



# Aviation Investigation Final Report

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<b>Location:</b>	CROSS CITY, Florida	<b>Accident Number:</b>	MIA92LA126
<b>Date &amp; Time:</b>	May 24, 1992, 10:45 Local	<b>Registration:</b>	N4547J
<b>Aircraft:</b>	CESSNA T188C	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	1 Minor
<b>Flight Conducted Under:</b>	Part 91: General aviation - Ferry		

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## Analysis

FLIGHT EXPERIENCED ENGINE FAILURE SHORTLY AFTER SWITCHING TO THE CHEMICAL HOPPER WHICH HAD BEEN CONVERTED TO A FUEL TANK FOR THE FERRY FLIGHT. THE ENGINE COULD NOT BE RESTARTED AND A FORCED LANDING WAS MADE IN A WOODED AREA. POST CRASH OPERATION OF THE ENGINE REVEALED THE ENGINE WOULD NOT RUN ON THE ENGINE DRIVEN FUEL PUMP. AFTER THE PUMP WAS CHANGED THE ENGINE OPERATED NORMALLY. THE ENGINE DRIVEN PUMP WAS FOUND TO CONTAIN BLACK RUBBER PARTICLE CONTAMINATION UNDER THE BYPASS VALVE AND TO BE WORN WHICH PREVENTED PRESSURE BUILD UP. THE HOPPER TANK LINE ENTERED THE AIRFRAME FUEL SYSTEM AFTER THE ELECTRIC BOOST PUMP AND THE ONLY SOURCE OF HOPPER TANK FUEL PRESSURE WAS THE ENGINE DRIVEN PUMP.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: THE INADEQUATE INSPECTION FOR CONTAMINATION OF THE AIRCRAFT FUEL SYSTEM AFTER MODIFICATION RESULTING IN FAILURE OF THE ENGINE DRIVEN FUEL PUMP DUE TO CONTAMINATION. CONTRIBUTING TO THE ACCIDENT WAS THE IMPROPER MODIFICATION OF THE FUEL SYSTEM WHICH RESULTED IN THE HOPPER FUEL TANK NOT HAVING A SECOND SOURCE OF FUEL PUMPING.

## Findings

Occurrence #1: LOSS OF ENGINE POWER(TOTAL) - MECH FAILURE/MALF

Phase of Operation: CLIMB

### Findings

1. (C) FUEL SYSTEM,PUMP - CONTAMINATION
2. (C) MAINTENANCE,INSPECTION - INADEQUATE - COMPANY MAINTENANCE PERSONNEL
3. (C) FUEL SYSTEM,PUMP - NO PRESSURE

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Occurrence #2: FORCED LANDING

Phase of Operation: DESCENT - EMERGENCY

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Occurrence #3: IN FLIGHT COLLISION WITH OBJECT

Phase of Operation: DESCENT - EMERGENCY

### Findings

4. OBJECT - TREE(S)

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Occurrence #4: IN FLIGHT COLLISION WITH TERRAIN/WATER

Phase of Operation: DESCENT - EMERGENCY

## Factual Information

### Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	56, Male
<b>Airplane Rating(s):</b>	Single-engine land	<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>	None Unknown	<b>Last FAA Medical Exam:</b>	
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	11500 hours (Total, all aircraft), 4000 hours (Total, this make and model), 11500 hours (Pilot In Command, all aircraft), 125 hours (Last 90 days, all aircraft), 3 hours (Last 30 days, all aircraft)		

### Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	CESSNA	<b>Registration:</b>	N4547J
<b>Model/Series:</b>	T188C T188C	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Restricted (Special)	<b>Serial Number:</b>	T18803749T
<b>Landing Gear Type:</b>	Tailwheel	<b>Seats:</b>	1
<b>Date/Type of Last Inspection:</b>	May 7, 1992 Annual	<b>Certified Max Gross Wt.:</b>	4400 lbs
<b>Time Since Last Inspection:</b>	3 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	5224 Hrs	<b>Engine Manufacturer:</b>	CONTINENTAL
<b>ELT:</b>	Not installed	<b>Engine Model/Series:</b>	TSIO-520-T
<b>Registered Owner:</b>	V AND R ENTERPRISES INC.	<b>Rated Power:</b>	310 Horsepower
<b>Operator:</b>	CALDERON MOYANO, SERGIO	<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>	GNV ,152 ft msl	<b>Distance from Accident Site:</b>	50 Nautical Miles
<b>Observation Time:</b>	10:52 Local	<b>Direction from Accident Site:</b>	90°
<b>Lowest Cloud Condition:</b>	Clear	<b>Visibility</b>	7 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	5 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	320°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	29 inches Hg	<b>Temperature/Dew Point:</b>	28°C / 13°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	(CTY)	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	MARIANNA , FL (MAI)	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	10:30 Local	<b>Type of Airspace:</b>	Class G

## 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>	Forced landing

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 Minor	<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 Minor	<b>Latitude, Longitude:</b>	29.63051,-83.119689(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Kennedy, Jeffrey
<b>Additional Participating Persons:</b>	SCOTT STRICKLAND; ORLANDO , FL
<b>Original Publish Date:</b>	March 24, 1993
<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=33093">https://data.nts.gov/Docket?ProjectID=33093</a>

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