

# AIRCRAFT CONDITION CHECKLIST

## IDENTIFICATION:

Aircraft Type	<u>B727-223 ADV</u>	Aircraft Inspected At	<u>Dallas, TX</u>
Current Operator	<u>American Airlines</u>	Date of Inspection	<u>August 30, 2001</u>
Registration	<u>N849AA</u>		
Serial Number	<u>20990</u>	Records Inspected At	<u>Port Orange, FL</u>
Date of Mfr	<u>April 27, 1976</u>	Date of Inspection	<u>September 25 - 26, 2001</u>
Engine Type	<u>JT8D-9A</u>		

## WEIGHT DATA:

Maximum Taxi Weight	<u>178,500 lbs</u>
Maximum Take-Off	<u>178,000 lbs</u>
Maximum Landing Weight	<u>154,500 lbs</u>
Maximum Zero Fuel Weight	<u>138,000 lbs</u>
Fuel Capacity	<u>52,700 lbs</u>

## AIRFRAME AND INTERIOR EQUIPMENT:

Galleys	<u>Four</u>	Location	<u>1 forward and 3 aft</u>
Lavatories	<u>Three</u>	Location	<u>1 forward and 2 aft</u>
Air Stairs	<u>One</u>	Location	<u>Aft ventral</u>
Passenger Seats	<u>138</u>	Locations / Types	<u>12 first class and 126 economy class</u>
Overhead Bins	<u>Large 180 pound capacity overhead bins</u>		
Cargo Door	<u>N/A</u>		
Aux Power Unit	<u>P/N 380678-1-1 S/N P-35586 TT: 19,359 TC: 9,313 TSO: 10,081 CSO: 6,211</u>		

## MAJOR AVIONICS EQUIPMENT:

Description	Mfr	Type	Quantity
Autopilot	<u>Sperry</u>	<u>4030950-901 / 2585805-6</u>	<u>One</u>
Air Data Computer	<u>Honeywell</u>	<u>HG480B13 / ABB4321</u>	<u>Two</u>
VHF Comm.	<u>Collins / King</u>	<u>618M-3 / KTR9100A</u>	<u>Two</u>
VHF Nav.	<u>Collins / Bendix</u>	<u>51RV-1 / RNA-34A</u>	<u>Two</u>
ATC Mode S Transponder	<u>Bendix / King</u>	<u>TRA-67A</u>	<u>One</u>
ATC Mode C Transponder	<u>King</u>	<u>KXP7500</u>	<u>One</u>
Weather Radar	<u>Bendix</u>	<u>RDR-1F</u>	<u>One</u>
GPS	<u>Trimble</u>	<u>HT9100</u>	<u>One</u>
DME	<u>Collins</u>	<u>860E-4</u>	<u>Two</u>
ACAS II	<u>Honeywell</u>	<u>TPA-81A (Enhanced)</u>	<u>One</u>
GPWS / Windshear	<u>Sundstrand</u>	<u>Mark VII</u>	<u>One</u>
ADF	<u>Collins</u>	<u>51Y-4</u>	<u>One</u>
Radio Altimeter	<u>Collins</u>	<u>860F-1</u>	<u>One</u>
Marker Beacon	<u>Bendix</u>	<u>MKA-28C</u>	<u>One</u>
Anti-Skid Unit	<u>Crane</u>	<u>Mark II</u>	<u>One</u>
CVR	<u>Fairchild</u>	<u>A100A</u>	<u>One</u>
DFDR	<u>Allied Signal</u>	<u>980-4120-RXUS</u>	<u>One</u>

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**REGISTRATION:** N849AA

**AIRFRAME TIMES** as of: August 31, 2001

Total Hours 66,863

Total Cycles 41,879

## AIRFRAME LIMITS:

Type of Check "C" "HC"

