



# Aviation Investigation Final Report

<b>Location:</b>	VANDALIA, Ohio	<b>Accident Number:</b>	CHI82FA211
<b>Date &amp; Time:</b>	June 6, 1982, 11:30 Local	<b>Registration:</b>	N7254Y
<b>Aircraft:</b>	PIPER PA-30	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	1 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

## Analysis

DURING DESCENT AT 215 MPH THE ACFT ENTERED VIOLENT BUFFETING. RECOVERY WAS INITIATED BY REDUCING POWER & THE ACFT LANDED WITHOUT ANY FURTHER INCIDENT. EXAMINATION REVEALED THE HORIZONTAL STABILATOR WAS PERMANENTLY BENT DOWNWARD ON BOTH SIDES. THE ACFT WAS MODIFIED WITH GAP SEALS ON 5/25/82 IAW STC SA516GL. EXAMINATION OF THE COUNTERBALANCE ARM ASSEMBLY SHOWED THAT TWO SMALL WEIGHTS (SLUGS) WERE USED TO OBTAIN A BALANCED CONDITION WHEN THE STC MODIFICATION WAS COMPLETED ON THE STABILATOR. THE STC CONTAINED A LIMITATION THAT IT SHOULD NOT BE INCORPORATED IN ANY ACFT HAVING OTHER APPROVED MODIFICATIONS UNLESS IT HAS BEEN DETERMINED THAT IT WILL NOT INTRODUCE ANY ADVERSE EFFECT UPON ACFT AIRWORTHINESS. THIS ACFT HAD 8 OTHER MODIFICATIONS. ON 7/10/82 THE OWNER OF THE STC ISSUED A SERVICE BULLETIN WHICH EFFECTIVELY REMOVED THE GAP SEALS ON ALL PA-30 & PA-39 TYPE ACFT THAT HAD PREVIOUSLY BEEN MODIFIED.

## Probable Cause and Findings

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

### Findings

Occurrence #1: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION  
Phase of Operation: DESCENT - NORMAL

#### Findings

1. FLIGHT CONTROL,STABILATOR - FLUTTER
2. (C) FLIGHT CONTROL,STABILATOR - IMPROPER
3. (C) RUDDERVATOR - IMPROPER - PRODUCTION/DESIGN PERSONNEL
4. (C) PERFORMANCE DATA - NOT ATTAINED - PRODUCTION/DESIGN PERSONNEL
5. (C) MAINTENANCE,DESIGN CHANGE - INADEQUATE - PRODUCTION/DESIGN PERSONNEL
6. (C) ACFT/EQUIP INADEQUATE,SUPPLEMENTAL TYPE CERT - MANUFACTURER

## Factual Information

### Pilot Information

<b>Certificate:</b>	Airline transport; Flight instructor	<b>Age:</b>	26, Male
<b>Airplane Rating(s):</b>	Single-engine land; Multi-engine land	<b>Seat Occupied:</b>	Unknown
<b>Other Aircraft Rating(s):</b>		<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	Airplane multi-engine; Airplane single-engine	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 1 Valid Medical--no waivers/lim.	<b>Last FAA Medical Exam:</b>	January 4, 1982
<b>Occupational Pilot:</b>	UNK	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	3304 hours (Total, all aircraft), 650 hours (Total, this make and model), 3314 hours (Pilot In Command, all aircraft), 153 hours (Last 90 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	PIPER	<b>Registration:</b>	N7254Y
<b>Model/Series:</b>	PA-30 PA-30	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>		<b>Serial Number:</b>	30-280
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	4
<b>Date/Type of Last Inspection:</b>	Unknown	<b>Certified Max Gross Wt.:</b>	3600 lbs
<b>Time Since Last Inspection:</b>	80 Hrs	<b>Engines:</b>	2 Reciprocating
<b>Airframe Total Time:</b>	3150 Hrs	<b>Engine Manufacturer:</b>	LYCOMING
<b>ELT:</b>	Installed	<b>Engine Model/Series:</b>	IO-360-C2C
<b>Registered Owner:</b>	MICHAEL I. MASSIMINI	<b>Rated Power:</b>	200 Horsepower
<b>Operator:</b>	MICHAEL I. MASSIMINI	<b>Operating Certificate(s) Held:</b>	
<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>		<b>Distance from Accident Site:</b>	
<b>Observation Time:</b>		<b>Direction from Accident Site:</b>	
<b>Lowest Cloud Condition:</b>	Clear	<b>Visibility</b>	30 miles
<b>Lowest Ceiling:</b>	Unknown	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	10 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	360°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	30 inches Hg	<b>Temperature/Dew Point:</b>	47°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	VANDALIA	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	VANDALIA	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	10:50 Local	<b>Type of Airspace:</b>	

## Airport Information

<b>Airport:</b>		<b>Runway Surface Type:</b>	
<b>Airport Elevation:</b>	0 ft msl	<b>Runway Surface Condition:</b>	
<b>Runway Used:</b>	0	<b>IFR Approach:</b>	
<b>Runway Length/Width:</b>	0 ft / 0 ft	<b>VFR Approach/Landing:</b>	Straight-in

## 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>	39.800708,-84.320373(est)

## Administrative Information

**Investigator In Charge (IIC):**

**Additional Participating Persons:**

**Original Publish Date:** June 6, 1983

**Last Revision Date:**

**Investigation Class:** [Class](#)

**Note:**

**Investigation Docket:** <https://data.nts.gov/Docket?ProjectID=72917>

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