



## **NATIONAL TRANSPORTATION SAFETY BOARD**

Office of Aviation Safety  
Washington, D.C. 20594

November 22, 2022

### **Group Chairman's Factual Report**

# **SURVIVAL FACTORS**

DCA22FA132

## A. ACCIDENT

Location: Miami, Florida  
Date: January 21, 2022  
Time: 1738 eastern daylight time  
Airplane: Boeing (McDonnell Douglas) DC-9-82, HI-1064, RED Air flight 203

## B. SURVIVAL FACTORS GROUP

Group Chairman            Emily Gibson  
                                 National Transportation Safety Board  
                                 Washington, DC

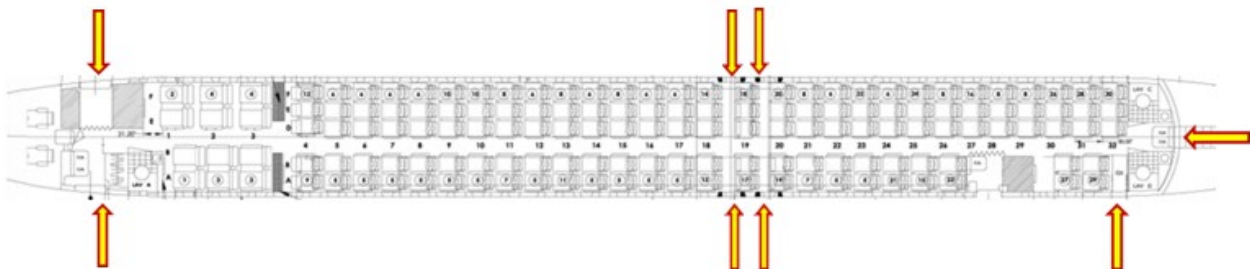
Group Member            Angela Cruz  
                                 The Boeing Company  
                                 Seattle, WA

## C. DETAILS OF THE INVESTIGATION

The Survival Factors Group was formed on scene. The group completed documentation of the wreckage and conducted interviews with first responders and flight attendants. The group obtained statements from other responders and various individuals that arrived on scene at the time of the accident. Other documentation was also collected to assist in the investigation. An examination of the forward R1 door slide was completed.

## D. FACTUAL INFORMATION

### 1.0 Airplane Configuration



**Figure 1- Layout of airplane depicting exits.**

The accident airplane, HI-1064, was a McDonnell Douglas MD-82. The airplane cabin was equipped with two exits forward of the wing (L1 and R1), two overwing window exits (OWWE) on both sides of the airplane at row 19 and 20, one floor level exit aft of the wing (L2) and a tailcone exit. The airplane cabin was configured as a two-class interior. There were 12 passenger seats in business class in a 2-2 configuration and 137 passenger seats in economy class, in a 3-2 configuration. There were 149 passenger seats total. There were three seats located in the flight deck: a captain seat, first officer seat, and an observer seat, located directly forward of the flight deck door. There were five cabin crew seats, one double occupancy aft facing retractable jumpseat adjacent to the forward exit (L1), one single occupant aft facing retractable jumpseat forward of the L2 door, and one double forward facing retractable jumpseat located on the aft tailcone interior door.

## 2.0 Cabin Crew Information

Position	Jumpseat Location	Date of Hire
Lead FA 1	L1, inboard seat	January 2019
FA 2	Aft tailcone	November 2021
FA 3	L2	December 2021
FA 4	L1, outboard seat	December 2018

There were two additional flight attendants in training that were observing onboard the airplane. According to interviews, they assisted with special assist passengers who needed help getting off the airplane.<sup>1</sup> There were approximately 11 special assist passengers who required assistance. The four flight attendants were interviewed at the Miami-Dade Airport. Because the flight attendants spoke little to no English a translator was provided.

### 2.1 Red Air Flight Attendant Manual

The flight attendant manuals and checklists were found onboard the airplane. They were written in Spanish.

### 2.2 Flight Attendant Interviews

All four flight attendant interviews were conducted on June 23, 2022. The flight attendant interview summaries are included as attachment 1 of this report.

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<sup>1</sup> See attachment 1 for Flight attendant interview summaries.

### 3.0 Airplane Documentation

The airplane was found resting on the fuselage with all landing gear collapsed. L1 and L2 were found opened with evacuation slides fully inflated and usable. The forward right OWWE was opened, and both left OWWE were opened. The R1, tailcone, and aft right OWWE were not opened.



**Figure 2- Left side of the airplane.**



**Figure 3- Right side of the airplane.**

#### **4.0 Interior Documentation**

The interior of the cabin remained intact. The overhead stowage bins and the passenger service units (PSU) panels were all in place. There was no noticeable deformation of monuments. There was no visible buckling of the floor structure, however, on the right side of the cabin one bank of seats at row 29 DEF was found to be off the track and easily moved up and down and another seat bank at row 23 DEF was missing a screw that fastened the seat bank to the track and could be moved back and forth slightly. Further inspection revealed other seat banks with loose fasteners.



**Figure 4- Cabin interior, main aisle looking aft.**



**Figure 5- Cabin interior, main aisle looking forward.**

#### **4.1 Airplane Doors, Evacuation Slides, and Overwing Window Exits**

The airplane was equipped with two forward exits (L1 and R1), four overwing window exits (OWWE, 2 on each side located at rows 19 and 20), and one exit in the aft part of the cabin, forward of row 31 (L2), and a tailcone exit. L1, R1, L2, and the tailcone exits were equipped with evacuation slides. The OWWE were not equipped with evacuation slides. The OWWE evacuation route was onto the wing and off the trailing edge to the ground.

### 4.1.1 Flight Deck Escape Routes

The flight deck had two escape windows, one on the left and one on the right. Neither flight deck window was opened or used by the flight crew for egress. Both flight crew exited the flight deck through the flight deck door and used the doors in the cabin to exit. One flight crew used the L1 exit and the other used L2 to egress. The flight deck floor was intact. Both flight deck windows were found to be operational. They were easily opened and could be locked in the open position.

### 4.1.2 Cabin Evacuation Routes

There was no visible buckling of the floor structure in the main aisles or in the passageways leading up to the exits. The main aisle and passageways to the floor level exits were primarily clear.

The passageways leading up to the OWWE were littered with personal effects (i.e., glasses, jackets, baggage). On the right side, the forward right OWWE hatch was resting on the cabin floor leaning against the seatbacks forward of the exit. On the left side, one OWWE hatch was found on the trailing edge of the left wing and another OWWE hatch was found on the cabin floor near the forward exit. The lifelines were not used and found stowed.

