



Aviation Investigation Final Report

Location:	CHICAGO, Illinois	Incident Number:	CHI87IA188
Date & Time:	August 8, 1987, 14:25 Local	Registration:	CGYNE
Aircraft:	BOEING 727-233	Aircraft Damage:	None
Defining Event:		Injuries:	133 None
Flight Conducted Under:	Part 129: Foreign		

Analysis

AIR CANADA FLT 839 (BOEING 727, C-GYNE) WAS DEPG CHICAGO O'HARE INTL ARPT AS CESSNA 650 (CITATION), N20AT, WAS DEPG PALWAUKEE (PWK) ARPT, ABOUT 8 MI NORTH OF O'HARE. BOTH FLTS TKOF WITH IFR FLT PLANS. BFR THE CITATION TKOF, THE PWK TWR CTLR CTCD THE TRACON NORTH SATELLITE CTLR (NC) & OBTAINED CLNC FOR THE CITATION TO TAKEOFF ON RWY 16 WITH A PWK #1 DEPARTURE. FLT 839 TOOK OFF FM RWY 32R AT O'HARE & BGN A RGT TURN TO 020 DEG, CLBG TO 5000'. AT ABOUT THE SAME TIME, THE CITATION DEPD RWY 16 AT PWK & BGN A RGT TURN WHILE CLBG TO 3000'. THE 2 ACFT CONVERGED NRLY HEAD-ON & PASSED CLOSE TO EACH OTR. FLT 839 ESTD THEY PASSED WITH APRX 500' SEPN, THE CITATION CREW ESTD 100' SEPN. BOTH FLTS WERE IN CTC WITH TRACON; FLT 839 WAS IN CTC WITH THE EAST DEP CTLR (EC); THE CITATION CREW WERE IN CTC WITH NC. THE 2 CTLRS WERE WORKING SIDE-BY-SIDE, SHARING THE SAME RADAR SCOPE. THERE WAS AN AVAILABLE LIGHT TO WARN OF ACFT DEPG PWK, BUT IT WAS NOT BEING USED. WRITTEN PROCEDURES FOR USE OF THE LIGHT WERE NOT SPECIFIC. TRAFFIC WAS DESCRIBED AS MODERATE TO BUSY.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this incident to be:

Findings

Occurrence #1: NEAR COLLISION BETWEEN AIRCRAFT

Phase of Operation: CLIMB - TO CRUISE

Findings

1. (C) ATC CLEARANCE - IMPROPER - ATC PERSONNEL(DEP/APCH)
2. (C) CREW/GROUP COORDINATION - INADEQUATE - ATC PERSONNEL(DEP/APCH)
3. (F) FACILITY,INADEQUATE MANUALS/DIRECTIVES - FAA(OTHER/ORGANIZATION)

Factual Information

Pilot Information

Certificate:	Foreign	Age:	Male
Airplane Rating(s):	Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):		Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):		Toxicology Performed:	No
Medical Certification:	Class 1 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:	7005 hours (Total, all aircraft), 4766 hours (Total, this make and model), 5 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	BOEING	Registration:	CGYNE
Model/Series:	727-233 727-233	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Transport	Serial Number:	22345
Landing Gear Type:	Retractable - Tricycle	Seats:	145
Date/Type of Last Inspection:	Unknown	Certified Max Gross Wt.:	191500 lbs
Time Since Last Inspection:		Engines:	3 Turbo fan
Airframe Total Time:		Engine Manufacturer:	P&W
ELT:	Not installed	Engine Model/Series:	JT8D-15
Registered Owner:	AIR CANADA	Rated Power:	15500 Lbs thrust
Operator:		Operating Certificate(s) Held:	Flag carrier (121)
Operator Does Business As:		Operator Designator Code:	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument (IMC)	Condition of Light:	Day
Observation Facility, Elevation:	ORD ,700 ft msl	Distance from Accident Site:	6 Nautical Miles
Observation Time:	14:20 Local	Direction from Accident Site:	180°
Lowest Cloud Condition:		Visibility	1 miles
Lowest Ceiling:	Overcast / 3300 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	/	Turbulence Type Forecast/Actual:	/
Wind Direction:	0°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	
Precipitation and Obscuration:	N/A - None - Fog		
Departure Point:	CHICAGO , IL (ORD)	Type of Flight Plan Filed:	IFR
Destination:	CALGARY,CANADA , OF (CYYC)	Type of Clearance:	IFR
Departure Time:	14:20 Local	Type of Airspace:	Class B

Airport Information

Airport:	PALWAUKEE PWK	Runway Surface Type:	
Airport Elevation:	0 ft msl	Runway Surface Condition:	
Runway Used:	0	IFR Approach:	None
Runway Length/Width:	0 ft / 0 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	7 None	Aircraft Damage:	None
Passenger Injuries:	126 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	133 None	Latitude, Longitude:	

Administrative Information

Investigator In Charge (IIC): Bruce, W.

