



Aviation Investigation Final Report

Location:	ROMULUS, Michigan	Accident Number:	DCA87MA046
Date & Time:	August 16, 1987, 20:45 Local	Registration:	N312RC
Aircraft:	MCDONNELL DOUGLAS DC-9-82	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	156 Fatal, 2 Serious, 4 Minor
Flight Conducted Under:	Part 121: Air carrier - Scheduled		

Analysis

The Safety Board's full report on this investigation is provided as Aviation Accident Report number AAR-88/05. To obtain a copy of this report, or to view the executive summary online, please see the Web site at <http://www.ntsb.gov/publictn/publictn.htm>

NORTHWEST FLT 255 (NW255) CRASHED AFTER TAKEOFF FM RWY 3C AT DETROIT METRO AIRPORT. WITNESSES SAID NW255 ROTATED FOR TAKEOFF 1200-1500 FT FROM THE END AND LIFTED OFF NR THE END OF THE 8500 FT RWY. AFTER LIFTOFF, THE WINGS ROCKED LT AND RT AND THE ACFT FAILED TO CLIMB NORMALLY. 18 FEET OF THE LT WING SEPARATED WHEN THE WING CONTACTED A LIGHT POLE 2760 FT BEYOND THE RWY END. THE ACFT ROLLED STEEPLY TO THE LEFT AND STRUCK POLES, A BLDG, AND AUTOMOBILES BEFORE CRASHING INTO A RAILROAD EMBANKMENT. THE ACFT WAS DESTROYED. THE EVIDENCE INDICATED THAT THE FLAPS AND SLATS WERE IN THE UP/RETRACT POSITION AND HAD NOT BEEN DEPLOYED FOR TKOF. NEITHER PLT RECITED THE ITEMS OF THE TAXI CKLIST. STALL WARNINGS WERE ANNUNCIATED BUT AN AURAL TKOF WARNING WAS NOT ANNUNCIATED BY THE CENTRAL AURAL WARNING SYSTEM (CAWS). IT WAS CONFIRMED THAT 28 VOLT DC PWR WAS NOT PROVIDED TO THE CAWS PWR SUPPLY #2. THE REASON FOR THE LOSS OF ELECTRICAL PWR WAS TRACED TO A CIRCUIT BRKR BUT NO MALF OF THE CB WAS FND. FOR FURTHER INFORMATION, SEE NTSB/AAR-88/05.

Probable Cause and Findings

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

Findings

Occurrence #1: IN FLIGHT COLLISION WITH OBJECT
Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings

1. PREFLIGHT PLANNING/PREPARATION - IMPROPER - PILOT IN COMMAND
2. (C) CHECKLIST - NOT PERFORMED - PILOT IN COMMAND
3. INATTENTIVE - PILOT IN COMMAND
4. DIVERTED ATTENTION - COPILOT/SECOND PILOT
5. (C) LOWERING OF FLAPS - NOT PERFORMED - COPILOT/SECOND PILOT
6. (C) LOWERING OF SLATS - NOT PERFORMED - COPILOT/SECOND PILOT
7. (F) WARNING SYSTEM(OTHER) - DISABLED

Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: TAKEOFF - INITIAL CLIMB

Factual Information

Pilot Information

Certificate:	Airline transport; Commercial	Age:	57, Male
Airplane Rating(s):	Single-engine land; Single-engine sea; Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	Balloon	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	Yes
Medical Certification:	Class 1 Valid Medical--w/ waivers/lim	Last FAA Medical Exam:	April 22, 1987
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:	20859 hours (Total, all aircraft), 9459 hours (Total, this make and model), 160 hours (Last 90 days, all aircraft), 87 hours (Last 30 days, all aircraft), 5 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	MCDONNELL DOUGLAS	Registration:	N312RC
Model/Series:	DC-9-82 DC-9-82	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Transport	Serial Number:	48090
Landing Gear Type:	Retractable - Tricycle	Seats:	150
Date/Type of Last Inspection:	August 15, 1987 Continuous airworthiness	Certified Max Gross Wt.:	149500 lbs
Time Since Last Inspection:	17 Hrs	Engines:	2 Turbo fan
Airframe Total Time:	14928 Hrs	Engine Manufacturer:	P&W
ELT:		Engine Model/Series:	JT8D-217
Registered Owner:	NORTHWEST AIRLINES, INC.	Rated Power:	20850 Lbs thrust
Operator:		Operating Certificate(s) Held:	Flag carrier (121)
Operator Does Business As:		Operator Designator Code:	NWAA

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Dusk
Observation Facility, Elevation:	DTW ,639 ft msl	Distance from Accident Site:	1 Nautical Miles
Observation Time:	20:48 Local	Direction from Accident Site:	
Lowest Cloud Condition:	Scattered / 2500 ft AGL	Visibility	6 miles
Lowest Ceiling:	Broken / 4500 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	13 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	300°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	26°C / 19°C
Precipitation and Obscuration:	N/A - None - Haze		
Departure Point:	DETROIT (DTW)	Type of Flight Plan Filed:	IFR
Destination:	PHEONIX (PHX)	Type of Clearance:	IFR
Departure Time:	20:45 Local	Type of Airspace:	

Airport Information

Airport:	DETROIT METRO WAYNE CNTY DTW	Runway Surface Type:	Asphalt;Concrete
Airport Elevation:	639 ft msl	Runway Surface Condition:	Dry
Runway Used:	3C	IFR Approach:	None
Runway Length/Width:	8500 ft / 200 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	6 Fatal	Aircraft Damage:	Destroyed
Passenger Injuries:	148 Fatal, 1 Serious	Aircraft Fire:	On-ground
Ground Injuries:	2 Fatal, 1 Serious, 4 Minor	Aircraft Explosion:	In-flight
Total Injuries:	156 Fatal, 2 Serious, 4 Minor	Latitude, Longitude:	42.229625,-83.389617(est)

Administrative Information

Investigator In Charge (IIC): Drake, John

Additional Participating Persons: J DRAKE;
J GILDEN;
B RICHARDSON;
J WHITE;

Original Publish Date: April 28, 1989

Last Revision Date:

Investigation Class: [Class](#)

Note:

Investigation Docket: <https://data.nts.gov/Docket?ProjectID=15885>

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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](#).