



NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety
Washington, D.C. 20594

Maintenance Factual Report

February 21, 2020

A. ACCIDENT

DCA18FA144

Location: Alexandria, Louisiana
Date: April 20, 2018
Time: about 1935 UTC
Aircraft: Caribbean Sun Airline dba World Atlantic Airlines, Boeing MD-83,
Registration N807WA

B. GROUP

Group Chairman: Pocholo Cruz
National Transportation Safety Board
Washington, D.C.

Member: Jose Defran
Federal Aviation Administration
Miramar, FL

Member: Victor M. Gonzalez
World Atlantic Airlines
Virginia Gardens, FL

C. SUMMARY

On April 20, 2018, at about 1420 CDT, a Caribbean Sun Airlines (doing business as World Atlantic Airlines) MD-83, S/N 53093, experienced a right main landing gear collapse during landing at Alexandria Airport (AEX) near Alexandria, LA. This collapse caused the right wing to contact the runway, leading to fuel and hydraulic fluid leaking. The 94 passengers and 7 crew were evacuated, and no injuries were reported. The flight was contracted by the United States Immigration and Customs Enforcement (ICE) agency but operated under Part 121 regulations. The airplane was substantially damaged.

D. DETAILS OF INVESTIGATION

1.0 Air Carrier Certificates

Caribbean Sun Airlines, Inc. dba as World Atlantic Airlines (WAA) is located at 6355 NW 36th Street, Suite 100, Virginia Gardens, FL 33166. A Part 121 operations certificate number, 2WAA860M, was originally issued to Caribbean Sun Airlines by the Federal Aviation Administration's (FAA) Flight Standards Southern Division on July 25, 2014.

2.0 Operations Specifications (OpSpecs)¹

Caribbean Sun Airlines, Inc. doing business as World Atlantic Airlines (WAA) Certificate 2WAA860M, which includes the standards, terms, conditions, and limitations contained in the FAA approved Operations Specifications was reviewed.

- (a) Section D072 (Continuous Airworthiness Maintenance Program or CAMP) of the OpSpecs authorized World Atlantic Airlines to maintain in accordance with the conditions and limitations specified in each of the approved ops specs. Each aircraft and its component parts, accessories, and appliances are maintained in an airworthy condition in accordance with applicable Federal Aviation Regulations and standards prescribed and approved by the administrator. The DC-9-83 CAMP is covered by World Atlantic Airlines General Maintenance Manual (GMM), Continuous Airworthiness Maintenance Program Manual, Time Controlled Manual (TCM).
- (b) Section D076 of the OpSpecs authorized World Atlantic Airlines to use short-term escalations of maintenance intervals for check packages, check package individual line items or component time-change/task intervals. Scheduled Maintenance Task are authorized a maximum of 10 percent, not to exceed 500 hours time in service.
- (c) Section D083 of the OpSpecs authorized World Atlantic Airlines to use a borrowed part (overhauled) from another operator when time in service of the available part exceeds the certificate holder's approved overhaul limit.

¹ Operations Specifications contains the authorizations, limitations, and certain procedures under which each kind of operation, if applicable, is to be conducted by the certificate holder.

- (d) Section D085 of the OpSpecs World Atlantic Airlines has 1 DC-9-82, 7 DC-9-83 aircraft in the fleet. Total of 8 aircraft.
- (e) Section D089 of the OpSpecs authorized World Atlantic Airlines to utilize the Maintenance Time Limitations specified in the World Atlantic Airlines DC 9-83 Time Control Manual, May 12, 2014.
- (f) Section D091 of the OpSpecs authorized World Atlantic Airlines to make arrangements with other maintenance providers to accomplish maintenance, preventive maintenance, or alterations for the certificate holder.
- (g) Section D095 of the OpSpecs authorized World Atlantic Airlines to use an FAA approved MEL for each fleet type listed in the OpSpecs.
- (h) Section D097 of the OpSpecs authorized the World Atlantic Airlines Aging Aircraft Program including, repair assessment, supplemental inspections, electrical wiring interconnection systems (EWIS), fuel tank system maintenance and means of flammability reduction as part of the continuous airworthiness maintenance program for its fleet of airplanes.
- (i) Per section E096 of the OpSpecs, World Atlantic Airlines is authorized for a Weight and Balance Program. World Atlantic Airlines is authorized to use individual aircraft weights outlined in the World Atlantic Airlines empty weight and balance program for each fleet type. Each DC-9-83 aircraft weighed every 36 months per the World Atlantic Airlines Balance Control Manual.

