



# National Transportation Safety Board Aviation Accident Final Report

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<b>Location:</b>	MIAMI, FL	<b>Accident Number:</b>	MIA92FA115
<b>Date &amp; Time:</b>	04/25/1992, 1815 EDT	<b>Registration:</b>	HK360
<b>Aircraft:</b>	BOEING 707-324C	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	3 None
<b>Flight Conducted Under:</b>	Part 129: Foreign		

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## Analysis

SHORTLY AFTER TAKEOFF, THE #3 ENGINE AND PYLON SEPARATED FROM THE AIRPLANE AS A RESULT OF THE FAILURE OF THE PYLON INBOARD MIDSPAR SUPPORT FITTING. THE FITTING HAD CRACKED DUE TO FATIGUE, AND HAD BEEN CRACKED FOR SOME TIME. THE POINT OF CRACKING WAS NOT VISIBLE FOR INSPECTION ON THE WING. THE FITTING IS THE SUBJECT OF FAA AIRWORTHINESS DIRECTIVE 88-24-10 AND BOEING SERVICE BULLETIN 3183 WHICH REQUIRE VISUAL INSPECTION OF THE MIDSPAR FITTING EACH 1500 FLIGHT HOURS OR 600 CYCLES. THIS INSPECTION HAD BEEN COMPLETED ON THE FAILED FITTING ON JANUARY 2, 1992, 821 FLIGHT HOURS AND 328 CYCLES BEFORE THE FAILURE.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: FAILURE OF THE #3 ENGINE PYLON INBOARD MIDSPAR SUPPORT FITTING DUE TO FATIGUE CRACKING WHICH RESULTED IN THE SEPARATION OF THE NUMBER THREE ENGINE AND PYLON. CONTRIBUTING TO THE ACCIDENT WAS THE INADEQUATE INSPECTION REQUIREMENTS OF THE MANUFACTURER AND THE FAA TO DETECT CRACKS IN THE MIDSPAR FITTING.

## Findings

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

Phase of Operation: TAKEOFF - INITIAL CLIMB

### Findings

1. (C) NACELLE/PYLON,FITTING - FATIGUE
2. (C) ACFT/EQUIP,INADEQUATE STANDARD/REQUIREMENT - MANUFACTURER
3. (C) ACFT/EQUIP,INADEQUATE STANDARD/REQUIREMENT - FAA(OTHER/ORGANIZATION)
4. NACELLE/PYLON - SEPARATION
5. ENGINE ASSEMBLY - SEPARATION

## Factual Information

### Pilot Information

<b>Certificate:</b>	Airline Transport	<b>Age:</b>	36, Male
<b>Airplane Rating(s):</b>	Multi-engine Land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	Seatbelt, Shoulder harness
<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 1 Valid Medical--w/ waivers/lim.	<b>Last FAA Medical Exam:</b>	02/27/1992
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	8000 hours (Total, all aircraft), 4500 hours (Total, this make and model), 2500 hours (Pilot In Command, all aircraft), 200 hours (Last 90 days, all aircraft), 70 hours (Last 30 days, all aircraft), 7 hours (Last 24 hours, all aircraft)		

### Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	BOEING	<b>Registration:</b>	HK360
<b>Model/Series:</b>	707-324C 707-324C	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	No
<b>Airworthiness Certificate:</b>	Transport	<b>Serial Number:</b>	19352
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	9
<b>Date/Type of Last Inspection:</b>	01/10/1992, AAIP	<b>Certified Max Gross Wt.:</b>	322300 lbs
<b>Time Since Last Inspection:</b>	821 Hours	<b>Engines:</b>	4 Turbo Fan
<b>Airframe Total Time:</b>	53257 Hours	<b>Engine Manufacturer:</b>	P&W
<b>ELT:</b>	Installed, not activated	<b>Engine Model/Series:</b>	JT3D-3B
<b>Registered Owner:</b>	EXPORT AIR LEASING, INC.	<b>Rated Power:</b>	17000 lbs
<b>Operator:</b>	TRANS AEREOS MERCAN PAN AM	<b>Operating Certificate(s) Held:</b>	
<b>Operator Does Business As:</b>	TAMPA AIRLINES	<b>Operator Designator Code:</b>	TAMF

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	MIA, 11 ft msl	Distance from Accident Site:	1 Nautical Miles
Observation Time:	1822 EDT	Direction from Accident Site:	360°
Lowest Cloud Condition:	Scattered / 4000 ft agl	Visibility	7 Miles
Lowest Ceiling:	None / 0 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	7 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	160°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	28° C / 21° C
Precipitation and Obscuration:			
Departure Point:		Type of Flight Plan Filed:	IFR
Destination:	CALI, COLOMBIA, OF (SKLC)	Type of Clearance:	IFR
Departure Time:	1815 EDT	Type of Airspace:	Class E

## Airport Information

Airport:	MIAMI INTERNATIONAL (MIA)	Runway Surface Type:	Asphalt
Airport Elevation:	11 ft	Runway Surface Condition:	Dry
Runway Used:	9R	IFR Approach:	None
Runway Length/Width:	13002 ft / 150 ft	VFR Approach/Landing:	None

## Wreckage and Impact Information

Crew Injuries:	3 None	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	3 None	Latitude, Longitude:	

## Administrative Information

Investigator In Charge (IIC):	JEFFREY L KENNEDY	Report Date:	12/16/1993
Additional Participating Persons:	ELMER HUIZINGA; SEATTLE, WA RAYMOND MONKS; SEATTLE, WA BRIAN A HOWE; SEATTLE, WA MICHAEL MENDEZ; MIAMI, FL		
Publish Date:			
Investigation Docket:	NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at <a href="mailto:pubinq@ntsb.gov">pubinq@ntsb.gov</a> , or at 800-877-6799. Dockets released after this date are available at <a href="http://dms.nts.gov/pubdms/">http://dms.nts.gov/pubdms/</a> .		

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The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).