

# AIRCRAFT CONDITION CHECKLIST

## IDENTIFICATION:

|                  |                   |                       |                         |
|------------------|-------------------|-----------------------|-------------------------|
| Aircraft Type    | B727-223 ADV      | Aircraft Inspected At | Mojave, CA              |
| Current Operator | American Airlines | Date of Inspection    | September 28, 2001      |
| Registration     | N859AA            |                       |                         |
| Serial Number    | 21086             | Records Inspected At  | Port Orange, FL         |
| Date of Mfr      | February 15, 1977 | Date of Inspection    | September 25 - 26, 2001 |
| Engine Type      | JT8D-9A           |                       |                         |

## WEIGHT DATA:

|                          |             |
|--------------------------|-------------|
| Maximum Taxi Weight      | 178,500 lbs |
| Maximum Take-Off         | 178,000 lbs |
| Maximum Landing Weight   | 154,500 lbs |
| Maximum Zero Fuel Weight | 138,000 lbs |
| Fuel Capacity            | 52,700 lbs  |

## AIRFRAME AND INTERIOR EQUIPMENT:

|                 |  |                   |                                      |
|-----------------|--|-------------------|--------------------------------------|
| Galleys         | Four   | Location          | 1 forward and 3 aft                  |
| Lavatories      | Three  | Location          | 1 forward and 2 aft                  |
| Air Stairs      | One  | Location          | Aft ventral                          |
| Passenger Seats | 138  | Locations / Types | 12 first class and 126 economy class |
| Overhead Bins   | Large 180 pound capacity overhead bins                                 |                   |                                      |
| Cargo Door      | N/A  |                   |                                      |
| Aux Power Unit  | P/N 380678-1-1 S/N P-36871 TT: 16,096 TC: 9,619 TSO: 11,008 CSO: 6,834 |                   |                                      |

## MAJOR AVIONICS EQUIPMENT:

| Description            | Mfr            | Type                    | Quantity |
|------------------------|----------------|-------------------------|----------|
| Autopilot              | Sperry         | 4030951-901 / 2585804-9 | One      |
| Air Data Computer      | Honeywell      | HG480B13 / ABB4321      | Two      |
| VHF Comm.              | Collins / King | 618M-3 / KTR9100A       | Two      |
| VHF Nav.               | Collins        | 51RV-1                  | Two      |
| ATC Mode S Transponder | Bendix / King  | TRA-67A                 | One      |
| ATC Mode C Transponder | King           | KXP7500                 | One      |
| Weather Radar          | Bendix         | RDR-1F                  | One      |
| GPS                    | Trimble        | HT9100                  | One      |
| DME                    | Collins        | 860E-4                  | Two      |
| ACAS II                | Honeywell      | TPA-81A (Enhanced)      | One      |
| GPWS / Windshear       | Sundstrand     | Mark VII                | One      |
| ADF                    | *              | *                       | *        |
| Radio Altimeter        | Collins        | 860F-1                  | One      |
| Marker Beacon          | Collins        | 51Z-4                   | One      |
| Anti-Skid Unit         | Crane          | Mark II                 | One      |
| CVR                    | Fairchild      | A100A                   | One      |
| DFDR                   | Allied Signal  | 980-4120-RXUS           | One      |

\*NOTE: At the time of our inspection, the ADF Receiver was removed.

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

Total Hours 68,147

Total Cycles 42,313

## AIRFRAME LIMITS:

Type of Check "C" "HC"

Check Interval 3,000 hrs 14,000 hrs

Time Since 2,176 hrs 12,342 hrs

## LANDING GEAR LIMITS:

Position Nose Left Right

Overhaul Limit 28,000 hrs / 3,650 dys 28,000 hrs / 3,650 dys 28,000 hrs / 3,650 dys

Time Since Overhaul 12,342 hrs / 12-9-96 12,342 hrs / 12-8-96 12,342 hrs / 12-9-96