3.0 Type Certificate Data Sheet

The Type Certificate Data Sheet (A6WE) prescribes conditions and limitations under which the product for which the Type Certificate (TC) was issued meets the airworthiness requirements of the Federal Aviation Regulations.

McDonnell Douglas Corporation, Long Beach, California, merged with The Boeing Company in 1997. They retained ownership of the TC A6WE and on January 30, 1998, granted The Boeing Company license to manufacture the aircraft under the production certificate. McDonnell Douglas Corporation is a subsidiary of The Boeing Company. Transferred Type Certificate to The Boeing Company on September 27, 2010.

4.0 Aircraft Information

The McDonnell Douglas Corporation manufactured the airplane on June 30, 1997 and delivered the airplane to Reno Air. The airplane had been leased and flown by several companies/operators prior to N807WA being leased by World Atlantic Airlines. The airplane was put on the World Atlantic Airlines certificate on August 26, 2015. The airplane had accumulated 43,724 total flight hours and 39,539 total flight cycles at the time of the accident.

The airplane was equipped with two Pratt and Whitney JT8D-219 engines and a Honeywell 381276-1 Auxiliary Power Unit (APU). The engines and APU had accumulated the following operating times at the time of the accident:

Engine and APU Information

| | No.1 Engine | No.2 Engine | APU |
|--|--------------------|--------------------|------------|
| Manufacturer | Pratt & Whitney | Pratt & Whitney | Honeywell |
| Part Number | JT8D-219 | JT8D-219 | 381276-1 |
| Manufacture Date | 7/17/1990 | 2/27/1991 | Unknown |
| Date Installed | 4/19/2017 | 4/19/2017 | 10/8/2016 |
| Serial Number | 725573 | 725786 | P-1083 |
| Time Since Restore (Engine /APU hours) | 6,446 | 5,914 | NOTE |
| Total Cycles Since Restore (Engine/APU cycles) | 4,371 | 3,484 | NOTE |
| Engine Total Time Hours | 47,054 | 58,922 | NOTE |
| Engine Total Cycles | 30,677 | 29,004 | NOTE |
| Location of Engine/APU Installation | Miami | Miami | Miami |
| Total Time of Airframe at engine/APU installation (hours) | 43,724 | 43,724 | 41,948 |
| Total Cycles of Airframe at engine/APU installation | 39,539 | 39,539 | 38,699 |

NOTE: There is NO threshold or opportunity inspection requirements given for the APU. APU is consider as an “On Condition” component. There are no Life Limited Parts on the APU installed on the MD- 80 Series Aircraft. The APU and its components are changed on condition following the World Atlantic Airlines maintenance program.

5.0 Maintenance and Inspection Programs

The maintenance program for the Boeing MD-80 is made up of systems, powerplant, structural and zonal maintenance tasks which are outlined in the Boeing MPD (ME80-020) document.

The following are summaries of each check:

Service Check – Walk around to examine the aircraft visually for discrepancies and security, replenishment of fluids, and a review of the logbook. Accomplished every 3 days or not to exceed 72 hours.

Daily Maintenance Check – Walk around that covers the scheduled maintenance task called out by the current Boeing MPD and WAAs CAMP.

“A” Check - Accomplished every 450 flight hours. (A1 at 450 flight hours since last A1, A2 at 900 flight hours since last A2, A4 at 1800 flight hours since last A4).

“C” Check – Accomplished every 3,600 flight hours or 15 calendar months whichever expires first since last accomplishment. Service Check and applicable A Checks are accomplished. (C1 at 3,600 flight hours or 15 calendar months whichever expires first since accomplishment of the last C1 Check, C2 at 7,200 flight hours or 30 calendar months whichever expires first since accomplishment of the last C2 Check, C3 at 10,800 flight hours or 45 calendar months whichever expires first since accomplishment of the last C3 Check, C4 at 14,400 flight hours or 60 calendar months whichever expires first since accomplishment of the last C4 Check, C5 at 18,000 flight hours or 75 calendar months whichever expires first since accomplishment of the last C5 Check, C6 at 21,600 flight hours or 90 calendar months whichever expires first since accomplishment of the last C6 Check, C8 at 28,800 flight hours or 120 calendar months whichever expires first since accomplishment of the last C8 Check).

Special Inspection Checks, Structural Inspections and the Corrosion Prevention and Control Program are incorporated into the existing maintenance program and addressed as standalone checks and scheduled accordingly.