Check Interval 3,000 hrs 14,000 hrs

Time Since 2,326 hrs 12,782 hrs

## LANDING GEAR LIMITS:

Position	<u>Nose</u>	<u>Left</u>	<u>Right</u>
Overhaul Limit	<u>28,000 hrs / 3,650 dys</u>	<u>28,000 hrs / 3,650 dys</u>	<u>28,000 hrs / 3,650 dys</u>
Time Since Overhaul	<u>12,782 hrs / 11-18-96</u>	<u>12,782 hrs / 11-21-96</u>	<u>12,782 hrs / 11-21-96</u>

## ENGINE DATA:

Position	<u>No. 1</u>	<u>No. 2</u>	<u>No. 3</u>
Type	<u>JT8D-9A</u>	<u>JT8D-9A</u>	<u>JT8D-9A</u>
Serial Number	<u>665301</u>	<u>665205</u>	<u>666214</u>
Total Hours	<u>78,801</u>	<u>79,599</u>	<u>58,387</u>
Total Cycles	<u>51,858</u>	<u>51,538</u>	<u>36,086</u>
Hours Since Shop Visit	<u>1,711</u>	<u>6,468</u>	<u>5,312</u>
Cycles Since Shop Visit	<u>878</u>	<u>3,340</u>	<u>2,731</u>
Hours to Next Hard Limit	<u>2,438/T4</u>	<u>392/C4</u>	<u>393/C8-C13</u>
Cycles to Next Hard Limit	<u>3,790/Various</u>	<u>1,155/C4</u>	<u>2,784/C8-C13</u>

*\*NOTE: Data for ESN 665301 is current as of September 25, 2001; data for ESN 665205 and 666214 is current as of August 29, 2001.*

## QUALITY OF MAINTENANCE RECORDS:

A general documentation review was accomplished by Pro-Tech Advisors, Inc. Our documentation review consisted of the review of limited information in the form of computerized data and summaries provided by American Airlines. All records reviewed appear to be accurate, complete, and in compliance with the requirements of FAR Part 121. No discrepancies were noted. It should be noted that our documentation review did not include detailed research to verify accuracy of the supplied information and component life limited traceability was not established or verified.

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## **REVIEW OF SIGNIFICANT AIRWORTHINESS DIRECTIVES AND FARs:**

The Airworthiness Directive (AD) documentation provided for our review consisted of American Airlines computerized "American Airlines Preliminary AD Status by Aircraft / Engine / Component" report which reflects the status of all mandatory FAA ADs. It appears as though all mandatory ADs are being tracked / accomplished as required. No discrepancies were noted during our review. Refer to the AD Summary section of this report for details on repetitive or outstanding Airworthiness Directives.

The aircraft is equipped as required for FAR Part 121 operation. No areas of non-conformity to current FARs were noted during our inspection.

## **REVIEW OF SIGNIFICANT SERVICE BULLETINS:**

Our audit did not include a review of non-mandatory service bulletins. For the status of the service bulletins mandated by the Aging Airplane Structural Modification Program, refer to the applicable section of this report.

## **MAJOR MODIFICATIONS SINCE MANUFACTURE:**

Major modifications include installation of Raisebeck Lightweight Noise Reduction Kit per STC # ST00555SE and avionics upgrades including installation of a Trimble HT9100 Global Positioning System, upgrade of the DFDR to 19 parameters, and upgrade of TCAS system to ACAS II Enhanced TPA-81A, which incorporates Change 7. No other major modifications, other than normal avionics and interior upgrades, were noted.

## **ACCIDENTS AND MAJOR DAMAGE HISTORY:**

Our physical inspection did not reveal that the aircraft has been repaired as a result of, or suffered any damage caused by, a major incident or accident.

## **MISSING EQUIPMENT:**

None noted.