Passengers used L1, both left OWWE and L2 for egress. The forward right OWWE was used by 1-3 passengers before the fire started. The evacuation slides automatically deployed after doors L1 and L2 opened. The aft right OWWE was not used during the evacuation. Door L1 was opened by flight attendant four, the L2 door was opened by flight attendant three, and the OWWE were opened by passengers seated in the emergency exit rows.



LH Side of Aircraft Looking Aft

LH Side of Aircraft Looking Fwd

**Figure 6- Left emergency exits and slides.**





**Figure 7- Right overwing window exits.**

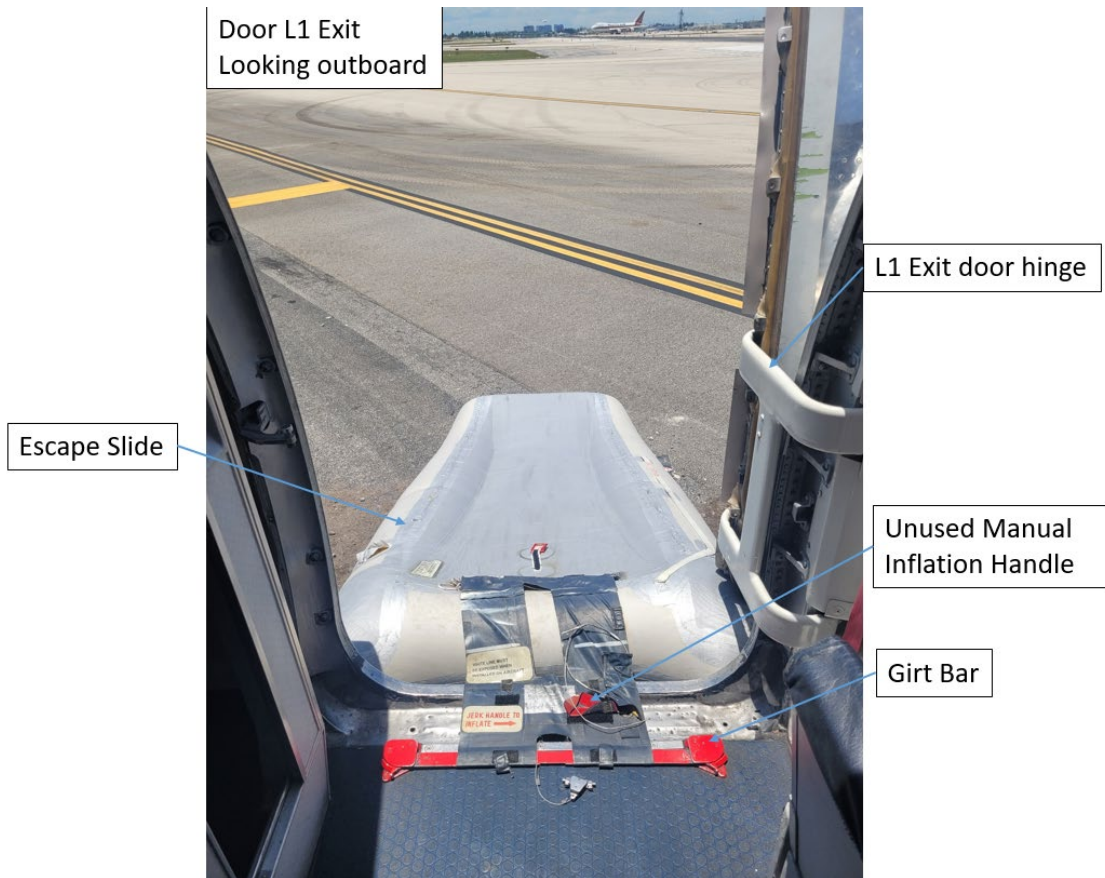
All the doors and OWWE hatches were inspected and had no visible structural damage. There was minor damage found on the aft OWWE hatch on the trailing edge of the wing. There were no matching marks on the hatch frames on the fuselage. All doors and hatches were able to be reinstalled and operable. The marked OWWE hatch was found next to the corresponding opened exit.

The OWWE part numbers were labeled:

- Left forward overwing: P/N: 5910159, ED No: 405, FSN 53027, Prod: 349118
- Left aft overwing: P/N: 5910159, ED No: 405, FSN 53027, Prod: not decipherable.
- Right forward overwing: P/N: 5910159, ED No: 404, FSN 53027, Prod: 3493168

The exits that were not used for evacuation (R1 and the tailcone) were opened and slides deployed. R1 opened easily, and the slide automatically deployed once the door