World Atlantic Airlines uses a Pratt and Whitney Engine Health Monitoring (EHM) for condition monitoring of its JT8D engines.

The following is the history of N807WA that lists the time limitation for inspection and check procedures:

| Checks | Date of recent Inspection | Location | Total Time | Total Cycles |
|-----------------|---------------------------|----------|------------|--------------|
| Daily MTX Check | 4/19/2018 | BRO | 43,720 | 39,537 |
| Service Check | 4/17/2018 | BRO | 43,708 | 39,532 |
| A1 Check | 1/26/2018 | MIA | 43,461 | 39,399 |
| A2 Check | 11/16/2017 | MIA | 43,299 | 39,321 |
| A4 Check* | 11/14/2016 | AEX | 42,106 | 38,768 |
| C1 Check | 1/26/2018 | MIA | 43,461 | 39,399 |
| C2 Check | 4/20/2017 | MIA | 42,733 | 39,042 |
| C3 Check | 1/26/2018 | MIA | 43,461 | 39,399 |
| C4 Check | 8/30/2014 | MHK | 40,301 | 37,837 |
| C5 Check | 12/18/2015 | MIA | 40,888 | 38,156 |
| C6 Check | 12/18/2015 | MIA | 40,888 | 38,156 |
| C8 Check* | 6/30/2009 | MIA | 34,358 | 34,755 |

*The Maintenance Program does not have a A3 Check or C7 Check

6.0 Continuing Analysis and Surveillance System (CASS)²

To comply with requirements of 14 CFR Part 121.373, World Atlantic Airlines has an approved CASS program, which is a systems approach to assess the performance and effectiveness of the World Atlantic Airlines Continuous Airworthiness Maintenance Program (CAMP).

The World Atlantic Airlines CASS has four primary functional elements for its inspection, other maintenance, preventative maintenance and alterations program.

- (a) Surveillance of the maintenance program's effectiveness and performance
- (b) Analysis of the maintenance program's effectiveness and performance

Monthly CASS reports (February and March) were reviewed for 2018 with no systemic issues relating to the WAA fleets landing gear structure.

7.0 Minimum Equipment List (MEL)³

World Atlantic Airlines was authorized to use an approved MEL on its airplanes per its OpSpecs. At the time of the accident, there were two (left fuel temp indicator and right engine B loop engine would not test) open MEL items. Both items were being tracked.

8.0 Supplemental Type Certificates (STC)⁴

Supplemental Type Certificates (STCs), supplied by air carrier, were reviewed. A total of 13 STCs were documented by the operator. No landing gear/slides STCs were documented.

9.0 Airworthiness Directives (AD)⁵ and Service Bulletins (SB)

World Atlantic Airlines provided an AD summary for review. The AD summary contained the applicable Service Bulletins. A review of Airworthiness Directive status lists for the airplane, powerplants and appliances were conducted. No discrepancies were found during the review of the listing. There were three repetitive ADs applicable to the landing gear structure.

2004-05-03 – Repetitive inspection to detect fatigue cracking of the shock strut cylinder of the MLG. Repetitive inspections to be accomplished every 450 landings. The last accomplished inspection was on 11/16/2017. Previous inspections were accomplished on the airplane on 3/30/2017, 11/1/2016 and 2/29/2016.

² As established by 14 CFR Part 121.373, 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.

³ The FAA approved Minimum Equipment List contains a list of equipment and instruments that may be inoperative on a specific aircraft for continuing flight beyond a terminal point.

⁴ The FAA issues Supplement Type Certificates, which authorize a major change or alteration to an aircraft, engine or component that has been built under an approved Type Certificate.

⁵ Airworthiness Directive (AD) is a regulatory notice sent out by the FAA informing the operator of an action that must be taken for the aircraft to maintain its airworthiness status.

2004- 25-14 – MLG retract cylinder support fitting inspect/change. Repetitive inspections to be accomplished every 15,000 hours. The last accomplished inspection was on 3/24/2017; 14,009 remained until the next inspection was due.

2006-01-02 – Inspection of NLG Upper Lock Link Assembly. Repetitive inspections to be accomplished every 4,000 cycles. The last accomplished inspection was on July 10, 2014; 2,297 cycles.

