



National Transportation Safety Board Aviation Accident Final Report

Location:	MARION, IN	Accident Number:	CHI85LA219
Date & Time:	06/01/1985, 1130 EST	Registration:	N6787R
Aircraft:	CESSNA T210	Aircraft Damage:	Substantial
Defining Event:		Injuries:	2 None
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

SHORTLY AFTER TAKEOFF, THE PLT DISCOVERED THAT THE ELEVATOR CONTROLS WERE JAMMED & PITCH CHANGES COULD ONLY BE MADE WITH ELEVATOR TRIM & POWER. AN EMERG LANDING WAS MADE USING THE TRIM, BUT THE PLT WAS UNABLE TO FLARE THE ACFT AT LANDING SPEED. THE ACFT STRUCK THE RWY WITH THE NOSE GEAR, BREAKING THE NOSE GEAR OFF. A POST-ACCIDENT EXAM REVEALED THAT AN AUTOPILOT ADAPTER FLANGE (RECENTLY INSTALLED TO THE BACK OF THE PILOT'S ATTITUDE INDICATOR) WAS IN A POSITION TO CATCH THE ELEVATOR SECONDARY STOP ON THE PILOT'S CONTROL COLUMN. THE ELEVATOR CONTROL COULD HAVE BEEN FORCIBLY FREED, BUT IT WOULD HAVE REQUIRED A LARGE FORCE TO DO SO.

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: TAKEOFF

Findings

1. (C) AUTOPILOT/FLIGHT DIRECTOR - OTHER
2. (C) MAINTENANCE, INSTALLATION - IMPROPER - OTHER MAINTENANCE PERSONNEL
3. (C) FLT CONTROL SYST, ELEVATOR CONTROL - JAMMED

Occurrence #2: LOSS OF CONTROL - IN FLIGHT

Phase of Operation: LANDING - FLARE/TOUCHDOWN

Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER

Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings

4. FLARE - NOT POSSIBLE

Occurrence #4: NOSE GEAR COLLAPSED

Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings

5. LANDING GEAR, NOSE GEAR - OVERLOAD

Factual Information

Pilot Information

Certificate:	Commercial	Age:	57, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 2 Valid Medical--w/ waivers/lim.	Last FAA Medical Exam:	06/08/1983
Occupational Pilot:		Last Flight Review or Equivalent:	
Flight Time:	1175 hours (Total, all aircraft), 303 hours (Total, this make and model), 1055 hours (Pilot In Command, all aircraft), 13 hours (Last 90 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	CESSNA	Registration:	N6787R
Model/Series:	T210 T210	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	140262-6-C
Landing Gear Type:	Retractable - Tricycle	Seats:	5
Date/Type of Last Inspection:	02/15/1985, Annual	Certified Max Gross Wt.:	3800 lbs
Time Since Last Inspection:	25 Hours	Engines:	1 Reciprocating
Airframe Total Time:	3300 Hours	Engine Manufacturer:	CONTINENTAL
ELT:	Installed, not activated	Engine Model/Series:	TIO-520
Registered Owner:	AERO ASSOCIATES, INC.	Rated Power:	285 hp
Operator:	AERO ASSOCIATES, INC.	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	MIE, 937 ft msl	Distance from Accident Site:	20 Nautical Miles
Observation Time:	1045 EST	Direction from Accident Site:	142°
Lowest Cloud Condition:	Unknown / 4500 ft agl	Visibility	15 Miles
Lowest Ceiling:	Broken / 4500 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	7 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	230°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	
Precipitation and Obscuration:			
Departure Point:	NEW CASTLE, IN (UWL)	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	1045 EST	Type of Airspace:	Class G

Airport Information

Airport:	MARION	Runway Surface Type:	Asphalt
Airport Elevation:	859 ft	Runway Surface Condition:	Dry
Runway Used:	22	IFR Approach:	None
Runway Length/Width:	5200 ft	VFR Approach/Landing:	Full Stop

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	1 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 None	Latitude, Longitude:	

Administrative Information

Investigator In Charge (IIC):	WILLIAM S COOPER	Report Date:	
Additional Participating Persons:	DELMUS E SHANKS; INDIANAPOLIS, IN		
Publish Date:			
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/ .		

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).