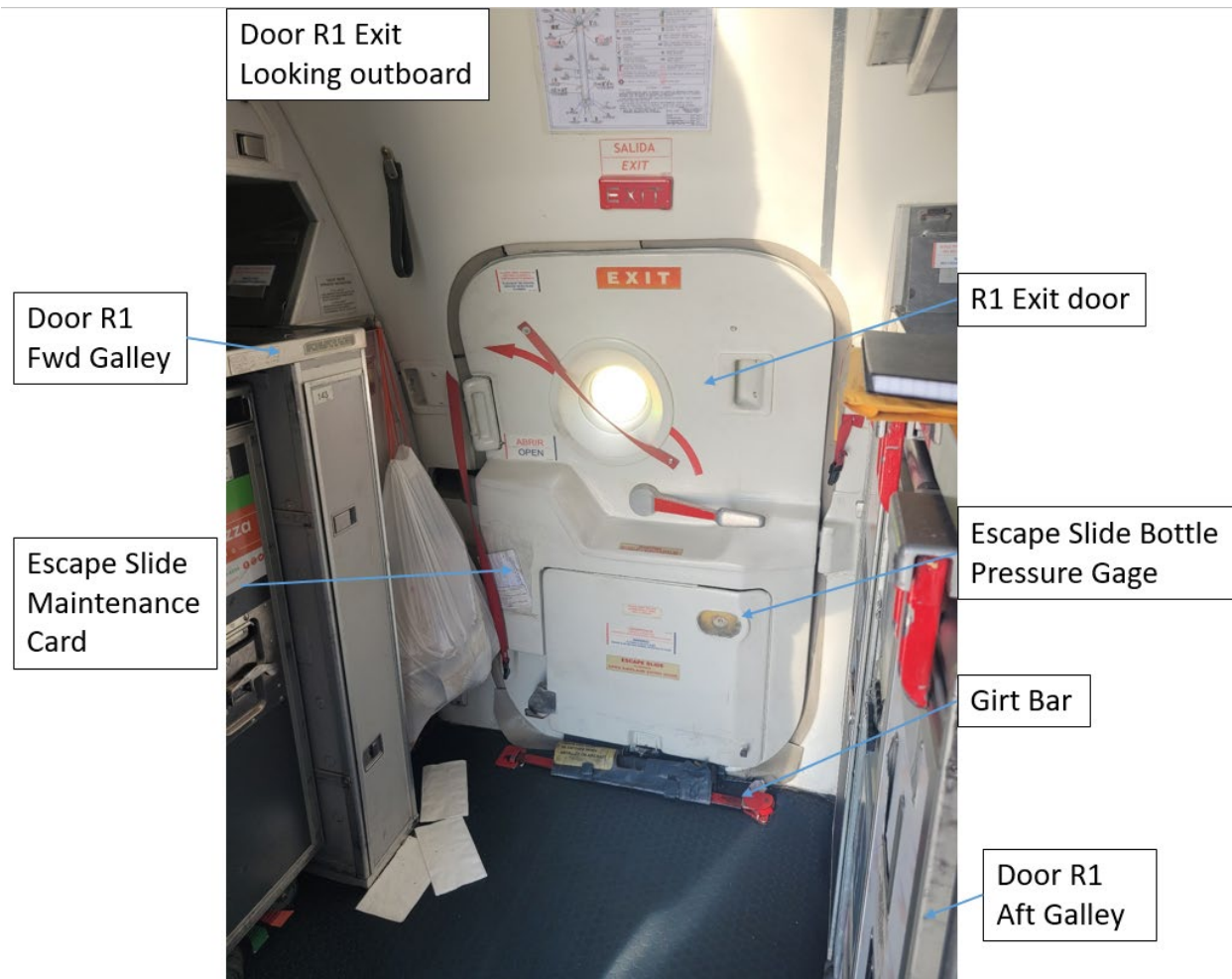
was fully opened. The R1 slide deflated about 3 minutes after inflation. There was loud pop and hissing sound as the slide deflated. The slide was removed by the Survival Factors group and sent to the manufacturer for examination<sup>2</sup>. The tailcone interior exit door was opened in the disarmed mode which functioned properly. The tailcone exterior exit was released successfully using the manual release handle however, due to the tail down of the aft fuselage, the slide was not automatically deployed and the tailcone had to be rolled away to manually deploy the escape slide.



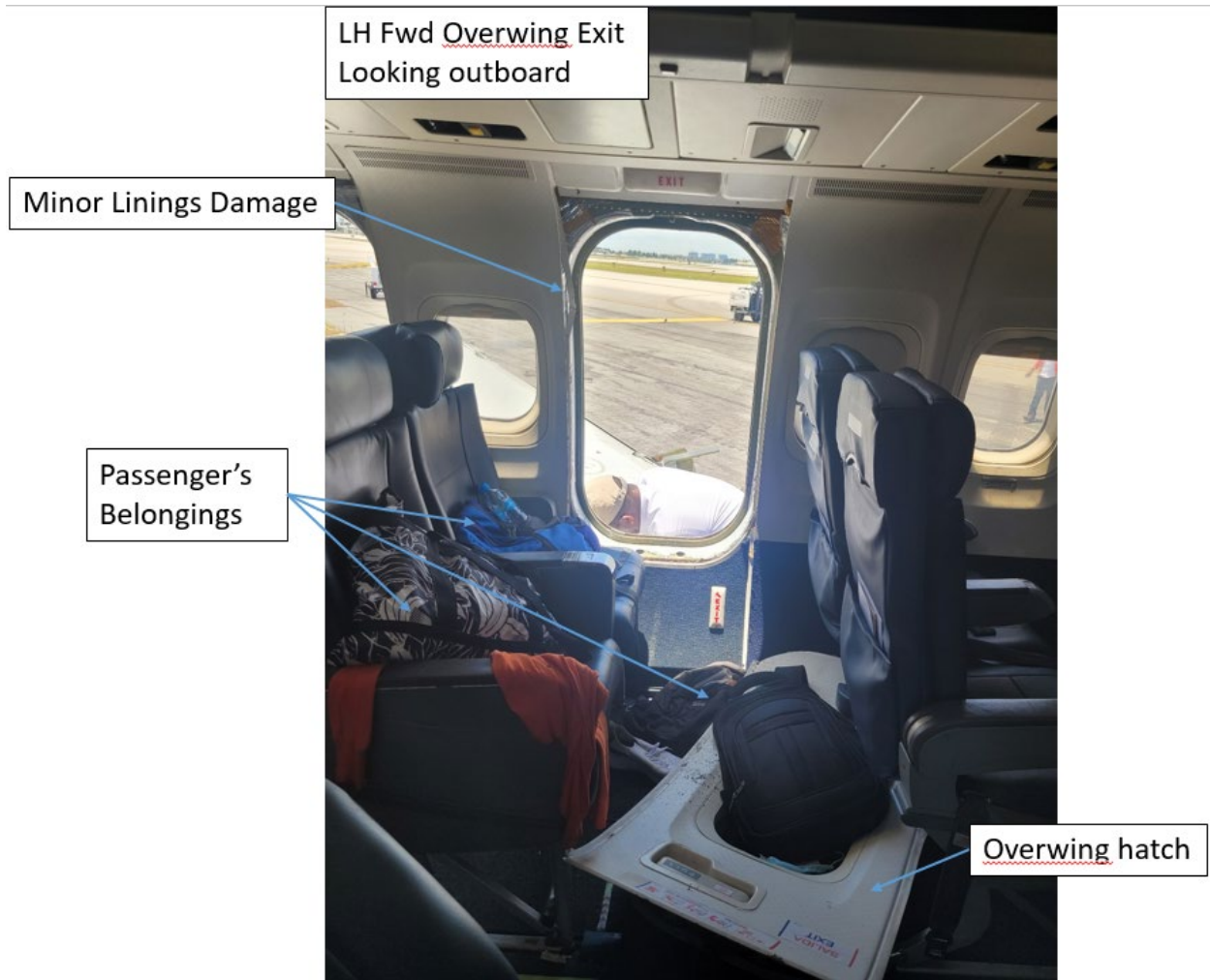
**Figure 8- L1 exit looking out.**

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<sup>2</sup> See attachment 3 slide investigation report.



