

**NATIONAL TRANSPORTATION SAFETY BOARD
OFFICE OF AVIATION SAFETY
WASHINGTON, D.C. 20594**

January 14, 2004

Aircraft Maintenance Records Factual Report

A. ACCIDENT: NTSB Identification DCA05MA004
LOCATION: Kirksville, Missouri
DATE/TIME: October 19, 2004, 1945 pm (CDT)
AIRCRAFT: Corporate Airlines Flight 5966,
British Aerospace Jetstream 3201, N875JX

B. GROUP MEMBERS

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C: SUMMARY

At approximately 1945 central daylight time (CDT), October 19, 2004, a Corporate Airlines, Inc., British Aerospace (BAe) Jetstream 3201¹, N875JX, operating as American Connection flight 5966 in accordance with 14 CFR Part 121, crashed while the flight was on approach to the Kirksville Regional Airport, Kirksville, Missouri. The flight was conducting a non-precision LOC/DME Runway 36 approach. Eleven of the 13 passengers and the two flight crewmembers were fatally injured. The two surviving passengers received serious injuries. The airplane was destroyed by impact and post-impact fire. The reported weather included visibility of 3 miles in mist and an overcast ceiling at 300 feet.

On October 26, 2004, an Aircraft Maintenance and Records Group convened at the Corporate Airlines maintenance facility in Smyrna, Tennessee. The group reviewed maintenance at the organization level, as well as maintenance records for the individual airplane. The review examined maintenance programs and contracts, airworthiness directives, weight and balance, supplemental type certificates, maintenance discrepancies, and service difficulty reports. The Aircraft Maintenance and Records Group completed the Smyrna maintenance organization and records examination on October 28, 2003.

D: DETAILS OF INVESTIGATION

OPERATOR HISTORY

Nashville Eagle Airlines began to conduct operations in 1987, as a subsidiary of AMR Corporation. At that time, operations were conducted under regulations described in 14 Code of Federal Regulations (CFR) Part 135. In 1991, the Nashville Eagle name was changed to Flagship Airlines (Part 121/135) and the company merged into the AMR Eagle's structure, completely moving to Dallas by late 1997.

In August 1996, personnel from Flagship Airlines who did not wish to relocate formed Corporate Airlines as a subsidiary of Corporate Flight Management. The first operational flight was conducted on December 16, 1996, under Part 121 (Certificate FJTA920D). On March 5, 1997, an original incorporation was filed and the airline no longer did business as a subsidiary of Corporate Flight Management. The Part 121/135 certificate number was retained after the incorporation and again after the name of the corporation was changed to Corporate Airlines on March 12, 1998.

In March 19, 2001, the Corporate Airlines operating certificate was changed to delete the provision for Part 135 operations and a new Part 121 certificate was issued (03XA812J). The new Certificate was re-issued on August 21, 2002. As part of becoming a Part 121

¹ The Jetstream 32 series of airplane were designed and manufactured by British Aerospace and are, also known as the Super 31. The difference from the Jetstream 31 is an additional over-wing exit and higher horsepower engines.

air carrier and changing the certificate, the FAA was required to re-assign "New Entrant" air carrier status for a second 5 year period of new air carrier surveillance.

In early 2001, Corporate Airlines had two hubs, operating about 11 airplanes with Midway at Raleigh-Durham International Airport (RDU) and 5 airplanes with Trans World Airlines (as Trans World Express) in St. Louis (STL). After September 11, 2001, American Airlines purchased Trans World Airlines (TWA) and Midway Airlines ceased operations at RDU. Nearly all Corporate Airlines flights were flown from STL since these changes and the airline began to do business as American Connection, while the headquarters and most maintenance functions were kept at Smyrna, Tennessee. The Operations Specifications showed that the company fleet consisted of 17 Jetstream airplanes on September 18, 2001.

MAINTENANCE ORGANIZATION AT TIME OF ACCIDENT

The current Air Carrier Certificate (Number 03XA812J) was issued by the Federal Aviation Administration (FAA) to Corporate Airlines, Inc. An Operations Specification (Ops Specs) describes what the FAA authorizes the operator to do and what the FAA prohibits. The Ops Specs states that Corporate Airlines is authorized to conduct business as American Connection. The document also shows that Corporate Airlines performs maintenance on the company aircraft and does not have authorization to contract maintenance for the entire aircraft (Operations Specification Paragraph D.077).

