



# National Transportation Safety Board Aviation Accident Final Report

---

<b>Location:</b>	DELAND, FL	<b>Accident Number:</b>	MIA90FA135
<b>Date &amp; Time:</b>	05/28/1990, 0803 EDT	<b>Registration:</b>	N4973V
<b>Aircraft:</b>	CESSNA T303	<b>Aircraft Damage:</b>	Destroyed
<b>Defining Event:</b>		<b>Injuries:</b>	2 Minor

**Flight Conducted Under:** Part 91: General Aviation - Instructional

---

## Analysis

DURING AN NDB APCH IN INSTRUMENT CONDS WITH THE LANDING GEAR EXTENDED, THE FIRE WARNING LIGHT FOR THE RGT ENG ILLUMINATED. THE RGT ENG WAS SHUT DOWN & A MISSED APCH WAS INITIATED; HOWEVER, THE LANDING GEAR WOULD NOT RETRACT & THE ACFT WOULD NOT MAINTAIN ALT. AS IT DSCNDD INTO THE TOP OF AN OVERCAST AT AN ALT OF ABOUT 600', THE PLTS TRIED TO RESTART THE ENG, BUT TO NO AVAIL. SUBSEQUENTLY, THE ACFT DSCNDD BELOW THE CLOUDS AT AN ALT OF ABOUT 150' TO 170'. AS THE INSTRUCTOR (CFI) LANDED THE ACFT IN AN OPEN FIELD, THE NOSE GEAR ENCOUNTERED SOFT DIRT & THE ACFT NOSED OVER. AN EXAM REVEALED THAT AN ELECTRICAL POWER JUMPER WIRE BETWEEN 2 BUS BARS HAD BECOME CHAFED & SHORTED. THE LEFT & RGT ISOLATION CIRCUIT BREAKERS & THE BUSS TIE CIRCUIT BREAKER WERE FOUND IN THE TRIPPED (OPEN) POSITION. THIS RESULTED IN A FALSE FIRE WARNING LIGHT & PREVENTED THE LANDING GEAR FROM BEING RETRACTED.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: THE CHAFED AND SHORTED ELECTRICAL WIRING BETWEEN BUS BARS, WHICH CAUSED A PARTIAL ELECTRICAL FAILURE, RESULTED IN A FALSE FIRE WARNING INDICATION, AND PREVENTED THE RESTART OF THE RIGHT ENGINE.

## Findings

---

Occurrence #1: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION  
Phase of Operation: MISSED APPROACH (IFR)

### Findings

1. (C) ELECTRICAL SYSTEM,ELECTRIC WIRING - CHAFED
2. (C) ELECTRICAL SYSTEM,ELECTRIC WIRING - SHORTED
3. ELECTRICAL SYSTEM,CIRCUIT BREAKER - OPEN
4. (C) FIRE WARNING SYSTEM,POWERPLANT - FALSE INDICATION
5. PROPELLER FEATHERING - PERFORMED - PILOT IN COMMAND(CFI)
6. GEAR RETRACTION - NOT POSSIBLE

-----

Occurrence #2: FORCED LANDING  
Phase of Operation: DESCENT - EMERGENCY

-----

Occurrence #3: NOSE OVER  
Phase of Operation: LANDING - ROLL

### Findings

7. (F) TERRAIN CONDITION - SOFT

## Factual Information

### Pilot Information

<b>Certificate:</b>	Flight Instructor; Commercial	<b>Age:</b>	23, Male
<b>Airplane Rating(s):</b>	Multi-engine Land; Single-engine Land	<b>Seat Occupied:</b>	Right
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	Seatbelt, Shoulder harness
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	Yes
<b>Instructor Rating(s):</b>	Airplane Multi-engine; Airplane Single-engine; Instrument Airplane	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 2 Valid Medical--w/ waivers/lim.	<b>Last FAA Medical Exam:</b>	02/23/1990
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	1520 hours (Total, all aircraft), 100 hours (Total, this make and model), 1340 hours (Pilot In Command, all aircraft), 270 hours (Last 90 days, all aircraft), 100 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

### Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	CESSNA	<b>Registration:</b>	N4973V
<b>Model/Series:</b>	T303 T303	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	No
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	T30300285
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	6
<b>Date/Type of Last Inspection:</b>	05/17/1990, AAIP	<b>Certified Max Gross Wt.:</b>	5175 lbs
<b>Time Since Last Inspection:</b>	42 Hours	<b>Engines:</b>	2 Reciprocating
<b>Airframe Total Time:</b>	2542 Hours	<b>Engine Manufacturer:</b>	CONTINENTAL
<b>ELT:</b>	Installed, activated, aided in locating accident	<b>Engine Model/Series:</b>	LTSIO-520-AE
<b>Registered Owner:</b>	EMBRY-RIDDLE AERONAUTICAL UNIV	<b>Rated Power:</b>	250 hp
<b>Operator:</b>	EMBRY-RIDDLE AERONAUTICAL UNIV	<b>Operating Certificate(s) Held:</b>	None

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument Conditions	Condition of Light:	Day
Observation Facility, Elevation:	DAB, 10 ft msl	Distance from Accident Site:	15 Nautical Miles
Observation Time:	0831 EDT	Direction from Accident Site:	90°
Lowest Cloud Condition:	Unknown / 0 ft agl	Visibility	1 Miles
Lowest Ceiling:	Overcast / 150 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	6 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	150°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	26° C / 23° C
Precipitation and Obscuration:			
Departure Point:	DAYTONA BEACH, FL (DAB)	Type of Flight Plan Filed:	IFR
Destination:		Type of Clearance:	IFR
Departure Time:	0715 EDT	Type of Airspace:	Class G

## Airport Information

Airport:	DELAND MUNI (DED)	Runway Surface Type:	Asphalt
Airport Elevation:	80 ft	Runway Surface Condition:	Dry
Runway Used:	30	IFR Approach:	ADF/NDB
Runway Length/Width:	6003 ft / 100 ft	VFR Approach/Landing:	Forced Landing

## Wreckage and Impact Information

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

## Administrative Information

Investigator In Charge (IIC):	JEFFREY L KENNEDY	Report Date:	06/02/1992
Additional Participating Persons:	KEN CROCKETT; ORLANDO, FL DALE CARTER; MOBILE, AL RICK BASCO; WICHITA, KS LYLE E SUNDERLAND; DAYTONA, FL		
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 <a href="mailto:pubinq@ntsb.gov">pubinq@ntsb.gov</a> , or at 800-877-6799. Dockets released after this date are available at <a href="http://dms.nts.gov/pubdms/">http://dms.nts.gov/pubdms/</a> .		

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](#).