**Figure 9- R1 exit looking out.**



**Figure 10- Forward left overwing window exit looking out.**



**Figure 11- Aft left overwing window exit looking out.**



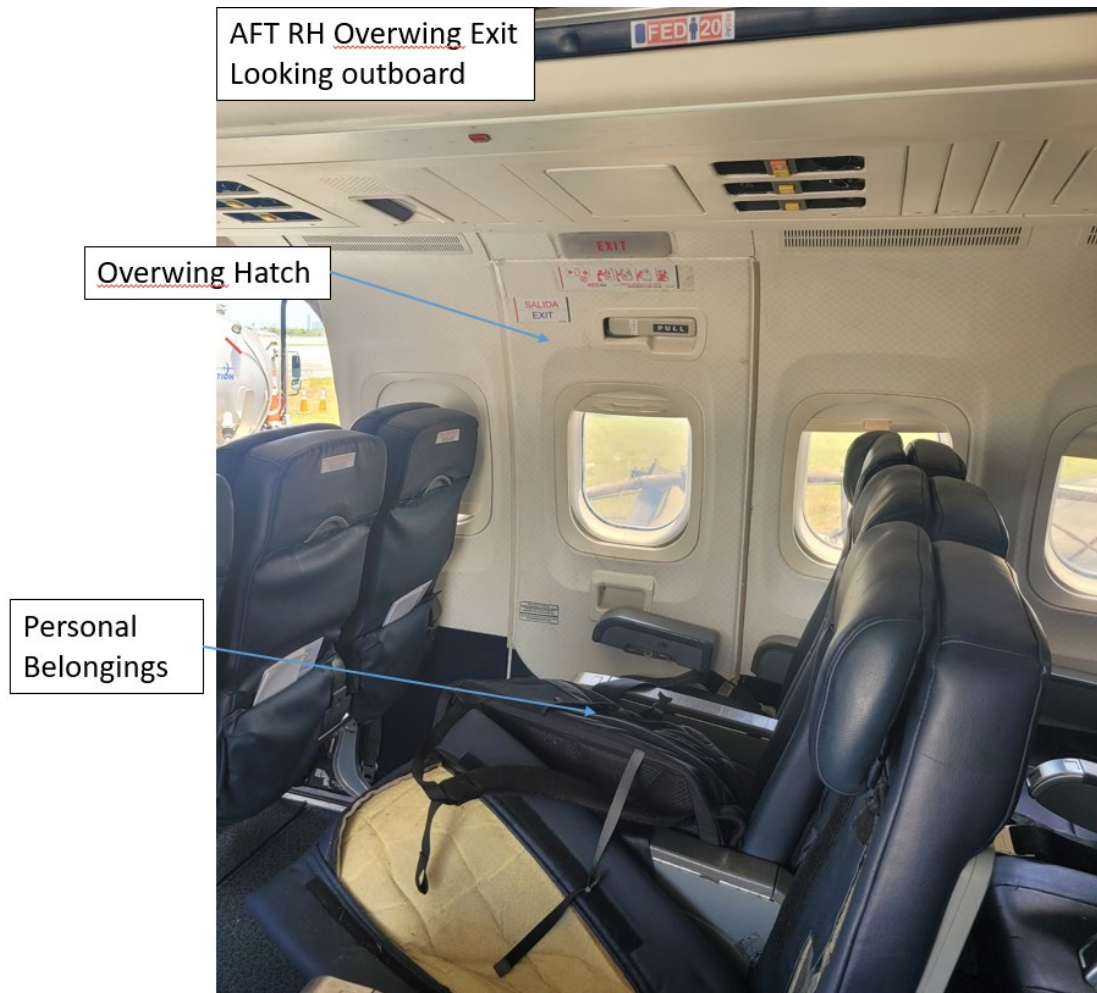
**Figure 12- Aft left overwing window hatch location.**

