



# National Transportation Safety Board Aviation Accident Final Report

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<b>Location:</b>	MEADVIEW, AZ	<b>Accident Number:</b>	DCA92MA040
<b>Date &amp; Time:</b>	06/19/1992, 1405 MST	<b>Registration:</b>	N2715X
<b>Aircraft:</b>	CESSNA 402C	<b>Aircraft Damage:</b>	Destroyed
<b>Defining Event:</b>		<b>Injuries:</b>	10 Fatal
<b>Flight Conducted Under:</b>	Part 135: Air Taxi & Commuter - Non-scheduled		

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## Analysis

PLT BEGAN TAKEOFF ON A 5200-FT DIRT RWY (UPSLOPE TO THE SOUTH, ELEV 4775 FT) WITH WIND FROM THE SOUTH AT 18-20 KTS, DENSITY ALT ABOUT 7250 FT. WITNESSES OBSERVED THE ACFT TAKING OFF, WITH THE LANDING GEAR RETRACTING AS IT PASSED THEIR PSN. SOON THEREAFTER, THE PLT TRANSMITTED HE HAD 'A PROBLEM.' ACFT WAS THEN SEEN ABOUT 200-300 FT AGL IN RIGHT TURN, WHICH PROGRESSED INTO A DIVE. ACFT IMPACTED IN FLAT ATTITUDE 1/2 MI SOUTH OF RWY 17. PSGR VIDEO TAPES REVEALED PROPS WENT OUT OF SYNC ABOUT 6 SEC AFTER TAKEOFF. ABOUT 15 SEC LATER, RIGHT PROP SLOWED UNTIL BLADES COULD BE SEEN TURNING. VIDEO SHOWED ONE ENG FUEL FLOW AT ABOUT 90 GPH, OTR ENG AT MIN SETTING (ABT 3 PSI), 5 DEG INCREASE IN PITCH ATTITUDE. EXAM REVEALED RGT ENG DRIVEN FUEL PUMP DRIVE COUPLING WAS SCORED AND ONLY PARTIALLY ENGAGED. SB ME88 3 COMPLIED WITH; AUX FUEL PUMP SWS FOUND IN LOW PSN. RGT PROP BLADES FND AT FINE PITCH, LACKING ROTATIONAL DMG. LNDG GEAR FND UP, BUT UNLOCKED; FLAPS EXTDD 15 DEG. EMERG PROC TRNG DID NOT REPLICATE HI DENSITY ALT AND MAX GROSS WEIGHT PERFORMANCE.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: FAILURE OF THE PILOT TO FOLLOW THE EMERGENCY PROCEDURE (ENGINE FAILURE AFTER TAKEOFF) AND HIS FAILURE TO MAINTAIN MINIMUM CONTROL SPEED (VMC), WHICH RESULTED IN A LOSS OF AIRCRAFT CONTROL. FACTORS RELATED TO THE ACCIDENT WERE FAILURE (DISENGAGEMENT) OF THE RIGHT ENGINE FUEL PUMP DRIVE COUPLING, HIGH DENSITY ALTITUDE, AND THE LACK OF COMPANY TRAINING CONCERNING AIRCRAFT PERFORMANCE IN CONDITIONS OF HIGH DENSITY ALTITUDE AND HEAVY GROSS WEIGHT.

## Findings

Occurrence #1: LOSS OF ENGINE POWER  
Phase of Operation: TAKEOFF - INITIAL CLIMB

### Findings

1. (F) FUEL SYSTEM,PUMP - FAILURE,TOTAL  
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Occurrence #2: LOSS OF CONTROL - IN FLIGHT  
Phase of Operation: TAKEOFF - INITIAL CLIMB