Boeing SB MD80-32A286 R4 dated February 3, 1999 was released to prevent main landing gear shock strut cylinder fracturing which allowed the Main Landing Gear (MLG) to collapse during landing. Investigation of the previous failure revealed that fracture was caused by vibration induced high stress loads on the cylinder. The vibration was limited to speeds between 40 and 60 knots with the anti-ski system on during moderate to heavy braking. Repetitive dye penetrant and magnetic particle inspections were required to determine if a crack existed. Additionally, the installation of brake line hydraulic restrictors, if not previously accomplished per SB MD80-32-276, would minimize vibration induced stress loads and minimize possibility of cylinder failure. According to the records Avianca accomplished the modification and confirmed by Streamline Aviation during the Landing Gear Overhaul in 4/19/2011. This SB was a subject of AD 2004-05-03.

Boeing SB MD80-32A344 R5 dated December 20, 2006 was released to accomplish fluorescent magnetic particle inspections to minimize the possibility of a MLG shock strut cylinder fracture on MD-80 after in the installation of Boeing SB MD80-32A286. This SB was a subject of AD 2004-05-03.

10.0 Aircraft Flight Logs

Aircraft Flight Logs were reviewed from February 2015 thru April 2018. The review focused on Landing Gears and Escape Slide discrepancies on the accident airplane. No discrepancies of landing gears or escape slide issues were noted.

11.0 Weight and Balance Summary

World Atlantic Airlines uses a weight and balance program to ensure compliance with applicable airworthiness requirements and aircraft operation limitations. Air Operations weighs all aircraft on a scheduled basis to ensure accuracy of published basic operating weight data.

DC 9-83 aircraft must be weighed every 36 calendar months. The last weight and balance for N807WA was performed on January 24, 2018 and was accomplished at Miami, FL.

| | | |
|-------------------------|------------|-----------|
| Basic Operating Weight: | 86,860.7 | pounds |
| Arm: | 930.6 | inches |
| Moment: | 80831640.8 | lb-inches |

12.0 Service Difficulty Reports (SDR)⁶ and Mechanical Interruption Summary Report (MISR)⁷

World Atlantic Airlines reported two SDR (2017 and 2016) and one MISR (2017) for the accident airplane. One (July 2016) affected the Left-Hand Landing Gear where the gear open light and unsafe light illuminated after gear retraction. Further review revealed the MLG inboard lower link assembly was damaged, WAA replaced the damaged link assembly. 2017 MISR was for wire burning smell in the cabin.

13.0 Major Repairs and Alterations

Major repairs (6) and alterations (9) were documented and reviewed. There were no major repairs or alterations on either the landing gear system or evacuation slides of the accident airplane.

14.0 Time Limit Components

Time Limit component status for the airplane, the two installed powerplants and the APU were reviewed. The review included time limited rotatable components installed on N807WA. Components are tracked by the manufacturer part and serial number.

15.0 Vendors

The Maintenance Group reviewed the Approved Vendor List provided by World Atlantic Airlines. World Atlantic Airlines accomplished audits of their essential maintenance providers and critical vendors on a yearly/24-month basis. There were no discrepancies in the listing.

16.0 Method of Record Keeping

World Atlantic Airlines Record keeping system maintains aircraft, engine, and component records using both hard copy and a Computerized Tracking System (CTS). At times paper records are sent and converted to electronic format in CTS. Historical paper records are retained in a safe, fire and water resistance facility. This includes everything required by 14 CFR 121.380 and 14 CFR 121.380A. All data are preserved and back up daily.

17.0 Flight Recorder Parameter Verification

The flight recorder parameter verification is a 15-month task per the World Atlantic Airlines maintenance program. The review process verifies that each parameter is being recorded correctly and if not, corrective action is taken. The parameter verification reviews both the FAA mandatory parameters and non-mandatory parameters. The last check was completed on January 8, 2018 by Aviation Safety Resource Services, Inc. Miami Springs, FL. The flight recorder data

⁶ As required under 14 CFR 121.703, each scheduled operator is to report the occurrence or detection of each failure, malfunction or defect concerning (a) fires during flight, (b) false fire warning during flight, (c) engine exhaust system that causes damage during flight, (e) an aircraft component that causes accumulation or circulation of smoke, vapor, or toxic or noxious fumes during flight, (f) engine shutdown during flight, (g) a propeller feathering, (h) aircraft structure requiring major repairs, (i) cracks, corrosion, (j) other safety critical issues as stated in the FAR part. These occurrences must be reported within 72 hours of the event.

⁷ Each scheduled operator is required under 14 CFR Part 121.705 to submit a summary of any (a) interruption to flight, (b) unscheduled change of aircraft en-route, or unscheduled stop or diversion from a route caused by known or suspected mechanical difficulties or malfunctions that are not required to be reported as service difficulty reports.

was downloaded and analyzed. There were several parameters that were corrected by World Atlantic Airlines Maintenance during the airplane's C check.