FWD RH Overwing Exit  
Looking outboard

Overwing Hatch



**Figure 13- Forward right overwing window exit looking out.**



AFT RH Overwing Exit  
Looking outboard

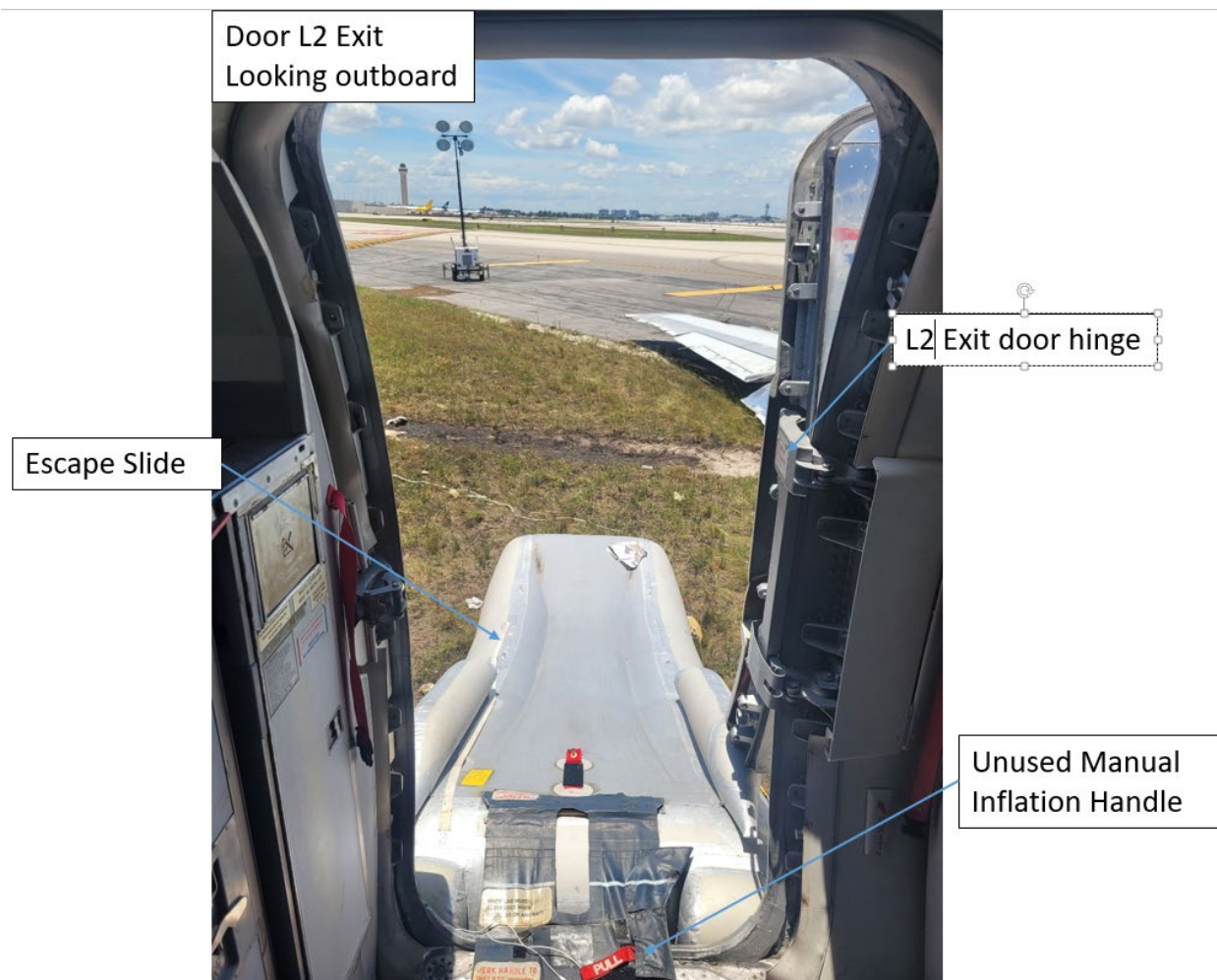
Overwing Hatch

Personal Belongings

**Figure 14- Aft right overwing window exit.**



**Figure 15- Overwing window exit hatch placard.**



**Figure 16- L2 exit looking out.**

### **4.1.3 Emergency Evacuation Slides**

The evacuation slides at the L1 and L2 doors were deployed and used during the evacuation. The evacuation began from the left OWWE and L2 door. There was at least one passenger observed through video footage walking around from the nose of the airplane after they exited through the right OWWE. The slide manufacturer for the L1, R1, and L2 slides was Safran Aerospace and the slide manufacturer for the tailcone slide was Collins Aerospace.

### **4.1.4 L1 Evacuation Slide**

The L1 slide was fully deployed and used during the evacuation. The inspection record on the slide container was in Spanish and labeled as an "airworthiness approval tag," Form INAC 21-004. The company who performed the inspection was NESKO.



There were no anomalies found with the slide system or observed during the evacuation. The slide was labeled:

P/N D29982-125

Slide assembly Part Number: D31602-109 Rev B

Serial Number: 3216

Date of Manufacturer: Mar 2014

Marking on lacing cover: MOD PER S.B 304-25-20

Inspection Performed: 8/19/2021



**Figure 17- L1 evacuation slide.**

#### 4.1.5 R1 Evacuation Slide

The R1 slide was not deployed or used during the evacuation. The inspection record was on the door bustle and was labeled 8130-3. The company that performed the last overhaul was BF Aerospace in Davie, Florida. The slide was labeled:

P/N: D29982-121

Slide assembly Part Number: D31602-109 Rev BE

Serial Number: 2469

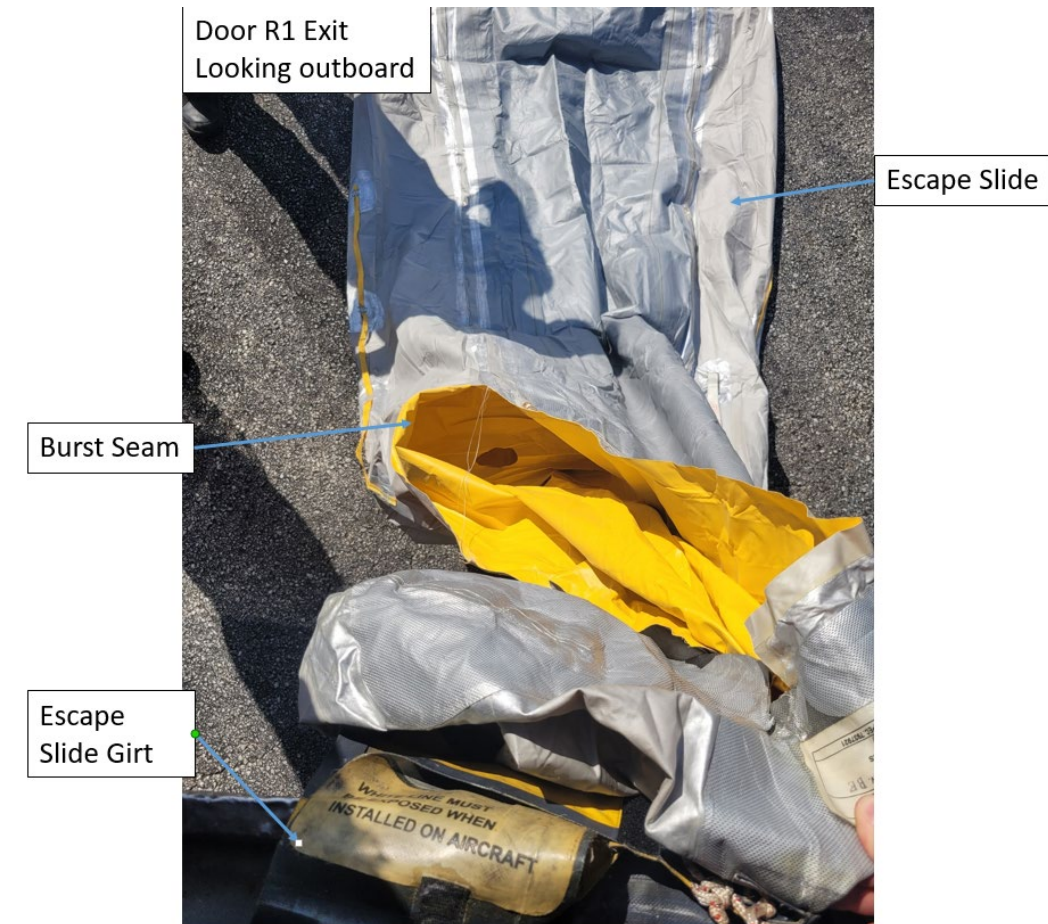
Date of Manufacturer: Jan 2000

Marking on lacing cover: Inspection sticker showing BE Aerospace

Inspection Performed: 11/2021



**Figure 18- R1 slide fully deployed prior to deflation.**



**Figure 19- R1 burst seam.**

#### **4.1.6 L2 Evacuation Slide**

The L2 slide was fully deployed and was used during the evacuation. The inspection record was on the door bustle and labeled 8130-3. The company that performed the last overhaul was Carmas Aviation Equipment (CAE) Inc. in Medley, Florida. There were no anomalies found with the slide system or observed during the evacuation. It was labeled:

P/N D29985-103

Slide assembly Part Number: D31610-105 Rev BM

Serial Number: 1290

Date of Manufacturer: APR 2012

Marking on lacing cover: MOD Per SB 304-25-20

Inspection Performed: Nov 2020



**Figure 20- L2 evacuation slide.**

#### **4.1.7 Tailcone Evacuation Slide**

The inspection record on the slide container was in Spanish and labeled as an "airworthiness approval tag," Form INAC 21-004. The company who performed the inspection was NESKO. The slide was labeled:

P/N 100506-203 Rev N

Slide assembly Part Number: 105508-203 Rev K

Serial Number: D9T069

Date of Manufacturer: Nov 1997

Marking on lacing cover: Nothing notable found on the slide container.