Additional Participating Persons:

Original Publish Date: July 10, 1989

Last Revision Date:

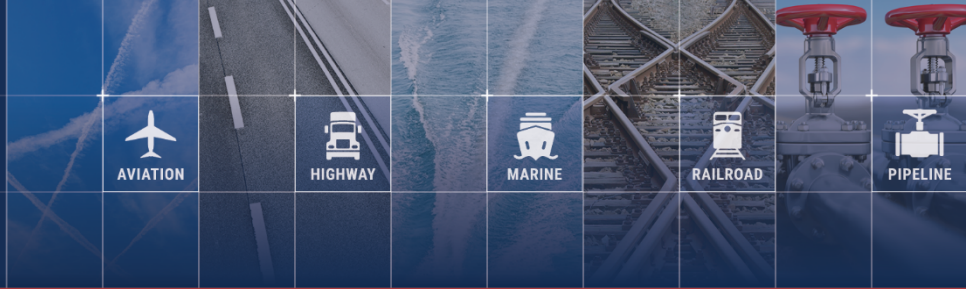
Investigation Class: [Class](#)

Note:

Investigation Docket: <https://data.nts.gov/Docket?ProjectID=13672>

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](#).



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Aircraft:	CESSNA 650	Aircraft Damage:	None
Defining Event:		Injuries:	2 None
Flight Conducted Under:	Part 91: General aviation - Executive/Corporate		

Analysis

AIR CANADA FLT 839 (BOEING 727, C-GYNE) WAS DEPG CHICAGO O'HARE INTL ARPT AS CESSNA 650 (CITATION), N20AT, WAS DEPG PALWAUKEE (PWK) ARPT, ABOUT 8 MI NORTH OF O'HARE. BOTH FLTS TKOF WITH IFR FLT PLANS. BFR THE CITATION TKOF, THE PWK TWR CTLR CTCD THE TRACON NORTH SATELLITE CTLR (NC) & OBTAINED CLNC FOR THE CITATION TO TAKEOFF ON RWY 16 WITH A PWK #1 DEPARTURE. FLT 839 TOOK OFF FM RWY 32R AT O'HARE & BGN A RGT TURN TO 020 DEG, CLBG TO 5000'. AT ABOUT THE SAME TIME, THE CITATION DEPD RWY 16 AT PWK & BGN A RGT TURN WHILE CLBG TO 3000'. THE 2 ACFT CONVERGED NRLY HEAD-ON & PASSED CLOSE TO EACH OTR. FLT 839 ESTD THEY PASSED WITH APRX 500' SEPN, THE CITATION CREW ESTD 100' SEPN. BOTH FLTS WERE IN CTC WITH TRACON; FLT 839 WAS IN CTC WITH THE EAST DEP CTLR (EC); THE CITATION CREW WERE IN CTC WITH NC. THE 2 CTLRS WERE WORKING SIDE-BY-SIDE, SHARING THE SAME RADAR SCOPE. THERE WAS AN AVAILABLE LIGHT TO WARN OF ACFT DEPG PWK, BUT IT WAS NOT BEING USED. WRITTEN PROCEDURES FOR USE OF THE LIGHT WERE NOT SPECIFIC. TRAFFIC WAS DESCRIBED AS MODERATE TO BUSY.

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3. (F) FACILITY,INADEQUATE MANUALS/DIRECTIVES - FAA(OTHER/ORGANIZATION)

Factual Information

Pilot Information

Certificate:	Airline transport	Age:	37, 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--no waivers/lim.	Last FAA Medical Exam:	
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:	6100 hours (Total, all aircraft), 100 hours (Last 90 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	CESSNA	Registration:	N20AT
Model/Series:	650 650	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	109
Landing Gear Type:	Retractable - Tricycle	Seats:	11
Date/Type of Last Inspection:	Unknown	Certified Max Gross Wt.:	17500 lbs
Time Since Last Inspection:		Engines:	2 Turbo fan
Airframe Total Time:		Engine Manufacturer:	AIRESEARCH
ELT:	Installed, not activated	Engine Model/Series:	TFE-731
Registered Owner:	QUAKER OATS COMPANY	Rated Power:	3650 Lbs thrust
Operator:		Operating Certificate(s) Held:	
Operator Does Business As:		Operator Designator Code:	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument (IMC)	Condition of Light:	Day
Observation Facility, Elevation:	ORD ,700 ft msl	Distance from Accident Site:	6 Nautical Miles
Observation Time:	14:20 Local	Direction from Accident Site:	180°
Lowest Cloud Condition:		Visibility	1 miles
Lowest Ceiling:	Overcast / 3300 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	/	Turbulence Type Forecast/Actual:	/
Wind Direction:	0°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	
Precipitation and Obscuration:	N/A - None - Fog		
Departure Point:	WHEELING , IL (PWK)	Type of Flight Plan Filed:	IFR
Destination:	SOUTH BEND , IN (SBN)	Type of Clearance:	IFR
Departure Time:	00:00 Local	Type of Airspace:	Class E

Airport Information

Airport:	PALWAUKEE PWK	Runway Surface Type:	
Airport Elevation:	0 ft msl	Runway Surface Condition:	
Runway Used:	0	IFR Approach:	None
Runway Length/Width:	0 ft / 0 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	2 None	Aircraft Damage:	None
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 None	Latitude, Longitude:	

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