18.0 Manuals

- (a) General Maintenance Manual (GMM) – This section provides World Atlantic Airlines overview of how the policies, procedures, and documents in its manual system ensure compliance with the Federal Aviation Administration's (FAA) regulatory requirement for a Continued Airworthiness Maintenance Program (CAMP) as authorized in FAA issued Operation Specifications.
- (b) Illustrated Parts Catalog (IPC) – The IPC is intended for use in provisioning, requisitioning, storing, and issuing replaceable aircraft/engine parts and units, and identifying these parts. It is also used to list and illustrate assemblies and detailed parts, which are utilized for the aircraft/engines operated by World Atlantic Airlines. The part number content of the IPC arrangement and breakdown sequence of items is compatible with Air Transport Association (ATA) No. 100.
- (c) Maintenance Manuals (MM) – The Maintenance Manual contains the information necessary to service, troubleshoot, functionally check, repair and/or replace components installed on the aircraft/engines operated by World Atlantic Airlines. The manual identifies limits and tests for the associated components or systems.
- (d) Minimum Equipment List, Configuration Deviation List, and Dispatch Deviation Procedures - This manual provides information pertaining to the dispatch of aircraft with inoperative system(s)/configuration deviation and also references maintenance procedures relating to inoperative MEL items.
- (e) Overhaul Manual (OHM) – Provides technical data required to overhaul the various components installed on the aircraft. This data contains descriptive, disassembly, cleaning, check, repair, assembly, functional test, special tools, and illustrated parts information. The Overhaul Manual does not contain information relative to work normally performed on the flight line or in the aircraft maintenance operation.
- (f) Structural Repair Manual (SRM) – This manual contains material identifications for structure, subject to repairs generally applicable to structural components of the aircraft that are most likely to be damaged. Structural damage criteria fastener installation and procedures that must be performed concurrently with structural repair are identified.
- (g) Wiring Diagram Manual (WDM) – The WDM Manual contains combined electrical and electronic wiring diagrams and schematics, an electrical and electronics list, and electrical and electronic charts. The equipment list, contained within the WDM, is an approved source for obtaining correct part numbers for aircraft, engines or components.

- (j) Pratt and Whitney JT8D-200 Series Engine Manual and Pratt and Whitney JT8D-200 Engine Work Scope Planning Document – Manual used to support the proper use maintenance, inspection, repair, servicing and parts application of Pratt and Whitney engines.
- (k) Time Control Manual (TCM) – Contains all the time limited task cards used to maintain the WAA fleet.

19.0 Landing Gear Maintenance

The maintenance group reviewed the records associated with the landing gear installed on N807WA at time of the accident.

| MPD Task | Task Card | Description | Task | Interval | Last Accomplished |
|-----------|--------------|---|------|--------------------|--|
| 32-011-01 | 32-011-01-01 | Main Landing Gear Shock Strut | GVI | 1A | 1/26/2018 |
| 32-011-03 | 32-011-03-01 | Main Landing Gear Shock Strut | RST | 20,000 FC 10 YR | 4/19/2011 |
| 32-011-04 | 32-011-04-01 | Main Landing Gear Landing Gear Components | DIS | Life Limited | Being tracked on Life Limited Parts List in CTS. |
| 32-013-02 | 32-013-02-01 | Main Landing Gear Braces and Attachments | GVI | 1A | 1/26/2018 |
| 32-013-05 | 32-013-05-01 | Main Landing Gear Hydraulic Dampers | GVI | 1A | 1/26/2018 |

The Left Hand Main Landing Gear (P/N: 5930999-5503 S/N: S1001) was installed on the accident airplane on 5/10/2011. The Landing Gear was overhauled by Streamline Aviation, Inc. Miami, FL on 4/19/2011.

The Right Hand Main Landing Gear (P/N:5930999-5504 S/N: S1017) was installed on the accident airplane on 5/10/2011. The Landing Gear was overhauled by Streamline Aviation, Inc. Miami, FL on 4/19/2011.