Inspection Performed: Dec 2021



**Figure 21- Tailcone evacuation slide.**

## **4.2 Cabin Documentation**

### **4.2.1 Emergency Equipment**

The location of emergency equipment is depicted in the below diagram. The diagram was positioned at each exit door. Every piece of equipment was accounted for onboard the airplane.

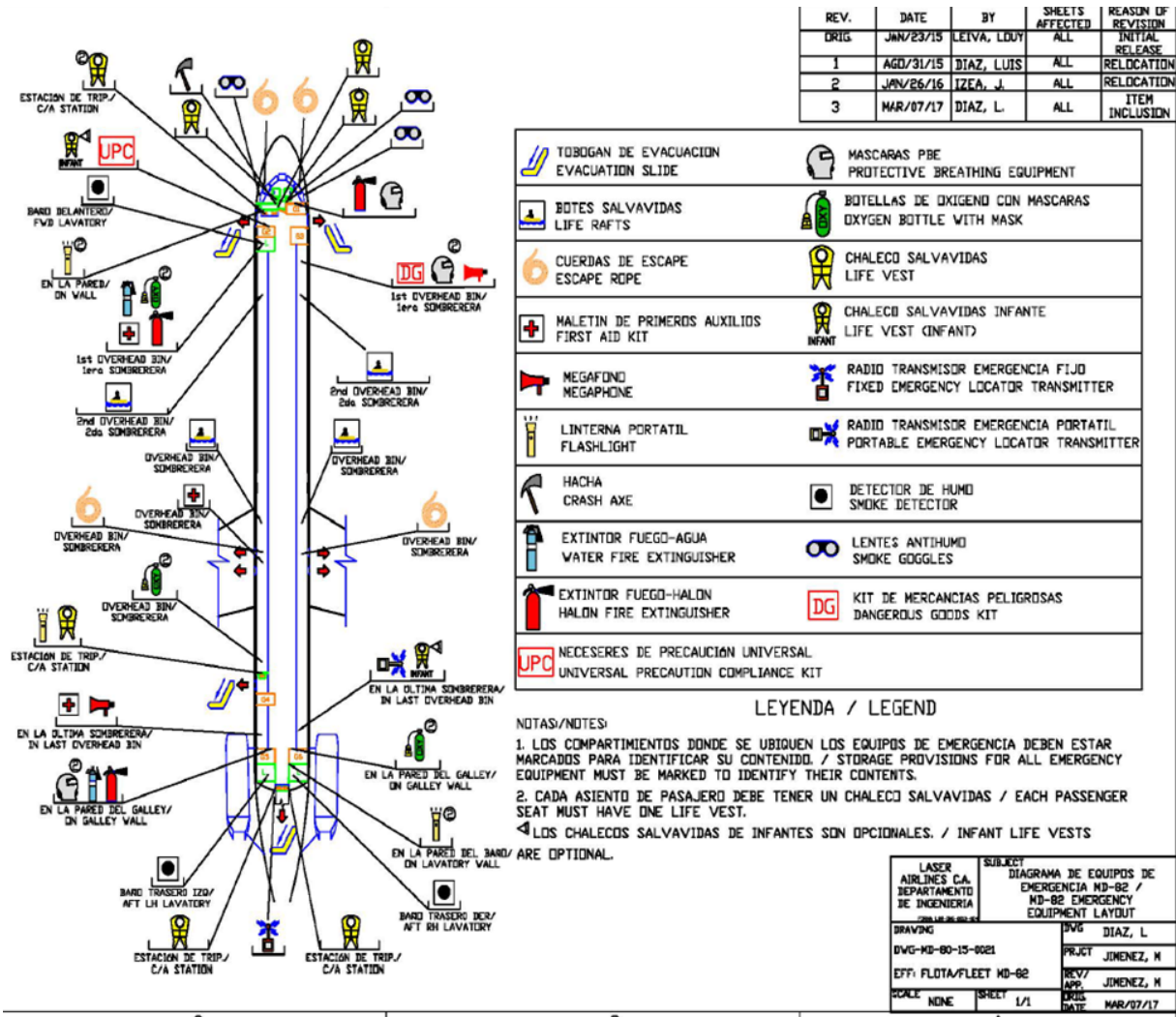


Figure 22- Emergency equipment layout diagram.

## 4.2.2 Flight Attendant Jumpseats

### 4.2.2.1 Forward Flight Attendant Jumpseat Station (L1 and R1)

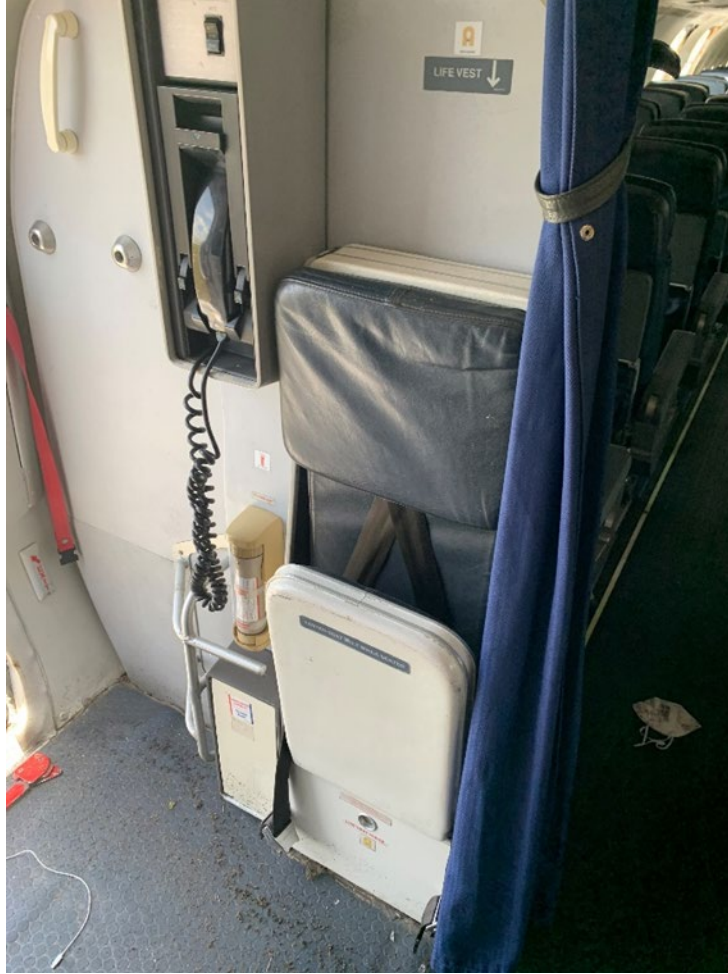
The emergency lights were not armed and in the off position on the flight attendant panel (FAP). The FAP held a flashlight and interphone. There were two lifevests and fire extinguisher under the jumpseat. Adjacent to the jumpseat a closet held first aid kit, infant lifevests, and a flight attendant manual (Spanish). The seat bottom retracted and there was no deformation. The restraints retracted. The restraint closest to the L1 door was still buckled and the restraint outboard was unbuckled.



