



# National Transportation Safety Board Aviation Accident Final Report

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<b>Location:</b>	GROVES, TX	<b>Accident Number:</b>	FTW92LA031
<b>Date &amp; Time:</b>	12/01/1991, 1556 CST	<b>Registration:</b>	N9503T
<b>Aircraft:</b>	CESSNA 210	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	1 None

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

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## Analysis

ACCORDING TO THE PILOT, HE ENCOUNTERED THE FORECAST HEAD WINDS EN ROUTE AND HE INTENTIONALLY RAN THE LEFT TANK DRY AND WAS FLYING ON THE RIGHT TANK DURING THE DESCENT WHEN IT ALSO RAN DRY. HE STATED THAT AT THE TIME OF THE TANK CHANGE HE THOUGHT ABOUT REQUESTING AN ALTERNATE, BUT DID NOT. AFTER THE ENGINE FAILURE THE PILOT WAS GIVEN RADAR VECTORS TO THE FINAL LOCALIZER APPROACH COURSE OF A NEARBY AIRPORT; HOWEVER, HE HAD INSUFFICIENT ALTITUDE TO REACH THE RUNWAY. HE BROKE OUT AT 700 FEET AND WAS ABLE TO LAND ON A PLAYING FIELD ADJACENT TO A CHURCH IN AN URBAN AREA. AFTER ROLLING ABOUT 234 FEET, THE AIRPLANE STRUCK A BASEBALL BACK STOP AND CAME TO REST IN THE CHURCH PARKING LOT. THE PILOT'S FUEL CALCULATIONS INDICATED THAT HE HAD 6.5 HOURS TO FUEL EXHAUSTION, WHILE ACTUAL FUEL EXHAUSTION OCCURRED AFTER 5.5 HOURS. THE LEFT TANK RAN DRY AT 2.6 HOURS AND THE RIGHT RAN DRY AT 2.9 HOURS.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: FUEL EXHAUSTION WHICH PRECIPITATED THE FORCED LANDING DUE TO THE PILOT'S INADEQUATE FUEL CONSUMPTION CALCULATIONS. A FACTOR IN THE ACCIDENT WAS THE PILOT'S FAILURE TO DIVERT TO AN ALTERNATE DESTINATION WHEN HE RECOGNIZED THAT FUEL EXHAUSTION WAS A POSSIBILITY.

## Findings

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Occurrence #1: LOSS OF ENGINE POWER(TOTAL) - NONMECHANICAL  
Phase of Operation: DESCENT - NORMAL

### Findings

1. (C) FLUID,FUEL - EXHAUSTION
2. (C) FUEL CONSUMPTION CALCULATIONS - INADEQUATE - PILOT IN COMMAND
3. (F) NOT PERFORMED - PILOT IN COMMAND

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

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Occurrence #3: ON GROUND/WATER COLLISION WITH OBJECT  
Phase of Operation: LANDING - ROLL

### Findings

4. OBJECT - FENCE
5. OBJECT - FENCE POST

## Factual Information

### Pilot Information

<b>Certificate:</b>	Flight Instructor; Commercial	<b>Age:</b>	50, Male
<b>Airplane Rating(s):</b>	Multi-engine Land; Single-engine Land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	Seatbelt
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	Airplane Single-engine	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 2 Valid Medical--w/ waivers/lim.	<b>Last FAA Medical Exam:</b>	09/05/1991
<b>Occupational Pilot:</b>	<b>Last Flight Review or Equivalent:</b>		
<b>Flight Time:</b>	6000 hours (Total, all aircraft), 26 hours (Total, this make and model), 3500 hours (Pilot In Command, all aircraft), 26 hours (Last 90 days, all aircraft), 26 hours (Last 30 days, all aircraft), 8 hours (Last 24 hours, all aircraft)		

### Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	CESSNA	<b>Registration:</b>	N9503T
<b>Model/Series:</b>	210 210	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	No
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	210-57303
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	4
<b>Date/Type of Last Inspection:</b>	06/28/1991, Annual	<b>Certified Max Gross Wt.:</b>	2900 lbs
<b>Time Since Last Inspection:</b>	19 Hours	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	2810 Hours	<b>Engine Manufacturer:</b>	CONTINENTAL
<b>ELT:</b>	Installed, not activated	<b>Engine Model/Series:</b>	IO-470-E
<b>Registered Owner:</b>	HAWKINS, THOMAS R.	<b>Rated Power:</b>	260 hp
<b>Operator:</b>	HAWKINS, THOMAS R.	<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:	BPT, 16 ft msl	Distance from Accident Site:	3 Nautical Miles
Observation Time:	1559 CST	Direction from Accident Site:	300°
Lowest Cloud Condition:	Clear / 0 ft agl	Visibility	2 Miles
Lowest Ceiling:	Broken / 700 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	4 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	260°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	22° C / 20° C
Precipitation and Obscuration:			
Departure Point:	CARTERSVILLE, GA (6A0)	Type of Flight Plan Filed:	IFR
Destination:	HOUSTON, TX (AXH)	Type of Clearance:	IFR
Departure Time:	1123 EST	Type of Airspace:	Class D

## Wreckage and Impact Information

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

## Administrative Information

Investigator In Charge (IIC):	Warren V Wandel	Report Date:	07/23/1993
Additional Participating Persons:	MICHAEL KNUCHEY; HOUSTON, TX		
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:pubinquiry@ntsb.gov">pubinquiry@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> .		

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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](#).