Corporate Airlines headquarters and maintenance operations are located at the Smyrna Regional Airport in Smyrna, Tennessee. With the exception of daily line maintenance and A-checks,² all checks and scheduled maintenance are accomplished in accordance with the Corporate Airlines maintenance program at a former Sewart Air Force Base hangar. At the time of the accident on October 19, 2004, the company planned to open a maintenance hangar at Quincy, Illinois, to reduce repositioning flights.

The St. Louis station performs Line and A-checks. The station has the aircraft maintenance manual (AMM), engine and illustrated parts catalog in compact disc (CD) format. In addition, they have all required task cards and hard copy wiring diagrams. The station does not have access to the Aircraft Inventory and Maintenance System (AIM).³ When additional task cards or other documents are required, the Maintenance Planning department transmits the documents via facsimile.

The October 18, 2004 fleet utilization report for the September 2004 Monthly Maintenance Summary that had been submitted to the FAA showed that 12 airplanes were in use. (See Attachment A) The Manager of Maintenance Programs stated that an additional airplane was used as an operational spare, to take the place of airplanes that required maintenance. Five non-flying Jetstream airplanes are kept at Smyrna, which the

² Appendix B contains the definitions for the required maintenance checks.

³ Appendix C contains descriptions for the various types of maintenance records at Corporate Airlines.

company uses as a source of spare parts. Maintenance records are kept current for both the parked and operational airplanes.

WORK PLANNING AND RECORDS

Scheduled tasks are provided to mechanics from the AIM database or the Maintenance Inspection Manual by the Planning Department through the issuance of a Bill of Work (BOW). The BOW contains a list of the required task cards to be performed. Corporate Airlines removes and replaces avionics for repair by vendors. The air carrier is capable of transponder checks, pitot-static system checks, and checks of the vertical speed indicator.

The Manager of Maintenance Programs routes these documents to the FAA for approval and generates revisions to the manuals. Once approved, he revises the applicable task cards and AIM scheduling of tasks. After creating or coordinating production of the revisions for paper documents, he sends each to the line stations and receives a receipt from each location. The air carrier also employs an auditor for checking current revisions to documents at line stations, tooling, mechanic training, and other station functions; as well as to perform vendor audits.

The official records for each aircraft at Corporate Airlines are the paper logbooks. Corporate Airlines also uses two electronic maintenance systems to collect and report data. The two electronic systems are known as the Aircraft Inventory and Maintenance System (AIM) and the American Airlines SABRE system.

CONTINUED ANALYSIS AND SURVEILLANCE SYSTEM (CASS)

Corporate Airlines has developed CASS in keeping with 14 CFR Part 121.373. The regulation requires that each certificate holder shall establish and maintain a system for the continuing analysis and surveillance of the performance and effectiveness of its inspection program and the program covering other maintenance, preventative maintenance and alterations and for the correction of any deficiency in those programs, regardless of whether those programs are carried out by the certificate holder or by another person. The system consist of four individual parts:

1. A review of daily operations, schedule interruptions or maintenance findings that may have an impact on scheduled operations.
2. A monthly review of fleet reliability data utilizing information compiled and summarized from the previous operating month.
3. A system that provides a means of recognizing errors or omissions in the air carrier's maintenance program. This system will also provide a means for the air carrier to continually enhance the overall performance of its maintenance programs.
4. Establishing an auditing program that will include air carrier "internal" audits as well as "external" audits of vendors that provide either On-Call Maintenance, Fuel Servicing

or Repair and Overhaul services to the air carrier. The audit program will ensure that the policies and procedures contained in air carrier's Maintenance Procedures Manual are being followed.

The Maintenance Records Group examined the CASS records and found that the program had been successfully used to identify and resolve maintenance problems. As an example, the company had repetitive write-ups on altitude alerters. Through the use of the CASS program, the company and FAA found cold-soldered electrical repairs had been made to the altitude alerters at a repair facility. The discrepancy was rectified and the number of repetitive write-ups decreased. The CASS Program obtains information from AIM.

