



Aviation Investigation Final Report

Location:	MIAMI, Florida	Incident Number:	MIA86IA098
Date & Time:	March 16, 1986, 00:10 Local	Registration:	N8861E
Aircraft:	BOEING 727	Aircraft Damage:	Minor
Defining Event:		Injuries:	140 None
Flight Conducted Under:	Part 121: Air carrier - Scheduled		

Analysis

DURING ARRIVAL AT FT LAUDERDALE, THE AIRCREW ATTEMPTED TO EXTEND THE GEAR, BUT AT FIRST, THEY WERE UNABLE TO GET A SAFE 'DOWN' INDICATION FOR THE RGT MAIN GEAR. AFTER ABOUT ONE HOUR, THEY WERE ABLE TO INSURE THAT BOTH MAIN GEAR HAD EXTENDED& WERE LOCKED. THEY DIVERTED TO MIAMI, BUT BY THEN, THEY WERE UNABLE TO EXTEND THE NOSE GEAR BY USING THE NORMAL GEAR EXTENSION SYS & THEY HAD ONLY 4000 LBS OF FUEL REMAINING. THE CAPTAIN ELECTED TO LAND WITHOUT MANUALLY EXTENDING THE NOSE GEAR; HE WAS CONCERNED ABOUT THE LOW FUEL CONDITION AND BELIEVED THAT HE MIGHT COMPROMISE THE MAIN LANDING GEAR POSITION BY PLACING THE GEAR HANDLE IN THE NEUTRAL POSITION WHILE THE 'A' HYDRAULIC SYS WAS OFF. AN EXAM REVEALED THE ROD END OF THE LANDING GEAR LOCK ACTUATOR, PN 69-30537-4, HAD FAILED. A METALLURGICAL EXAM REVEALED THE ROD END HAD FAILED FROM FATIGUE IN THE THREADED AREA WHERE CORROSION HAD OCCURRED. ALSO, AN ELEC FAILURE WAS FND IN THE LANDING GEAR LOGIC RESOLUTION CIRCUIT THAT WOULD HAVE CAUSED AN IMPROPER INDICATION OF THE RIGHT MAIN GEAR.

Probable Cause and Findings

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

Findings

Occurrence #1: AIRFRAME/COMPONENT/SYSTEM FAILURE/MALFUNCTION

Phase of Operation: APPROACH

Findings

1. (F) ELECTRICAL SYSTEM - FAILURE,PARTIAL
2. (F) LANDING GEAR,GEAR INDICATING SYSTEM - FALSE INDICATION
3. GEAR EXTENSION - ATTEMPTED - PILOT IN COMMAND
4. (F) LANDING GEAR,GEAR LOCKING MECHANISM - CORRODED
5. (C) LANDING GEAR,GEAR LOCKING MECHANISM - FATIGUE
6. LANDING GEAR,NOSE GEAR ASSEMBLY - MOVEMENT RESTRICTED

Occurrence #2: ON GROUND/WATER ENCOUNTER WITH TERRAIN/WATER

Phase of Operation: LANDING - ROLL

Findings

7. (C) EMERGENCY PROCEDURE - NOT USED - PILOT IN COMMAND
8. (F) LACK OF FAMILIARITY WITH AIRCRAFT - PILOT IN COMMAND
9. WHEELS UP LANDING

Factual Information

Pilot Information

Certificate:	Airline transport; Commercial	Age:	45, Male
Airplane Rating(s):	Single-engine land; Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):		Toxicology Performed:	No
Medical Certification:	Unknown Unknown	Last FAA Medical Exam:	
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:	14713 hours (Total, all aircraft), 5715 hours (Total, this make and model), 4 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	BOEING	Registration:	N8861E
Model/Series:	727 727	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Transport	Serial Number:	20623
Landing Gear Type:	Retractable - Tricycle	Seats:	149
Date/Type of Last Inspection:	June 2, 1985 Continuous airworthiness	Certified Max Gross Wt.:	142000 lbs
Time Since Last Inspection:		Engines:	3 Turbo fan
Airframe Total Time:	39498 Hrs	Engine Manufacturer:	P&W
ELT:	Installed, not activated	Engine Model/Series:	JT8D-15
Registered Owner:	EASTERN AIRLINES INC.	Rated Power:	15500 Lbs thrust
Operator:		Operating Certificate(s) Held:	Flag carrier (121)
Operator Does Business As:		Operator Designator Code:	EALA

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Night/dark
Observation Facility, Elevation:	MIA ,10 ft msl	Distance from Accident Site:	
Observation Time:	00:12 Local	Direction from Accident Site:	
Lowest Cloud Condition:	Unknown / 2500 ft AGL	Visibility	7 miles
Lowest Ceiling:	Broken / 2500 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	9 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	140°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	22°C / 19°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	NEW YORK , NY (LGA)	Type of Flight Plan Filed:	IFR
Destination:	FT.LAUDERDALE , FL (FLL)	Type of Clearance:	IFR
Departure Time:	00:00 Local	Type of Airspace:	

Airport Information

Airport:	MIAMI INTL MIA	Runway Surface Type:	Asphalt
Airport Elevation:	10 ft msl	Runway Surface Condition:	Dry
Runway Used:	9R	IFR Approach:	None
Runway Length/Width:	13000 ft / 150 ft	VFR Approach/Landing:	Full stop;Straight-in

Wreckage and Impact Information

Crew Injuries:	7 None	Aircraft Damage:	Minor
Passenger Injuries:	133 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	140 None	Latitude, Longitude:	

Administrative Information

Investigator In Charge (IIC):	Alston, Andrew
Additional Participating Persons:	AL SCHEIDER; MIAMI , FL WAYNE HOWLETT; MIAMI , FL DON MCCLURE; WASHINGTON , DC
Original Publish Date:	
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=31526

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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](#).