## ENGINE DATA:

Position In Shop No. 2 No. 3

Type JT8D-9A JT8D-9A JT8D-9A

Serial Number 665457 665177 666268

Total Hours 76,654 76,759 51,609

Total Cycles 50,151 49,544 31,574

Hours Since Shop Visit 8,473\* 8,380 6,316

Cycles Since Shop Visit 4,435\* 4,438 3,242

Hours to Next Hard Limit 34/Various\* 934/C9 1,733/T1

Cycles to Next Hard Limit 1,997/T1\* 2,712/T1 2,615/T2

*\*NOTE: ESN 665457 is currently in the shop due to time expiration. Refer to the Engine Data section of this report for details. Engine data 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:**

Our review of the Airworthiness Directive report provided indicates that all mandatory ADs are being accomplished as required. 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.

## **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:**

At the time of our inspection, the ACARS Optional Auxiliary Terminal, No. 1 ADF Receiver, No. 2 GFMS, and Auto-Throttle Computer were missing.

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| Exterior Condition:        | Poor  | Fair  | Average | Good  | Excellent | Notes / Remarks                                   |
|----------------------------|-------|-------|---------|-------|-----------|---|
| Paint                      | _____ | _____ | √       | _____ | _____     | AA logo removed / red stripe / painted blue       |
| Forward Fuselage           | _____ | _____ | √       | _____ | _____     | Numerous repairs noted                            |
| Mid Fuselage               | _____ | _____ | √       | _____ | _____     | No significant damage noted                       |
| Aft Fuselage               | _____ | _____ | √       | _____ | _____     | Numerous repairs noted                            |
| Belly Skins                | _____ | _____ | √       | _____ | _____     | No corrosion noted                                |
| E & E Compartment          | _____ | _____ | √       | _____ | _____     | No signs of fluid spills / some debris            |
| Upper Wing                 | _____ | _____ | √       | _____ | _____     | Clean / no major repairs visible                  |
| Lower Wing                 | _____ | _____ | √       | _____ | _____     | No skin blending or corrosion noted               |
| Flaps                      | _____ | _____ | √       | _____ | _____     | Several repairs on leading edge flaps/ slats      |
| Ailerons                   | _____ | _____ | √       | _____ | _____     | No delamination visible from ground               |
| Horizontal Stabilizer      | _____ | _____ | √       | _____ | _____     | Leading edges are smooth / no leaks noted         |
| Vertical Stabilizer        | _____ | _____ | √       | _____ | _____     | No fluid leaks noted                              |
| Wheel Wells                | _____ | _____ | √       | _____ | _____     | Clean / no fluid leaks noted                      |
| Landing Gear               | _____ | _____ | √       | _____ | _____     | Clean / no fluid leaks                            |
| Wheels & Tires             | _____ | _____ | √       | _____ | _____     | Normal wear and tear                              |
| Engine Nacelles            | _____ | _____ | √       | _____ | _____     | Leading edge smooth/scratches noted on cowling    |
| Thrust Reversers           | _____ | _____ | √       | _____ | _____     | No defects noted                                  |
| Pylons                     | _____ | _____ | √       | _____ | _____     | No fluid leaks noted                              |
| Doors                      | _____ | _____ | √       | _____ | _____     | Operate smooth / no signs of pressurization leaks |
| Cargo Compartment          | _____ | _____ | √+      | _____ | _____     | Smoke and fire detection system installed         |
| <b>Interior Condition:</b> |       |       |         |       |           |   |
| Passenger Seats            | _____ | _____ | √       | _____ | _____     | Seat covers / Airfone system removed              |
| Lavatories                 | _____ | _____ | √+      | _____ | _____     | No significant defects noted                      |
| Galleys                    | _____ | _____ | √       | _____ | _____     | Normal wear and tear                              |
| Flight Attd. Stations      | _____ | _____ | √       | _____ | _____     | Three seat assemblies                             |
| Windows                    | _____ | _____ | √       | _____ | _____     | Minor scratches noted                             |
| Overhead Bins              | _____ | _____ | √       | _____ | _____     | Normal wear and tear                              |
| Ceilings                   | _____ | _____ | _____   | √     | _____     | No defects noted                                  |
| Sidewalls                  | _____ | _____ | _____   | √     | _____     | No defects noted                                  |
| Floor / Carpet             | _____ | _____ | √       | _____ | _____     | Dirty / center aisle flooring is soft             |
| <b>Cockpit Condition:</b>  |       |       |         |       |           |   |
| Seats                      | _____ | _____ | √       | _____ | _____     | Normal wear and tear                              |
| Instruments / Equip.       | _____ | _____ | √       | _____ | _____     | All instruments are installed                     |
| Windows                    | _____ | _____ | √       | _____ | _____     | No delamination noted                             |