**Figure 23 - Forward flight attendant jumpseat station.**

#### **4.2.2.2 Aft Flight Attendant Jumpseat Station (L2)**

The aft L2 flight attendant station held a flashlight and an interphone. There was a lifevest and fire extinguisher under the jumpseat. The seat bottom retracted and there was no deformation. The restraints retracted. The restraint was unbuckled.



**Figure 24- Aft L2 flight attendant jumpseat station.**

#### **4.2.2.3 Aft Flight Attendant Jumpseat Station (Tailcone)**

To the left of the flight attendant jumpseat station there was a flight attendant panel with light controls and an interphone. To right of the station there were two flashlights. There were lifevests and a fire extinguisher under the jumpseat. The seat bottom retracted and there was no deformation. The restraints retracted. The right-side restraint was buckled, and the left side restraint was unbuckled.





**Figure 25 - AFT flight attendant jumpseat station at the tailcone.**

#### **4.2.2.4 Flight Attendant Jumpseat Restraints**

The restraint system consisted of an adjustable lapbelt and shoulder harness. All the restraints retracted and showed no signs of tear or fraying. The restraints were labeled:

Amsafe Inc.  
1043 N. 47<sup>th</sup> Ave Phoenix AZ 85043  
Conforms to FAA

Insert Tab  
PMA SUPP 4, 99  
P/N 501995-215-2251  
MFR 35F89 DMF A1110  
ASSY 501995-409-2251  
S/A  
M/NUM  
C/PNR  
SN

### Buckle End

PMA SUPP 4, 99

P/N 501995-213-2251

MFR 35FB9 DMF A1112

ASSY 501995-409-2251

S/A

M/NUM 449470

C/PNR

Conforms to FAA TSO C221

### **4.2.3 Galleys**

The airplane was equipped with three galley consoles, referred to as G1, G2, and G3. There were two galley consoles in the forward part of the airplane cabin and one in the aft. The galley contained ovens, waste containers (trash cart), coffee makers (however, no coffee pots were onboard or used), storage/servicing carts, and stowage bins. The galleys were equipped with an electrical power and water system. Light controls were also located on the galley electric panel.

#### **4.2.3.1 Forward Galleys (G1 and G2)**

All galley bins were stowed, locked, and latched at the time of documentation. Galley carts were locked and secured with latches. There was a bag of trash strapped to one of the latches on the galley cart adjacent to R1 door.



**Figure 26- Forward galley (G1 and G2).**

#### **4.2.3.2 Aft Galley (G3)**

All galley bins were stowed, locked, and latched. Galley carts were locked and secured with latches.



**Figure 27- Aft galley.<sup>3</sup>**

#### **4.2.4 Lavatories**

There were three lavatories on the airplane. None of the lavatory oxygen masks had deployed.

#### **4.2.5 Lifevest**

Lifevest were single chamber and manufactured by Regent Survival Solutions. They were stowed under passenger seats in a translucent plastic bag with the corresponding seat number written on it. Most were stowed under the seat; however, a few were found in the seat aisles. They were labeled:

Part Number: RSS-301T  
Serial Number 1-2027263  
Date of Cert 2013-09-25  
Overhaul Due- @023-12-25  
Adult/Child  
TSO 013 and ETSO-C13F

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<sup>3</sup> Photograph taken after airplane was moved and additional items put inside airplane cabin.

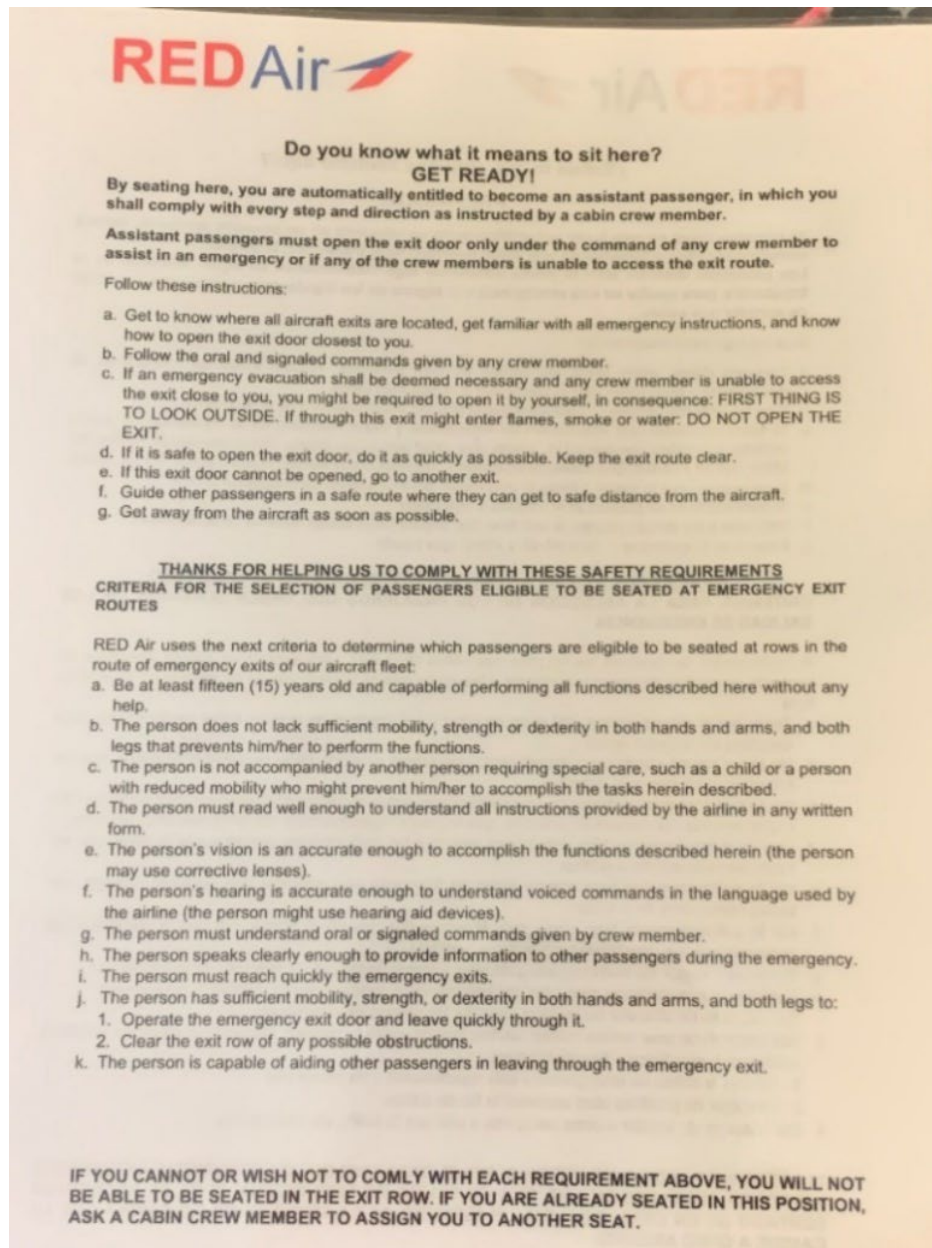
#### **4.2.6 Additional Cabin Information**