PERSONNEL

The organizational chart was reviewed with the Chief Inspector, who related that the majority of about 200 Corporate Airlines employees are at Smyrna, with smaller numbers at St. Louis and outstations. The total includes approximately:

- 65 pilots⁴
- 5 dispatchers
- 4 cleaners and stores clerks
- 34 maintenance and quality assurance personnel

The air carrier has 28 mechanics, when including personnel who have management or other duties. When omitting the management personnel, the air carrier has 13 mechanics at Smyrna. Six additional mechanics are at line stations, primarily at St. Louis, and four of the six have authorities as designated inspectors. Designated inspectors can sign Required Inspection Items (RII) and airworthiness releases.

All mechanics at Corporate Airlines possess an airframe and/or powerplants certificate, as do the inspectors. The air carrier has three specialists with a maintenance repairman's certificate. One person works with and repairs deicing boots, and the other two are avionics technicians.

The Smyrna maintenance facility has three work shifts during weekdays (two on weekends) and up to four mechanics are authorized to function as designated inspectors until 1300. The Chief Inspector and Manager of Maintenance Training are also available prior to 1300. Two full time inspectors are on the second shift and one inspector works on the third shift.

Most Maintenance Procedures Manual (MPM) descriptions for "Personnel Duties and Responsibilities" include the statement "His duties shall include but are not limited to:"

⁴ Corporate Airlines personnel reported 145 pilots and 17 dispatchers on October 28, 2004. Joe Travis requested that the respective numbers be changed to 65 and 5 on December 21, 2004.

and are followed by a list of functions. (See Attachment B) The following multiple functions were noted:

The Chief Inspector, besides his normal duties, occasionally stands in for personnel working for him. For example, he may perform inspections and audits, in addition to quality assurance functions, developing engineering orders, and performing the other functions that the MPM describes. The following personnel report to the Chief Inspector:

The Manager of Maintenance Training/Quality Assurance Auditor performs vendor audits, in-house audits, and is an inspector when no others are available.

The Manager of Maintenance Planning also functions as the Records Clerk.

The Manager of Maintenance Programs also is responsible for technical publications and revisions, Reliability Review Board programs, interfaces with SABRE for technical data, and was found to have 18 desktop computers in his office (includes 3 functioning servers for accounting, virtual private network, and maintenance), as he assists in providing in-house information technology support.⁵

The air carrier provides training as described in the training manual.

VENDORS

Corporate Airlines has a vendor audit program as part of the Continuing Analysis and Surveillance System (CASS). The Manager of Maintenance Training/Quality Assurance Auditor performs an on-site audit of each vendor on a scheduled basis, in addition to his other duties. Corporate Airlines does not use the results of audits created by other companies and shared through the Coordinating Agencies for Suppliers Evaluation (CASE). An Approved Vendor List database is kept and updated periodically by the Manager of Maintenance Training/Quality Assurance Auditor.

FAA SURVEILLANCE

Through the FAA Surveillance and Evaluation Program (SEP) process, the FAA certification management team meets once per quarter-year. The team consists of the PMI, POI, PAI, and their assistants. The team determines if there is a perceived risk in an air carrier's operation and adjusts surveillance accordingly. The last SEP meeting was completed during the first week of October 2004, and a letter containing 12 FAA topics of interest was sent to the airline CEO on October 15, 2004. FAA personnel then met with the airline CEO and the Chief Inspector to setup action plans. (See Attachment C)

⁵ In a letter of January 4, 2005, from Joe Travis of Corporate Airlines, to Richard Rodriguez, Mr. Travis noted that 15 of the 18 computers were for spare parts.

For example, seat back break-over tension was one of the SEP topics of interest. The tension is adjusted on B-checks and past surveillance indicated that the tension might have not been properly maintained.⁶ As a result of the SEP topic and meeting, Corporate Airlines is considering adding this check to A-checks.

N875JX AIRCRAFT HISTORY

Airclaims⁷ reported that N875JX was ordered by Nashville Eagle and manufactured as a BAE JETSTREAM 3201, Serial Number (S/N) 875. The airplane was manufactured on January 9, 1990, delivered on February 12, 1990, operated until March 11, 1994, and was parked on that date. The airplane was re-registered on September 21, 1994, when it was leased to Trans State Airlines as part of the Trans World Express fleet (for TWA), until parked in December 1999. Corporate Airlines returned the airplane to service on April 26, 2000.

