



# Aviation Investigation Factual Report

---

<b>Location:</b>	BUTLER, Pennsylvania	<b>Accident Number:</b>	NYC96LA026
<b>Date &amp; Time:</b>	November 7, 1995, 16:30 Local	<b>Registration:</b>	N636SP
<b>Aircraft:</b>	FAIRCHILD IIIA	MERLIN	<b>Aircraft Damage:</b> Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	2 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Executive/Corporate		

---

## Factual Information

On November 7, 1995, at 1630 eastern standard time, a Fairchild, Merlin IIIA, N636SP, was substantially damaged during landing at the Butler County Airport, Butler, Pennsylvania. The commercial pilot and co-pilot were not injured. Instrument meteorological conditions prevailed for the corporate positioning flight that originated at Du Bois, Pennsylvania, at 1540. An IFR flight plan had been filed for the flight conducted under 14 CFR Part 91.

During an interview on November 13, 1995, the pilot stated that he had flown two ILS approaches to BTP during the accident flight, and the second resulted in the hard landing.

According to a pilot's statement dated December 4, 1995, the flight departed the Du Bois-Jefferson County Airport, for Butler County (BTP). Upon arrival at BTP, the co-pilot flew the first of three ILS approaches from the right seat. At 350 feet above ground level (AGL), the airplane was right of the ILS course, and the pilot took over the controls and executed a missed approach. The pilot flew the second approach; however, the autopilot would not remain coupled, and the pilot performed a second missed approach at 250 feet AGL. The pilot then attempted a third ILS approach.

The pilot further stated:

...I kept the airplane at about 120 knots, which meant I had to reduce power considerably, because of the quartering tailwind to maintain the glide slope. Then at the last minute I drifted off and broke out at 300 feet...and I was about 100 to 150 feet right of centerline of the runway...The winds were 300 to 310 [degrees] at 7 [knots]...I applied power to brake the glide, cause [the airplane] was descending pretty rapidly...when I applied power, the aircraft rolled left...the only way to recover at that particular time was to pull the power back...and it came down still slightly left wing low and made contact with the runway, then nose, then right main gear...I didn't think any damage had been done since I have ridden through harder landings...

In the co-pilot's statement, she said that she was not employed by the operator, and had requested to fly with them to "build" flight time. This was her first flight in a Merlin, and she was briefed by the pilot on her non-flying duties. The co-pilot stated she did not fly any of the approaches. After departure from Du Bois, the pilot flew two unsuccessful ILS approaches to BTP. During the first approach she called "runway in sight," and the pilot performed a missed approach. During the second ILS approach they did not see the runway at decision height, and initiated another missed approach.

She further stated:

...The third ILS approach, at decision height, I said, "Runway in Sight, to your left." [The pilot] landed the airplane on this approach. It was a hard landing...

The co-pilot also stated that there were no problems with the engines.

According to the Pittsburgh Air Traffic Control voice communications transcript, N636SP was cleared for four ILS approaches. During the first vector to the ILS approach course, the controller issued N636SP a heading and altitude to maintain until established on the final approach course. The airplane flew through the approach course, and the controller issued headings for a new vector for a second ILS approach.

At the completion of the second approach, the pilot contacted the controller and advised that he wanted another approach by stating, "No Sir, we missed the approach, we'd like to go back and do it again, it was our fault...we just got off too far to one side" The airplane was then vectored for a third approach. This also resulted in a missed approach, where the pilot stated, "approach, we have, we didn't find the runway, so we are doing a missed approach, the published one." When the controller asked if the pilot had been right of course, the pilot responded, "yea, but we never did ah break out this time, we did the last time we were to far right."

The controller then vectored N636SP for the fourth ILS approach. When cleared for the approach, the pilot stated, "Ok, we'll do a missed if we have to..." Four minutes later the pilot reported that they were on the ground.

The accident was not reported until an anonymous phone call was placed to the Federal Aviation Administration (FAA) Flight Standards District Office (FSDO), on November 17, 1995.

On November 17 and 20, 1995, FAA Inspectors examined the airplane. The examination revealed that the left engine nacelle was partially separated from the wing and canted downward. Buckling was observed on the left center wing section and the right engine nacelle. The three propeller blades tips of the left engine were similarly curled.