### Findings

2. (F) WEATHER CONDITION - HIGH DENSITY ALTITUDE
  3. (C) EMERGENCY PROCEDURE - NOT FOLLOWED - PILOT IN COMMAND
  4. (F) INADEQUATE TRAINING(EMERGENCY PROCEDURE(S)) - COMPANY/OPERATOR MANAGEMENT
  5. (C) PROPELLER FEATHERING - NOT ATTAINED - PILOT IN COMMAND
  6. (C) AIRSPEED(VMC) - NOT MAINTAINED - PILOT IN COMMAND
  7. (C) AIRCRAFT CONTROL - NOT MAINTAINED - PILOT IN COMMAND
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Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER  
Phase of Operation: DESCENT - UNCONTROLLED

## Factual Information

### Pilot Information

<b>Certificate:</b>	Flight Instructor; Commercial	<b>Age:</b>	61, Male
<b>Airplane Rating(s):</b>	Multi-engine Land; Single-engine Land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>		<b>Restraint Used:</b>	Seatbelt, Shoulder harness
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	
<b>Instructor Rating(s):</b>	Airplane Single-engine	<b>Toxicology Performed:</b>	Yes
<b>Medical Certification:</b>	Class 1 Valid Medical--w/ waivers/lim.	<b>Last FAA Medical Exam:</b>	01/28/1992
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	7891 hours (Total, all aircraft), 2030 hours (Total, this make and model), 7684 hours (Pilot In Command, all aircraft), 171 hours (Last 90 days, all aircraft), 31 hours (Last 30 days, all aircraft), 6 hours (Last 24 hours, all aircraft)		

### Aircraft and Owner/Operator Information

<b>Aircraft Manufacturer:</b>	CESSNA	<b>Registration:</b>	N2715X
<b>Model/Series:</b>	402C 402C	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	No
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	402C0215
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	10
<b>Date/Type of Last Inspection:</b>	05/29/1992, AAIP	<b>Certified Max Gross Wt.:</b>	6850 lbs
<b>Time Since Last Inspection:</b>	50 Hours	<b>Engines:</b>	2 Reciprocating
<b>Airframe Total Time:</b>	9266 Hours	<b>Engine Manufacturer:</b>	CONTINENTAL
<b>ELT:</b>	Installed, not activated	<b>Engine Model/Series:</b>	TSIO-520-VB
<b>Registered Owner:</b>	ADVENTURE AIRLINES	<b>Rated Power:</b>	325 hp
<b>Operator:</b>	ADVENTURE AIRLINES	<b>Operating Certificate(s) Held:</b>	Commuter Air Carrier (135)
<b>Operator Does Business As:</b>		<b>Operator Designator Code:</b>	GSUA

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	, 0 ft msl	Observation Time:	0000
Distance from Accident Site:	0 Nautical Miles	Direction from Accident Site:	0°
Lowest Cloud Condition:	Clear / 0 ft agl	Temperature/Dew Point:	36° C / -2° C
Lowest Ceiling:	None / 0 ft agl	Visibility	35 Miles
Wind Speed/Gusts, Direction:	18 knots, 170°	Visibility (RVR):	0 ft
Altimeter Setting:	29 inches Hg	Visibility (RVV):	0 Miles
Precipitation and Obscuration:			
Departure Point:	(AZ38)	Type of Flight Plan Filed:	Company VFR
Destination:	LAS VEGAS, NV (LAS)	Type of Clearance:	None
Departure Time:	0000	Type of Airspace:	Class G

## Airport Information

Airport:	GRAND CANYON WEST (AZ38)	Runway Surface Type:	Dirt
Airport Elevation:	4775 ft	Runway Surface Condition:	Dry; Rough
Runway Used:	17	IFR Approach:	None
Runway Length/Width:	5200 ft / 100 ft	VFR Approach/Landing:	None

## Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Destroyed
Passenger Injuries:	9 Fatal	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	10 Fatal	Latitude, Longitude:	

## Administrative Information

Investigator In Charge (IIC):	ROBERT M MACINTOSH	Adopted Date:	11/03/1993
Additional Participating Persons:	TOM WILCOX RON PRICE ED FRAZER LARRY SMITH		
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> .		

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