FLIGHT TIMES, FLIGHT CYCLES, WEIGHT & BALANCE

The following were the times and cycles for the airframe and engines when N875JX departed Saint Louis for the accident flight:

	Hours	Cycles	Since installed on this airplane:
Airframe	21,977.6	28,972	Not applicable
Left Engine S/N P66357C	12,917.8	19,000	341.3 hours / 458 cycles
Left Propeller S/N 940962	16,028.3	3,662	392.3 hours
Right Engine S/N P66360C	14,581.7	21,436	2,773.6 hours / 3753 cycles
Right Propeller S/N 000477	3,699.3	2,595	608.6 hours

The last weight and balance was performed on September 17, 2004, and the next was due to be performed September 17, 2007. The empty weight was 9942.46 pounds and the adjusted empty weight was 10118.7 pounds (includes engine oil, hydraulic fluid, oxygen, etc). The adjusted arm was at 218.35 inches (moment of 2209445) from the datum at the radome bulkhead.

According to AIM, the previous checks for N875JX had been accomplished:

⁶ The seatback tension in N875JX had been checked during the recent B-check.

⁷ Airclaims is an international provider of information about the history of individual airplanes used in air carrier service.

CHECK	DATE	FLIGHT HOURS	FLIGHT CYCLES	STATION
Line Check	10/16/04	21962.3	28954	BNA
A Check ¹	10/18/04	21968.5	28962	STL
B1 Check	8/18/04	21740.5	28648	MQY
B2 Check	10/5/04	21922.7	28900	MQY
B3 Check	2/19/03	19896.9	26088	MQY
B4 Check	5/15/03	20077.0	26333	MQY
B5 Check	7/1/03	20267.5	26596	MQY
B6 Check	8/30/03	20440.2	26836	MQY
B7 Check	10/20/03	20634.5	27106	MQY
B8 Check	12/11/03	20806.6	27341	MQY
B9 Check	2/3/04	20991.7	27602	MQY
B10 Check	3/29/04	21172.9	27867	MQY
B11 Check	5/17/04	21369.0	28152	MQY
B12 Check	7/5/04	21562.9	28422	MQY
C Check ²	2/28/03	19935.0	26136	MQY
D Check	2/28/03	19935.5	26136	MQY
E Check	4/5/02	16096.7	20732	MQY

¹ SABRE showed that the last A check was on 10/18/04, the next line check was due 10/20/04, and the next A check would be required on 10/24/04.

² The record of C-checks for N875JX are shown by the AIM reporting function as two items (C1 and C2), but the work was accomplished in single maintenance intervals. According to the Chief Inspector, this began in the concept to accomplish the C-checks as two separate weekend maintenance functions. The airline has learned that the C-checks require three to four weeks (with attached structural tasks) and therefore combines the tasks from the two C-checks. The currently approved MSM shows a single combined C-check to be required.

The review of maintenance records showed that a C check was due at 21,935 hours and that the airplane had flown for an additional 42.6 hours. The Operations Specifications Paragraph D76 contains "Short Term Escalation Authorization" which provides a method for exceeding maintenance intervals and the amount of exceedance permitted. The C-check for N875JX had been extended by the 180 hours permitted by the Ops Spec.

Accomplishment of the last VOR check was found on logbook page 56534, dated 10/17/2004 in STL. Bearing error for the #1 was +2 degrees and #2 was +1 degrees. (See Attachment D)

MINIMUM EQUIPMENT LIST (MEL)

Per Aircraft Maintenance Logs provided by Corporate Airlines there were no MEL's open at the time of the accident.

SUPPLEMENTAL TYPE CERTIFICATES⁸

Supplemental Type Certificates (STC), supplied by Corporate Airlines, were reviewed. No recent STCs were incorporated. (See Attachment E)

AIRWORTHINESS DIRECTIVE (AD) SUMMARY AND SERVICE BULLETINS (SB)

Corporate Airlines and the FAA provided summaries of Airworthiness Directives and Service Bulletins for the airframe, engines, and propellers. All listed AD's and SB's had been complied with at the date of the accident, although some of the ADs had recurring tasks that were due at a later date. (See Attachment F)

PRIOR DISCREPANCIES INVOLVING N875JX

A Log Page (#56523) from October 5, 2004, contained the following entry:

Captain's DME display is unreadable in dim mode.