According to the pilot's statements, the airplane was at 120 knots indicated airspeed (KIAS), 1/2 flaps, at 10,000 pounds gross weight, when the runway was observed during the fourth approach. The "Merlin III/IIIA Speeds (KIAS)" chart in the airplane, listed a 1/2 flaps speed at 50 feet of 106 KIAS. It also listed a power off stall speed (V<sub>so</sub>) of 76 knots, with full flaps.

On a 080 degree final approach course, with the pilot reported winds from 300 degrees at 7 knots, the airplane's estimated ground speed was 125 knots.

The ILS glide slope angle was published at 3.00 degrees. Using a rate of climb/descent table, the airplane's estimated rate of descent to remain on the glide slope was 625 feet per minute.

In a statement from another of the operator's pilots, he said that on November 7, 1995, about 1830, the operator's mechanic informed him that the Merlin had been involved in an accident. The mechanic also reported that when the accident pilot called the mechanic, he stated that he "didn't know what happened, that the airplane just seemed to suddenly quit flying, and fell out of the sky."

He further stated:

...Our director of Maintenance has told me that [the accident pilot] wants our Merlin's...flight idle fuel flows set-up with the maximum (approximately 2,500 fpm) descent rate that the book allows. This basically means that with the power levers at the stop, there is very little thrust being developed and an extremely large amount of drag is suddenly available...

### Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	64, Male
<b>Airplane Rating(s):</b>	Single-engine land; Multi-engine land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	Yes
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 2 Valid Medical-w/ waivers/lim	<b>Last FAA Medical Exam:</b>	June 26, 1995
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	17055 hours (Total, all aircraft), 3500 hours (Total, this make and model), 11003 hours (Pilot In Command, all aircraft), 110 hours (Last 90 days, all aircraft), 23 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	FAIRCHILD	<b>Registration:</b>	N636SP
<b>Model/Series:</b>	MERLIN IIIA MERLIN III	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	T-285
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	11
<b>Date/Type of Last Inspection:</b>	October 13, 1995 100 hour	<b>Certified Max Gross Wt.:</b>	12500 lbs
<b>Time Since Last Inspection:</b>	555 Hrs	<b>Engines:</b>	2 Turbo prop
<b>Airframe Total Time:</b>	4627 Hrs	<b>Engine Manufacturer:</b>	Garrett
<b>ELT:</b>	Installed, not activated	<b>Engine Model/Series:</b>	TPE-331
<b>Registered Owner:</b>	PERDUE CORPORATION	<b>Rated Power:</b>	840 Horsepower
<b>Operator:</b>		<b>Operating Certificate(s) Held:</b>	None
<b>Operator Does Business As:</b>	SHOWELL FARMS INC.	<b>Operator Designator Code:</b>	

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Instrument (IMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>		<b>Distance from Accident Site:</b>	
<b>Observation Time:</b>		<b>Direction from Accident Site:</b>	
<b>Lowest Cloud Condition:</b>	Unknown	<b>Visibility</b>	1.75 miles
<b>Lowest Ceiling:</b>	Overcast / 400 ft AGL	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	7 knots / None	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	300°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	29 inches Hg	<b>Temperature/Dew Point:</b>	
<b>Precipitation and Obscuration:</b>	N/A - None - Fog		
<b>Departure Point:</b>	DU BOIS (DUJ)	<b>Type of Flight Plan Filed:</b>	IFR
<b>Destination:</b>	(BTP)	<b>Type of Clearance:</b>	IFR
<b>Departure Time:</b>	15:40 Local	<b>Type of Airspace:</b>	Class E

## Airport Information

<b>Airport:</b>	BUTLER COUNTY BTP	<b>Runway Surface Type:</b>	Asphalt
<b>Airport Elevation:</b>	1248 ft msl	<b>Runway Surface Condition:</b>	Wet
<b>Runway Used:</b>	8	<b>IFR Approach:</b>	ILS
<b>Runway Length/Width:</b>	4005 ft / 100 ft	<b>VFR Approach/Landing:</b>	Full stop

## Wreckage and Impact Information

<b>Crew Injuries:</b>	2 None	<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>	2 None	<b>Latitude, Longitude:</b>	41.159629,-79.650909(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Pearce, Robert
<b>Additional Participating Persons:</b>	VICTOR C GREEN; ALLEGHENY , PA PATRICK T SCHIPPERT; ALLEGHENY , PA
<b>Report Date:</b>	May 1, 1996
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	
<b>Investigation Docket:</b>	<a href="https://data.ntsb.gov/Docket?ProjectID=39123">https://data.ntsb.gov/Docket?ProjectID=39123</a>

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](#).