



# Aviation Investigation Final Report

<b>Location:</b>	EL PASO, Texas	<b>Accident Number:</b>	FTW94LA048
<b>Date &amp; Time:</b>	December 12, 1993, 09:24 Local	<b>Registration:</b>	N3718X
<b>Aircraft:</b>	AERO COMMANDER 100-180	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	1 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Ferry		

## Analysis

THE PILOT LOST CONTROL OF THE AIRPLANE DURING AN ENCOUNTER WITH SEVERE TURBULENCE AFTER CROSSING A RIDGELINE PERPENDICULAR TO HIS ROUTE OF FLIGHT. THE PILOT STATED THAT HE WAS IN CRUISE FLIGHT AT 6500 FEET WHEN HE ENCOUNTERED THE TURBULENCE IN CLEAR AIR. THE AIRPLANE SUSTAINED STRUCTURAL DAMAGE, BUT THE PILOT WAS ABLE TO LAND UNEVENTFULLY.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: THE PILOT'S INADVERTENT FLIGHT INTO CLEAR AIR TURBULENCE.

## Findings

Occurrence #1: IN FLIGHT ENCOUNTER WITH WEATHER  
Phase of Operation: CRUISE - NORMAL

### Findings

1. (C) WEATHER CONDITION - TURBULENCE, CLEAR AIR
  2. (C) FLIGHT INTO KNOWN ADVERSE WEATHER - INADVERTENT - PILOT IN COMMAND
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Occurrence #2: LOSS OF CONTROL - IN FLIGHT  
Phase of Operation: DESCENT - UNCONTROLLED

Findings

3. PRECAUTIONARY LANDING - PERFORMED - PILOT IN COMMAND

## Factual Information

On December 12, 1993, at 0924 mountain standard time, an Aero Commander 100-180, N3718X, was substantially damaged following an encounter with severe turbulence while in cruise flight near El Paso, Texas. The private pilot was not injured. Visual meteorological conditions prevailed for the ferry flight.

According to the pilot, he was in level flight at 6,500 feet while en route from Deming, New Mexico, to the Tradewinds Airport, near Amarillo, Texas, when he lost control of the airplane, approximately a half a mile after crossing a ridge line running perpendicular to his route of flight. The pilot further stated that he lost 250 feet of altitude during the encounter with clear air turbulence. After recovering, the pilot diverted to the El Paso International Airport, where an uneventful landing was made.

Damage to the airplane included a cracked windshield, buckling to the leading edge of the right wing, and collapsing of the two inner ribs of the right wing.

### Pilot Information

<b>Certificate:</b>	Private	<b>Age:</b>	62, Male
<b>Airplane Rating(s):</b>	Single-engine land; Single-engine sea	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	None	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 3 Valid Medical-w/ waivers/lim	<b>Last FAA Medical Exam:</b>	October 10, 1992
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	2044 hours (Total, all aircraft), 726 hours (Total, this make and model), 2044 hours (Pilot In Command, all aircraft), 5 hours (Last 90 days, all aircraft), 5 hours (Last 30 days, all aircraft), 5 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	AERO COMMANDER	<b>Registration:</b>	N3718X
<b>Model/Series:</b>	100-180 100-180	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	5022
<b>Landing Gear Type:</b>	Tricycle	<b>Seats:</b>	4
<b>Date/Type of Last Inspection:</b>	December 10, 1993 Annual	<b>Certified Max Gross Wt.:</b>	2450 lbs
<b>Time Since Last Inspection:</b>	5 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	1763 Hrs	<b>Engine Manufacturer:</b>	LYCOMING
<b>ELT:</b>	Installed, not activated	<b>Engine Model/Series:</b>	O-360A2F
<b>Registered Owner:</b>	J.C AIRCRAFT MARKETING INC.	<b>Rated Power:</b>	145 Horsepower
<b>Operator:</b>	REED, JAMES C.	<b>Operating Certificate(s) Held:</b>	None
<b>Operator Does Business As:</b>		<b>Operator Designator Code:</b>	

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	ELP ,3956 ft msl	<b>Distance from Accident Site:</b>	15 Nautical Miles
<b>Observation Time:</b>	08:50 Local	<b>Direction from Accident Site:</b>	150°
<b>Lowest Cloud Condition:</b>	Scattered / 4600 ft AGL	<b>Visibility</b>	50 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	/	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	180°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	29 inches Hg	<b>Temperature/Dew Point:</b>	13°C / 3°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	DEMING , NM (DMN )	<b>Type of Flight Plan Filed:</b>	VFR
<b>Destination:</b>	AMARILLO , TX (TDW )	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	08:45 Local	<b>Type of Airspace:</b>	Class E

## Airport Information

<b>Airport:</b>		<b>Runway Surface Type:</b>	
<b>Airport Elevation:</b>		<b>Runway Surface Condition:</b>	
<b>Runway Used:</b>	0	<b>IFR Approach:</b>	
<b>Runway Length/Width:</b>		<b>VFR Approach/Landing:</b>	None

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>		<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	1 None	<b>Latitude, Longitude:</b>	

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Casanova, Hector
<b>Additional Participating Persons:</b>	DALE I HORNER; ALBUQUERQUE , NM
<b>Original Publish Date:</b>	August 1, 1994
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	
<b>Investigation Docket:</b>	<a href="https://data.nts.gov/Docket?ProjectID=18976">https://data.nts.gov/Docket?ProjectID=18976</a>

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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](#).