The DME entry was placed on the Minimum Equipment List (MEL) MEL#34-13, Authorization # 1-SD-C, when the aircraft total time was 21,922.7 and 28,900 cycles. The Operations Specifications (D095, 8/15/97, Revision 20) and the MEL manual showed that Category C MEL items (refer to last letter in MEL Authorization) "shall be repaired within 10 consecutive calendar days (240 hours), excluding the day they were deferred." The MEL for ATA Chapter 34, Item 13 (DME) showed that the DME "may be inoperative provided: b) Approach minimums are not predicated on it."

The Log Page (56533) from October 16, 2004, showed that the DME was replaced at aircraft total time 21962.3 and 28,954 cycles. The removed DME indicator was P/N 622-6524-003, S/N 5080, and the replacement part was S/N 3316.

During the time period that the DME indicator was on MEL, the SABRE flight records showed that the airplane had flown 54 legs. The stations listed included BNA, BRL, CGI, IRK, MKL, MQY, MWA, OWB, PAH, STL, TBN, and UIN.

The replacement DME had been overhauled by Instrument Tech Corporation of Addison, Texas, under work order D5942, and returned to service on October 11, 2004. The work order shows that the indicator had been repaired due to a defective display and that the

⁸ The FAA issues Supplemental Type Certificates. They authorize a major change or alteration to an aircraft, engine, or component that has been built under an approved Type Certificate.

DS3 display (P/N 262-3501-060) had been replaced. The part passed a final inspection test at Instrument Tech on October 9, 2004, prior to shipment.

SOURCE OF DME INSTALLED IN N875JX

The Instrument Tech Corp was on the Corporate Airlines approved vendor list. (See Attachment G) The FAA AIR AGENCY CERTIFICATE from Instrument Tech includes a capabilities list and class rating, dated 3/12/04. The list includes approval for repair of Class 3 and Class 4 electronics.

The result of an audit for Instrument Tech was reviewed. The audit included checking the company facility and records for a drug policy, repair station certificate, limitations, and authorizations, as well as other Instrument Tech documents, facilities, and functions. The schedule for following audits at this and other vendors is contained in the Corporate Airlines approved vendor list.

Each vendor listed contains an information block that describes allowed work to be performed by the vendor. The block did not contain a uniform method of listing work, for example, showing that Erie Aviation was permitted to repair distance measuring equipment (DME) and that Instrument Tech was permitted to repair Class 3 and 4 electronics. Part 145.59 (d) Radio Ratings, states:

Class 3: Radar equipment. An aircraft electronic system operated on radar or pulsed radio frequency principles.

Mr. Keith Stem, Principle Avionics Inspector for Corporate Airlines provided an interpretation about the applicability of Class 3 definition for the group on 10/27/04, stating that:

The DME navigation system measures distance by using a pulsed pair radio frequency principle, therefore is classified as a Radio Class 3 equipment type.

The Corporate Airlines auditor noted that this vendor last had a physical audit on November 5, 1998, and that annual “desk-top” audits had been performed since 1998. The desk-top audit consists of mailing a vendor survey evaluation and the Instrument Tech reply was dated August 6, 2004. Instrument Tech provided an Operational Specification with the reply and this document cited the capability to perform repairs on Class 3 and 4 devices.

SERVICE DIFFICULTY REPORTS⁹

Four (4) Service Difficulty Reports from N875JX for the period of 2000-2004 were found. The most recent SDR (03X01128751 dated 12/06/2001) reported that when the crew pushed the power levers forward, the L/H engine was not responding to their input.

⁹ A Service Difficulty Report (SDR) is a report of the occurrence or detection of each failure, malfunction, or defect as required by 14 CFR 121.703 and 121.704.

