **Aircraft Category:** | Airplane |
| **Year of Manufacture:** | | **Amateur Built:** | |
| **Airworthiness Certificate:** | Normal | **Serial Number:** | 38-78A0653 |
| **Landing Gear Type:** | Tricycle | **Seats:** | 2 |
| **Date/Type of Last Inspection:** | August 9, 1993 100 hour | **Certified Max Gross Wt.:** | 3600 lbs |
| **Time Since Last Inspection:** | 56 Hrs | **Engines:** | 1 Reciprocating |
| **Airframe Total Time:** | 3983 Hrs | **Engine Manufacturer:** | LYCOMING |
| **ELT:** | Installed, activated, did not aid in locating accident | **Engine Model/Series:** | O-235-L2C |
| **Registered Owner:** | NORTH DALLAS FLIGHT SCHOOL | **Rated Power:** | 112 Horsepower |
| **Operator:** | | **Operating Certificate(s) Held:** | None |
| **Operator Does Business As:** | | **Operator Designator Code:** | |

## 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** | 20 miles |
| **Lowest Ceiling:** | None | **Visibility (RVR):** | |
| **Wind Speed/Gusts:** | / | **Turbulence Type Forecast/Actual:** | / |
| **Wind Direction:** | 200° | **Turbulence Severity Forecast/Actual:** | / |
| **Altimeter Setting:** | | **Temperature/Dew Point:** | |
| **Precipitation and Obscuration:** | No Obscuration; No Precipitation | | |
| **Departure Point:** | ADDISON , TX (ADS ) | **Type of Flight Plan Filed:** | VFR |
| **Destination:** | DURANT , OK (DUA ) | **Type of Clearance:** | VFR |
| **Departure Time:** | 09:30 Local | **Type of Airspace:** | Class G |

## Airport Information

| | | | |
|---|---|---|---|
| **Airport:** | DENTON MUNICIPAL AIRPORT DTO | **Runway Surface Type:** | Asphalt |
| **Airport Elevation:** | 640 ft msl | **Runway Surface Condition:** | Dry |
| **Runway Used:** | 17 | **IFR Approach:** | None |
| **Runway Length/Width:** | 5000 ft / 150 ft | **VFR Approach/Landing:** | Straight-in |

## 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:** | 33.209651,-97.130393(est) |

## Administrative Information

| | |
|---|---|
| **Investigator In Charge (IIC):** | Ellis, Matthew |
| **Additional Participating Persons:** | C. MAHAFFEY; FORT WORTH , TX |
| **Original Publish Date:** | August 1, 1994 |
| **Last Revision Date:** | |
| **Investigation Class:** | Class |
| **Note:** | |
| **Investigation Docket:** | https://data.ntsb.gov/Docket?ProjectID=18974 |