



# National Transportation Safety Board Aviation Accident Final Report

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<b>Location:</b>	BECKLEY, WV	<b>Accident Number:</b>	DCA91MA019
<b>Date &amp; Time:</b>	01/30/1991, 2355 EST	<b>Registration:</b>	N167PC
<b>Aircraft:</b>	BRITISH AEROSPACE 3101	<b>Aircraft Damage:</b>	Destroyed
<b>Defining Event:</b>		<b>Injuries:</b>	13 Serious, 3 Minor, 3 None

**Flight Conducted Under:** Part 135: Air Taxi & Commuter - Scheduled

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## Analysis

ACFT WAS DISPATCHED WITH INOP AIRFRAME DEICE SYS, THO AN OPNL DEICE SYS WAS RQRD FOR FLT IN KNOWN ICG CONDS. DRG DSCNT TO LND, ACFT ENCTR D LGT ICG CONDS. CAPT BELIEVED ACFT COULD 'HANDLE IT' & CONTD DSCNT. AS HE BGN ILS FINAL APCH, HE NOTED SGFNT INCR OF ICE ACCUMULATION & USED HIGHER THAN NML APCH SPD. AS FULL (50 DEG) FLAPS WERE SET, ACFT BGN BUFFET & PITCHED NOSE DWN. CAPT CORRECTED WITH FULL BACK PRES ON CTL COLUMN, BUT ACFT LNDD HARD, GEAR COLLAPSED & ACFT SLID ABT 3600' TO A STOP. NO PREIMPACT MECH ANOMALY WAS FND, EXCEPT FOR INOP DEICE SYS. INV REVEALED PLTS HAD RCVD PRINTOUT OF WX FM CO COMPUTER SYS WITH SFC OBS & TRML FCST, BUT NO AREA FCST (FA). PLTS & GND PSNL WERE NOT AWARE THAT FA WAS AVAIL AT CO WX TRML. FA FCSTD LGT & OCNL MOD RIME & MXD ICG IN CLDS & PRECIP ABV FRZG LVL. WX DTRTD, BUT PLTS DID NOT REQ INFLT WX INFO OR PIREPS. FLT MNL NOTED TAILPLANE ICE MAY CAUSE NOSE DWN TRIM CHG WITH FLAP EXTN. THERE WAS EVIDENCE OF TAIL PLANE STALL, LACK OF CO TRNG IN COLD WX OPNS, DEFICIENCIES IN USE OF DEICING SYS, & LACK OF FAA SURVEILLANCE.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: FLIGHT INTO KNOWN ADVERSE WEATHER CONDITIONS BY THE PILOT, WHICH RESULTED IN ICE ACCUMULATION ON THE AIRCRAFT AND SUBSEQUENT LOSS OF AIRCRAFT CONTROL (TAIL PLANE STALL) AS THE FLAPS WERE FULLY EXTENDED. FACTORS RELATED TO THE ACCIDENT WERE: THE PILOT'S INADEQUATE USE OF THE PREFLIGHT BRIEFING SERVICE, INADEQUATE TRAINING PROVIDED TO THE PILOTS BY COMPANY/MANAGEMENT PERSONNEL, INADEQUATE SURVEILLANCE BY THE FAA, AND ICING CONDITIONS.

## Findings

Occurrence #1: IN FLIGHT ENCOUNTER WITH WEATHER

Phase of Operation: DESCENT - NORMAL

### Findings

1. (F) PREFLIGHT BRIEFING SERVICE - IMPROPER USE OF - PILOT IN COMMAND
2. (F) INADEQUATE TRAINING - COMPANY/OPERATOR MANAGEMENT
3. (F) INADEQUATE SURVEILLANCE OF OPERATION - FAA(ORGANIZATION)
4. ANTI-ICE/DEICE SYSTEM - INOPERATIVE
5. OPERATION WITH KNOWN DEFICIENCIES IN EQUIPMENT - PERFORMED
6. (F) WEATHER CONDITION - ICING CONDITIONS
7. (C) FLIGHT INTO KNOWN ADVERSE WEATHER - CONTINUED - PILOT IN COMMAND
8. (C) STABILIZER - ICE
9. (F) WING - ICE