Maintenance found the L/H power cable sheared. The cable had sheared approximately 12 inches from the attachment point of the power lever arm where the first under floor cable pulley is located. The cables are subject of AD91-15-08 (10,000 cycle life limit). The cable had 6,125 cycles remaining. The cable was replaced and aircraft returned to service. The AD was terminated for the aircraft on 12/11/2001. (See Attachment H)

DEFERRED / DELAYED MAINTENANCE ITEMS

Reports for Deferred Maintenance Items and Delays were reviewed. No entries were found for the day of the accident. (See Attachment I)

MAJOR REPAIRS AND ALTERATIONS

N875JX had no recent Major Repair and Alteration prior to the accident. On March 26, 2003, two Major repairs EO J32-3400-002R1 (KA92 GPS Antenna) and EO J32-2840-002R1 (Replacement of Fuel Quantity Wing Wiring) were accomplished.

Robert L. Swaim
Maintenance & Records Group Chairman

APPENDIX A

STRUCTURE OF MAINTENANCE PROGRAM

The Corporate Airlines Part 121 Air Carrier certificate specifies certain authorizations, limitations and procedures under which the air carrier is to operate, including those for maintenance. Aircraft maintenance is accomplished in-house, to the BAe approved maintenance program and the air carrier is authorized to accomplish aircraft modifications, Engineering Orders and Supplemental Data Directives. A limitation (paragraph D72) within the FAA-approved Operations Specifications is that the air carrier will use a Continuing Airworthiness Maintenance Program (CAMP).

- The Maintenance Procedures Manual (MPM) provides the organization of the Corporate Airlines Maintenance Department, company maintenance policies, programs (i.e. continuing airworthiness program, etc.), procedures, technical and instructional information to maintenance personnel in the performance of maintenance functions. This manual is an accepted FAA document under CFR Part 121.133.

The MPM contains the following description of its contents (from page 1.3.1, Rev 39, 21 Mar 02):

This manual sets for the instructions procedures, and data for the accomplishment of maintenance functions not covered in the equipment manufacturer's publications. It is intended that this manual be the basic guide for maintenance personnel in the performance of their work. No manual can encompass every conceivable circumstance. Therefore, when conditions are not covered in the contents, discretion and good judgment must be exercised.

The MPM states that company maintenance manuals consist of the following:

- a. Maintenance Procedures Manual
- b. Fueling and Ground Servicing Procedures Manual,
- c. Maintenance Training Manual,
- d. Time Limits Index as specified in Operations Specifications (Maintenance Specification Manual).
- e. Applicable maintenance / inspection manual (Maintenance Inspection Manual) for specific carrier aircraft as specified in Operations Specifications.
- f. Continuing Reliability Analysis and Control Program Manual
- g. Minimum Equipment List,
- h. Airplane Flight Manual
- i. Company approved vendor listing,
- j. Manuals as specified on the Company's Operations Specifications.

The air carrier adopts the manufacturer's maintenance manuals, regarding technical standards and procedural matters to be applied during the maintenance of company aircraft. Adopted also are the various appliance and accessory manufacturer's maintenance manuals. In cases where the airframe, engine, or

propeller maintenance manuals differ from the appliance manufacturer's manual, the certificate holder's manual shall prevail.

- Operations Specification (paragraph D72) states that the air carrier will comply with the Corporate Airlines JS3201 Maintenance Specification Manual (MSM), which contains the component time limits and inspection constraints for the aircraft operated by Corporate Airlines. The document also includes an index of all task-cards. The Chief Inspector and PMI noted that Corporate Airlines had adopted the BAe maintenance schedule as the air carrier constraints for time and other limits. Changes to the MSM require the air carrier to submit proposed changes to the FAA for approval. The Maintenance Specification Manual also contains the Corrosion Prevention Control Program.
- The Maintenance Inspection Manual (MIM) is an FAA-approved document, which contains all task cards for the maintenance inspection program.
- The MPM requires at least 10 days of Aircraft Maintenance Log (AML) records be kept with the airplane. Other records are not directly available to mechanics at other stations. In addition, mechanics at stations away from Smyrna do not have AIM available.
- The Manager of Maintenance Programs provides the Aircraft Maintenance Manual (AMM), Illustrated Parts Catalog (IPC), and Component Maintenance Manuals (i.e. Propeller and Landing Gear) to maintenance personnel on compact discs (CD). The Original Equipment Manufacturers (OEM) provides these CD's to the air carrier. Paper copies of Service Bulletins and Wiring Diagrams are provided at the maintenance bases. If a revision is necessary to the OEM documentation (i.e. company maintenance procedures), paper copies are created via Supplemental Data Directive (SDD) or Aircraft Maintenance Directive (AMD) or Engineering Orders (EO) and sent to manual holders for filing.
- Airworthiness directives (AD) are reviewed by the Director of Maintenance and the Chief Inspector. Implementation is made by creation of an AMD, EO, or task card.
- The air carrier has two flight manuals, OEM and Corporate Airlines. Both manuals are installed in the each aircraft. Pilots use the customized flight manual. The Maintenance Program Manager only handles distribution of the OEM flight manual; the customized flight manual is handled by Flight Operations. If a revision is necessary the Maintenance Program Manager generates an Aircraft Maintenance Directive (AMD) to install the revision into each of the aircraft.