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Exterior Condition:	Poor	Fair	Average	Good	Excellent	Notes / Remarks
Paint	_____	_____	√	_____	_____	Polished aluminum / paint has lost luster
Forward Fuselage	_____	_____	√	_____	_____	Numerous small dents and gouges
Mid Fuselage	_____	_____	√	_____	_____	Free of fatigue / corrosion related damage
Aft Fuselage	_____	_____	√	_____	_____	Numerous small dents and gouges
Belly Skins	_____	_____	√	_____	_____	Needs cleaning and polishing
E & E Compartment	_____	_____	√	_____	_____	Evidence of fluid spillage noted
Upper Wing	_____	_____	√	_____	_____	Viewed from main cabin windows
Lower Wing	_____	_____	√	_____	_____	No wing skin blending noted
Flaps	_____	_____	√	_____	_____	Free of impact damage and defects
Ailerons	_____	_____	√	_____	_____	No abnormal conditions noted
Horizontal Stabilizer	_____	_____	√	_____	_____	Free of impact damage and repairs
Vertical Stabilizer	_____	_____	√	_____	_____	Free of leaks and major repairs
Wheel Wells	_____	_____	_____	√	_____	Free of fluid leaks / clean
Landing Gear	_____	_____	√	_____	_____	Dirty / excessive lubrication
Wheels & Tires	_____	_____	√	_____	_____	Normal wear and tear noted
Engine Nacelles	_____	_____	√	_____	_____	Minimal ground handling damage noted
Thrust Reversers	_____	_____	√	_____	_____	No leaks or irregularities noted
Pylons	_____	_____	_____	√	_____	Free of major repairs and leaks
Doors	_____	_____	√	_____	_____	No roller damage or excessive wear noted
Cargo Compartment	_____	_____	√	_____	_____	Seam taping in place / no damage noted
<b>Interior Condition:</b>						
Passenger Seats	_____	_____	√	_____	_____	Show well / minor cosmetic defects noted
Lavatories	_____	_____	_____	√	_____	Clean / no defects noted / normal wear
Galleys	_____	_____	√	_____	_____	Carpet installed
Flight Attd. Stations	_____	_____	_____	√	_____	Light wear / few cosmetic defects noted
Windows	_____	_____	_____	√	_____	No visible trapped moisture / minor scratches
Overhead Bins	_____	_____	√	_____	_____	No defects noted / doors operate smoothly
Ceilings	_____	_____	_____	√	_____	No defects noted
Sidewalls	_____	_____	√	_____	_____	Minor damage / no floor level vents missing
Floor / Carpet	_____	_____	√	_____	_____	Minor soiling / light wear noted
<b>Cockpit Condition:</b>						
Seats	_____	_____	√	_____	_____	Normal wear and tear / no excessive play noted
Instruments / Equip.	_____	_____	_____	√	_____	Minor deterioration noted / placards are legible
Windows	_____	_____	_____	_____	√	Minor scratches on aft side windows

**REMARKS:**

The overall structural and cosmetic condition of the aircraft is average. The forward, mid, and aft fuselage areas are structurally sound; however, numerous small dents and gouges were noted throughout. No conditions were noted that would impair or detract from the overall value or marketability of the aircraft. The overall condition of the aircraft indicates an adequate level of preventive maintenance.

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## SUPPLEMENTARY NOTES:

- The aircraft has a Federal Aviation Administration Airworthiness Certificate in the transport category. A single exemption to the Type Certificate “Number 1834 CAR4b.356 (b) Removal of Ventral Aisle Strap” is listed on this certificate. This certificate is valid as of May 10, 1976.
- The Certificate of Registration indicates that the aircraft is registered to American Airlines. This certificate was issued on October 6, 1995.
- The inspection performed included a detailed visual walk-around of both the interior and exterior of the aircraft. The overall condition of the aircraft is average based on age (25.3 years), total airframe hours (66,863 as of August 31, 2001), total airframe cycles (41,879 as of August 31, 2001), and current maintenance status. The aircraft was rated on a five (5) point scale ranging from poor, fair, average, good, to excellent. The rating is based on comparison with other aircraft having similar age, total aircraft time, and total aircraft cycles.
- The aircraft is equipped with the standard Boeing 727-200 flight instrumentation, navigation, communications, and auto flight control systems. At the time of our inspection, no “inoperative” placards were placed on the installed equipment. In addition to the standard equipment, the aircraft is equipped with a Bendix RDR-1F weather radar, a Honeywell Enhanced TPA-81A Alert and Collision Avoidance System (ACAS II), a Bendix / King TRA-67A ATC mode “S” transponder, a Sundstrand Mark VII Ground Proximity Warning System (GPWS) which incorporates windshear detection functions, a single Trimble HT9100 Global Positioning System (GPS), and a Lear Siegler Performance Monitoring System (PMS). The aircraft is also equipped with a Smith Industries Digital Fuel Quantity Indicating System, which is displayed in pounds.
- The installed ACAS II system incorporates Change 7.0, which is a current European requirement. Honeywell’s new system is enhanced because the TCAS and Mode S transponder contain not only Change 7.0 improvements but additional improved features. The Enhanced TPA-81A processor contains the functionality and growth provisions necessary to meet all existing and anticipated user requirements for the next ten years.
- American has reported that the flight data recorder is currently recording 19 parameters, meeting current FAR Part 121 requirements.
- The installed avionics equipment appears to be intact, complete, and in compliance with current FAR Part 121 regulations.
- The overall condition of the main cabin is average to good. The main cabin is equipped to accommodate a total of one hundred thirty-eight (138) passengers in a dual class configuration. The first class compartment accommodates twelve (12) passengers and the economy class compartment accommodates one hundred twenty-six (126) passengers.
- The overall condition of the galleys and adjacent areas is average. The main cabin is equipped with four (4) galley units arranged in two (2) complexes. The forward right galley complex consists of an aft facing G-1 unit; a forward facing windscreen is located aft of the R-1 door. The aft galley complex consists of an aft facing G-3 unit and a forward facing G-4 unit, which are located forward and aft of the aft left service door, as well as an inboard facing G-4A unit which is located just aft of the G-4 unit.
- The overall condition of the flight attendant stations is good. This aircraft is equipped to accommodate a total of five (5) flight attendants in three (3) locations. One (1) aft facing double occupancy flight attendant seat is located just forward of the main entry door (L-1 door), one (1) forward facing single occupancy seat is located on the center aisle wall of the G-3 galley, and one (1) forward facing double occupancy seat is located on the aft ventral door.

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**SUPPLEMENTARY NOTES:** *continued*

- The overall condition of the lavatories is good. The aircraft is equipped with three (3) lavatories; one (1) is located in the forward right section of the main cabin and two (2) are located in the aft left and right sections of the cabin.
- The forward, mid, and aft fuselage areas are structurally sound and in average condition overall, both structurally and cosmetically. Numerous small dents and gouges were noted in these areas. It is recommended that these areas be examined to ensure these are within SRM limitations.
- The aircraft is painted in American Airlines' livery. The overall condition of the paint is average. The entire fuselage and empennage are polished aluminum, with three (3) horizontal stripes running from nose to tail. A blue stripe is painted at the window belt, with a white stripe and red stripe painted below it. American Airlines' logo is painted on both sides of the vertical stabilizer. The engine cowls and nacelles are also polished aluminum. The upper and lower surfaces of the wings and horizontal stabilizers are painted light gray. Minor erosion of the paint was noted on the leading edge devices. The lower belly skins are in need of cleaning and polishing.
- The cargo compartments are equipped with a smoke detection and fire suppression system as is required per current Federal Aviation Regulations (FARs).
- The overall structural and cosmetic condition of the nose and main landing gear is average. No visible identification plates were found on the three (3) landing gear assemblies.
- This aircraft meets FAR Part 36 Stage III noise requirements with the installation of the Raisbeck Lightweight Noise Reduction Kit per STC No. ST00555SE.
- The aircraft is being maintained on American Airlines' maintenance program which consists of "A" checks at 65 hour intervals; "B" checks at 475 hour intervals; "C" checks at 3,000 hour intervals; and Heavy "C" checks at 14,000 hour intervals.
- The last "C" check was accomplished at TAT: 64,537. The last "HC" check was accomplished at TAT: 54,081.