20.0 Escape Slide Maintenance

| MPD Task | Task Card | Description | Task | Interval | Last Accomplished |
|-----------|--|-----------------------------|-----------|-----------|---|
| 25-060-05 | 25-060-05-01 25-060-05-02 25-060-05-03 | Slide and Life Raft Bottles | Visual CK | 1A | 1/26/2018 1/26/2018 1/26/2018 |
| 25-060-06 | 25-060-06-01 25-060-06-02 25-060-06-03 25-060-06-04 | Escape Slides | Restore | 36 Months | 1/19/2018 1/22/2018 4/20/2017 10/10/2015 |

Installation of the L1 Escape Slide (P/N: D29982-121 S/N: 1091) on the accident airplane on January 25, 2018. According to the WAA Maintenance Program, the escape slides are visually checked every Service Check. According to Maintenance Check paperwork, WAA accomplished

a Service Check 22 times since the installation of the L1 Escape Slide. There were no non-routines associated each of the 22 Service Checks related to a slide or slide bottle issue.

Service Check Task:

Check evaluation slides (PAX entrance door, FWD service door, AFT service door, empennage) for security, proper installation and condition Check bottle pressure and proper instructions placards installed.

Door 1 Left Slide Examination

During the accident sequence it was discovered that the Door 1 Left Slide did not deploy. The slide was quarantined and shipped to the Manufacturer (SAFRAN) for further examination. On May 3, 2018 and August 8, 2018, the Survival Factors Group met to examine the slide and inflation valve respectively. On May 10, 2019, SAFRAN released the Formal Report (Engineering Document Number (EDN) 4865) on the Slide.

The Manufacturer concluded the following:

- The unsuccessful deployment of the slide is the result of an empty inflation gas reservoir
- The slide was found in a fully packed condition with no evidence of gas flow into the assembly, even though the inflation valve was fully open, and the lacing cover was open.
- A floor run of the system was successful, indicating that the slide assembly and inflation system were capable of a successful slide deployment during the incident
- A slow leak was found on the Rupture Disk Assembly on the inflation valve. The leak was at a rate that would have emptied the gas reservoir over a period of several months.
- Disassembly of the Rupture Disk Assembly interior rim inside the body (See Report Figure 15) found three areas of surface corrosion. These areas are located on the sealing surface where the rupture disk contacts the assembly body.

On June 26, 2019, the Maintenance Group met with representative of Aviation Inflatables, Inc. to discuss the SAFRAN Report. According to records, Aviation Inflatables accomplished the overhaul of the slide per Zodiac Aerospace Component Maintenance Manual (CMM) 25-65-11 Rev29 on January 19, 2018 and later was installed on the accident airplane on January 25, 2018.

According to Aviation Inflatables Inc., Zodiac Aerospace CMM does not require a Maintenance Repair Organizations (MRO) to disassemble the Rupture Disk Assembly during the overhaul therefore the Rupture Disk Assembly is replaced should issues be found during external examination. Aviation Inflatables Inc. also noted that during testing of the Reservoir Valve Assembly there were no leaks noted after 12 hours.

The SAFRAN report also noted that a Gas Bubble was found on the Inflation Valve Outlet Port. According to Aviation Inflatables Inc., the CMM does not require an MRO to check for this specific leakage. The CMM requires that the whole assembly be put together for testing as a system (valve and bottle assembly). Again, the system passed the test during the overhaul of the slide in January 19, 2018.

21.0 Operator Actions

After the accident, World Atlantic Airlines took the following actions with regards to the inspection of the landing gear and evacuation slides:

1. World Atlantic management team instructed the Planning Department to set up and scheduled a fleet campaign to reinspect with NDT (as instructed in the AD 2004-05-03 and SB MD80-32-17-02) each main gear strut cylinder in advanced of their actual next due inspection schedule.
2. World Atlantic retrained their inspection personnel as well as the maintenance provider personnel on the accomplishment procedures of SB MD80-32-17-02 to ensure adherence to the instructions described in the S/B. Further, as part of the training, World Atlantic contacted experts in the area of CAD plating to learn more about how to detect and test CAD plating and CAD application on the material surfaces.
3. World Atlantic customized and revised task card 32-900-32A344 per S/B MD80-32-17-02 instructions to ensure step by step compliance by the technical personnel. Additional steps were added into the task card to tests for and verify for presence or lack of the CAD plating on the surface of the strut cylinder.
4. World Atlantic revised the Daily Check and Service Check Maintenance Cards to pay attention to the security, proper installation, condition and proper bottle pressure of the evacuation slides of the airplane.
5. An Operations/ Maintenance Bulletin 2019-07 (dated May 16, 2019) was released to remind all Maintenance and Cabin Crew Personnel about being diligent in checking the Emergency Evacuation Slides before any departure to ensure safe and reliable operation during an emergency.