APPENDIX B

DEFINITION OF CHECKS AT CORPORATE AIRLINES

The Line Check is accomplished every two (2) flight-days. Servicing and visual walk around is accomplished for general condition of the aircraft from the ground level. (See Attachment J for records from the last Line Check)

On 11/29/04, the Chief Inspector amended the above to read the following:

The Line Check is accomplished every two (2) flight-days since the last line check or completion of a higher check. . Servicing and visual walk around is accomplished for general condition of the aircraft from the ground level.

The A Check is accomplished every six (6) flight-days since the last A Check or since performing the higher level Check. Servicing and visual walk around check is accomplished for general condition of the aircraft. Line Checks are performed in conjunction with the A Checks.

On 11/29/04, the Chief Inspector amended the above to read the following:

The A Check is accomplished every six (6) flight-days since the last A check or last line check or completion of a higher check. Servicing and visual walk around check is accomplished for general condition of the aircraft.

The B Check is a stand-alone check with twelve (12) segments. Subsequent segments are accomplished every 200 flight-hours. The completion of B1-B12 is one full cycle. Only a subset of the of the aircraft's components is inspected each segment, resulting in the complete aircraft being inspected within 2,400 flight-hours.

The C Check is accomplished every 2,000 flight-hours. Heavy inspections and servicing checks that require moderate system/zonal access are accomplished.

The D Check is accomplished every 4,000 flight-hours. Heavy inspection and servicing checks that require considerable system/zonal access are accomplished.

The E Check is accomplished every 8,000 flight-hours. Heavy inspection and servicing checks that require considerable system/zonal access are accomplished.

The checks and inspection times can be exceeded by the use of a Time Limit Short Term Escalation Authorization form. B Checks can be extended by 15 flight-hours; C, D and E Checks can be extended 180 flight-hours. Powerplants and powerplant components and accessories – 10% not to exceed 500 hours time-in-service. Airframe components and appliances – 10% not to exceed 500 hours time-in-service.

The airline also has the following maintenance requirements:

<u>Structural/Corrosion Checks:</u>	As set forth by the manufacturer as approved by FAA.
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Engine Program:

As set forth by the manufacturer as approved by FAA

Propeller Program:

As set forth by the manufacturer as approved by FAA

APPENDIX C

TYPES OF MAINTENANCE RECORDS

SABRE is used to collect flight data information, Minimum Equipment items (MEL) and Maintenance Carry-Over (MCI) items reported during aircraft operations. This information is then used by AIM to develop the air carrier's maintenance plan. Maintenance Checks/Inspection (Engine, Airframe, Systems and Structure) are accomplished on record cards and entered into AIM manually to track time and future maintenance constraints. Reports can be generated from AIM for individual aircraft status (Maintenance, Overdue Items, Next-Due, etc.).

For MCI items, mechanics obtain an authorization code from maintenance control and write a deferral record in the logbook. At the time the authorization is issued, the maintenance supervisor inputs the MCI into SABRE. This information is sent to maintenance planning for tracking and input into AIM.

Airworthiness Directives (AD) are tracked in AIM and once terminating action is accomplished, the AD's are entered into an AD log.

The Chief Inspector noted that parts moved from one airplane to another create a need to adjust AIM data for when the part entered service. This is accomplished to allow the AIM to show accurate dates or times for subsequent maintenance time or calendar constraints.