



Aviation Investigation Final Report

Location:	ATLANTIC CITY, New Jersey	Accident Number:	NYC91LA248
Date & Time:	September 28, 1991, 21:17 Local	Registration:	N159MC
Aircraft:	FAIRCHILD SW3	Aircraft Damage:	Substantial
Defining Event:		Injuries:	3 None
Flight Conducted Under:	Part 91: General aviation - Instructional		

Analysis

THE AIRPLANE TOUCHED DOWN ON RUNWAY 31. UPON TOUCHDOWN, THE RIGHT MAIN LANDING GEAR COLLAPSED AND THE AIRPLANE VEERED OFF THE RIGHT SIDE OF THE RUNWAY. THE AIRPLANE HAD RECENTLY UNDERGONE A MODIFICATION TO INCREASE ITS GROSS OPERATING WEIGHT FROM 14,500 TO 16,000 POUNDS. IT WAS FOUND THAT BOTH ACTUATOR POSITIONING CAMS HAD BEEN GROUND DOWN AT THE DOWN LOCK LOBES. REMOVAL OF MATERIAL FROM THE CAMS IS NOT AUTHORIZED ON THIS AIRPLANE. BOTH RIGHT MAIN LANDING GEAR DOWN LOCK ROLLER BEARING OUTER RACES HAD FAILED. THE FAA FOUND ONE BEARING IN PIECES ON THE RUNWAY, AND THE OTHER WAS NOT RECOVERED.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: A FAILURE OF THE DOWN LOCK ROLLER BEARINGS OF THE RIGHT MAIN LANDING GEAR, AS THE RESULT OF AN IMPROPER MODIFICATION.

Findings

Occurrence #1: MAIN GEAR COLLAPSED
Phase of Operation: LANDING - FLARE/TOUCHDOWN

Findings

1. (C) LANDING GEAR, GEAR LOCKING MECHANISM - FAILURE, TOTAL

2. (C) MAINTENANCE,MODIFICATION - IMPROPER - OTHER MAINTENANCE PERSONNEL

Occurrence #2: LOSS OF CONTROL - ON GROUND/WATER
Phase of Operation: LANDING - ROLL

Findings

- 3. (F) DIRECTIONAL CONTROL - NOT POSSIBLE - PILOT IN COMMAND
- 4. (F) DIRECTIONAL CONTROL - NOT POSSIBLE - COPILOT/SECOND PILOT

Factual Information

Pilot Information

Certificate:	Airline transport	Age:	44, Male
Airplane Rating(s):	Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 1 Valid Medical-w/ waivers/lim	Last FAA Medical Exam:	April 19, 1991
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:	4900 hours (Total, all aircraft), 105 hours (Total, this make and model), 402 hours (Pilot In Command, all aircraft), 162.5 hours (Last 90 days, all aircraft), 68 hours (Last 30 days, all aircraft), 3.7 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	FAIRCHILD	Registration:	N159MC
Model/Series:	SW3 SW3	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Transport	Serial Number:	728
Landing Gear Type:	Retractable - Tricycle	Seats:	21
Date/Type of Last Inspection:	September 26, 1991 AAIP	Certified Max Gross Wt.:	16100 lbs
Time Since Last Inspection:	12 Hrs	Engines:	2 Turbo prop
Airframe Total Time:	4205 Hrs	Engine Manufacturer:	GARRETT
ELT:	Installed, not activated	Engine Model/Series:	TPE33111U612G
Registered Owner:	CCD AIR TWENTY TWO, INC.	Rated Power:	1000 Horsepower
Operator:	JET EXPRESS, INC.	Operating Certificate(s) Held:	Commuter air carrier (135)
Operator Does Business As:		Operator Designator Code:	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Night/bright
Observation Facility, Elevation:		Distance from Accident Site:	
Observation Time:		Direction from Accident Site:	
Lowest Cloud Condition:	Clear / 5 ft AGL	Visibility	20 miles
Lowest Ceiling:	Unknown	Visibility (RVR):	
Wind Speed/Gusts:	/	Turbulence Type Forecast/Actual:	/
Wind Direction:	0°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	24°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:		Type of Flight Plan Filed:	Company VFR
Destination:		Type of Clearance:	
Departure Time:	20:15 Local	Type of Airspace:	Class D

Airport Information

Airport:	ATLANTIC CITY ITNL. ACY	Runway Surface Type:	Concrete
Airport Elevation:	76 ft msl	Runway Surface Condition:	Dry
Runway Used:	31	IFR Approach:	ILS;VOR/DME
Runway Length/Width:	10000 ft / 180 ft	VFR Approach/Landing:	Full stop

Wreckage and Impact Information

Crew Injuries:	2 None	Aircraft Damage:	Substantial
Passenger Injuries:	1 None	Aircraft Fire:	On-ground
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	3 None	Latitude, Longitude:	

Administrative Information

Investigator In Charge (IIC):	Yurman, Alan
Additional Participating Persons:	KIRK JAGER; PHILADELPHIA , PA JACK D MORGAN; SAN ANTONIO , TX
Original Publish Date:	April 27, 1993
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=37021

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).