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Occurrence #2: LOSS OF CONTROL - IN FLIGHT

Phase of Operation: APPROACH - FAF/OUTER MARKER TO THRESHOLD (IFR)

### Findings

10. LOWERING OF FLAPS - PERFORMED
11. AIRCRAFT CONTROL - NOT POSSIBLE
12. REMEDIAL ACTION - ATTEMPTED - PILOT IN COMMAND

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Occurrence #3: HARD LANDING

Phase of Operation: LANDING

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Occurrence #4: COMPLETE GEAR COLLAPSED

Phase of Operation: LANDING

## Factual Information

### Pilot Information

<b>Certificate:</b>	Airline Transport; Flight Instructor; Commercial	<b>Age:</b>	28, 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>	Yes
<b>Instructor Rating(s):</b>		<b>Toxicology Performed:</b>	
<b>Medical Certification:</b>	Class 1 Valid Medical--w/ waivers/lim.	<b>Last Medical Exam:</b>	08/15/1990
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	5000 hours (Total, all aircraft), 3400 hours (Total, this make and model), 3500 hours (Pilot In Command, all aircraft), 231 hours (Last 90 days, all aircraft), 76 hours (Last 30 days, all aircraft), 6 hours (Last 24 hours, all aircraft)		

### Aircraft and Owner/Operator Information

<b>Aircraft Manufacturer:</b>	BRITISH AEROSPACE	<b>Registration:</b>	N167PC
<b>Model/Series:</b>	3101 3101	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	No
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	710
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	21
<b>Date/Type of Last Inspection:</b>	01/30/1991, Continuous Airworthiness	<b>Certified Max Gross Wt.:</b>	15200 lbs
<b>Time Since Last Inspection:</b>	8 Hours	<b>Engines:</b>	2 Turbo Prop
<b>Airframe Total Time:</b>	8841 Hours	<b>Engine Manufacturer:</b>	GARRETT
<b>ELT:</b>	Installed, activated, did not aid in locating accident	<b>Engine Model/Series:</b>	TPE-331
<b>Registered Owner:</b>	MERIDIAN TRUST COMPANY TRUSTEE	<b>Rated Power:</b>	940 hp
<b>Operator:</b>	CCAIR INC.	<b>Air Carrier Operating Certificate:</b>	Commuter Air Carrier (135)
<b>Operator Does Business As:</b>	USAIR EXPRESS	<b>Operator Designator Code:</b>	

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument Conditions	Condition of Light:	Night/Dark
Observation Facility, Elevation:	BKW, 2504 ft msl	Observation Time:	2350 EST
Distance from Accident Site:	1 Nautical Miles	Direction from Accident Site:	350°
Lowest Cloud Condition:	Partial Obscuration / 0 ft agl	Temperature/Dew Point:	2° C / 3° C
Lowest Ceiling:	Overcast / 200 ft agl	Visibility	1 Miles
Wind Speed/Gusts, Direction:	13 knots, 330°	Visibility (RVR):	0 ft
Altimeter Setting:	29.9 inches Hg	Visibility (RVV):	0 Miles
Precipitation and Obscuration:			
Departure Point:	CHARLOTTE, NC (CLT)	Type of Flight Plan Filed:	IFR
Destination:	(BKW)	Type of Clearance:	IFR
Departure Time:	0000	Type of Airspace:	Class E

## Airport Information

Airport:	RALEIGH COUNTY MEMORIAL (BKW)	Runway Surface Type:	Asphalt
Airport Elevation:	2504 ft	Runway Surface Condition:	Wet
Runway Used:	19	IFR Approach:	ILS
Runway Length/Width:	6750 ft / 150 ft	VFR Approach/Landing:	

## Wreckage and Impact Information

Crew Injuries:	1 Serious, 1 None	Aircraft Damage:	Destroyed
Passenger Injuries:	12 Serious, 3 Minor, 2 None	Aircraft Fire:	On-Ground
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	13 Serious, 3 Minor, 3 None	Latitude, Longitude:	

## Administrative Information

Investigator In Charge (IIC):	AL DICKINSON	Adopted Date:	07/10/1992
Additional Participating Persons:			
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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