**REMARKS:**

The overall structural and cosmetic condition of the aircraft is average. No conditions were noted that would impair or detract from the overall value or marketability of the aircraft. The aircraft has ceased operation with American and is currently at Avtel in Mojave, California.

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## SUPPLEMENTARY NOTES:

- The physical inspection of this aircraft was completed by **Pro-Tech Advisors, Inc.** at the specific request of **Pegasus Aviation, Inc.** Our physical inspection was conducted on September 28, 2001 at the Avtel maintenance facilities in Mojave, California. At the time of our inspection, the aircraft was undergoing a series of maintenance tasks to ready the aircraft for long-term storage. Some of these tasks included the removal of American Airlines' logos, the removal of the airfone system, and the removal of all cabin seat covers. The No. 1 engine was also removed at the time of our inspection.
- The aircraft Federal Aviation Administration Certificate of Airworthiness and Certificate of Registration have been removed from the aircraft.
- 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 (24.5 years), total airframe hours (68,147 as of August 31, 2001), total airframe cycles (42,313 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 series flight instrumentation, navigation, communications, and auto flight control systems. 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 installed flight data recorder is currently recording 19 parameters, meeting current FAR Part 121 requirements.
- At the time of our inspection, the following avionics black boxes were removed:
  - ACARS Optional Auxiliary Terminal
  - ADF, No. 1
  - GFMS, No. 2
  - Auto-Throttle Computer
- 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. At the time of our inspection, the airfone system was in the process of being removed, which includes the removal of the phones and associated wiring and switches, and installation of blanking plates. The first and economy class seat covers were also removed.
- The main cabin is not equipped with a visual entertainment system.

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## SUPPLEMENTARY NOTES: *continued*

- 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 a side facing G-4A unit which is located just aft of the G-4 unit.
- The overall condition of the flight attendant stations is average. This aircraft is equipped to accommodate a total of five (5) flight attendants at three (3) locations. One (1) aft facing double occupancy flight attendant seat is located just forward of the L-1 door, one (1) forward facing single occupancy seat is located on the center aisle wall of the G-3 galley unit, and one (1) forward facing double occupancy seat is located on the aft ventral door.
- The overall condition of the lavatories is average to 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.
- A detailed inspection was accomplished on external repairs to determine quality of workmanship; however, documentation and conformity to the manufacturer's structural repair requirements, or other approved data, should be verified for each repair. Photographs of typical repairs and repairs that may be considered significant can be found in the Photographs section of this report under Repairs. Please refer to this section of the report for additional details.
- The fuselage paint is in average condition. The aircraft is painted in American Airlines' livery, which consists of a polished fuselage with three (3) painted 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. At the time of our inspection, AvTel Repair Station maintenance personnel were removing all of American Airlines' logos and re-painting the red stripe blue.
- The cargo compartments are equipped with a smoke detection and fire extinguishing 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. All three (3) landing gear are clean. The gear are being prepared for long-term storage.
- The aircraft is in compliance with FAR Part 36 Stage III noise requirements.
- 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: 65,971. The last "HC" check was accomplished at TAT: 55,805.