The first three rows of the airplane were business class configuration with seat pairs designated AC (left) and EF (right), with the A and F seats at the window. One backpack was found under a seat and personal effects were in the seatback pockets. There was no other luggage in the overhead bins in these rows or under the seats.

Economy class configuration began at row four, aft of a bulkhead and curtain. These seats were designated as AC (left) and DEF (right), with the A and F seats at the window. There was luggage in most all the overhead bins in economy. A total of eight overhead bins were open at the time of documentation. All the closed overhead bins had luggage inside them, and most of the open overhead bins also contained some luggage. Row 17 AC contained children's items. There was a stroller in the overhead bin at row 5 DEF. There were a few lifevest on the floor.

The last row of the cabin was row thirty-two. Row 31 and 32 AC were aft of the bulkhead behind door L2. There was no row 27 through 30 on the left side. Row 24 through 26 had "spiderweb" cracks in the windows inside the cabin and it was noted that the exterior windows at about row 22 through 26 were cracked. This was near the fire on the wing. Row 22 was the fourth window aft of the aft right OWWE. None of the PSUs fell and all overhead bins were intact.

There was an exit row seating briefing card in the seatback of all the OWWE seats. The OWWE had tray tables stowed in the armrests of the seat.



**Figure 28- Exit row seating briefing card (English).**

## **5.0 Passengers**

There were 130 passengers onboard the airplane (126 passengers and four lapheld infants). There were two pilots, two flight mechanics (seated in passenger seats in the aft cabin), four flight attendants, and two training/observing flight attendants (both seated in a passenger seat, one in the aft and one toward the front to mid cabin) onboard the airplane. There were 140 total occupants onboard. According to the manifest, 117 passengers were Venezuelan nationals, one passenger from Mexico, one passenger from Italy, one passenger from Spain, three passengers from the United States, and seven passengers from the Dominican Republic. The first officer, flight attendants and flight mechanics were all Dominican nationals, and the captain was a Venezuelan national.

### **5.1 Passengers Restraints**

Buckle-  
Amsafe Belts  
P/N 502755-128-2251  
M/N 502 751-1  
rated 3000 lbs.  
conforms to TSO C 221f

Insert Tab-  
P/N 502755-128-2251  
M/N 502751-1  
3000 lbs.  
Conforms to TSO C221f

### **5.2 Passenger Seat**

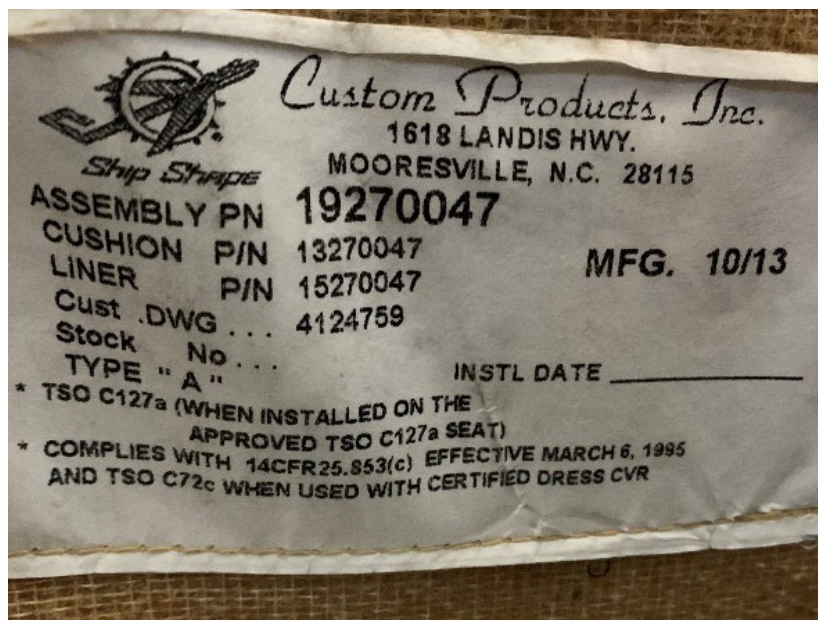
Seat tube information for economy class was labeled:

Recaro Aircraft Seats  
Made in Germany  
74523 Schwabisch Hall  
Part No: 778-32-42A through 44A  
Model No: 3410  
Serial No: 257465  
Weight: 44.900kg  
Date: 20.09.1999

Seat tube information for Business class was labeled:

1455 Fairchild Road  
Winston Salem, NC 27105  
USA  
P/N 48203445  
P/O 905432  
Rev B  
DOM May 08  
Type A  
Batch BRAD1226

All the seat cushions were labeled:



**Figure 29- Seat cushion label.**



### 5.3 Passenger Safety Information Card



Figure 30- Passenger Safety Information Card.

## 5.4 Passenger Injury

Three passengers were transported with minor injuries to two local hospitals on scene and one additional passenger was transported from inside the terminal.

## 6.0 Airport Information and Documentation

Miami International Airport (MIA) was operated by the Miami-Dade Aviation Department and was the property of Miami-Dade County government.

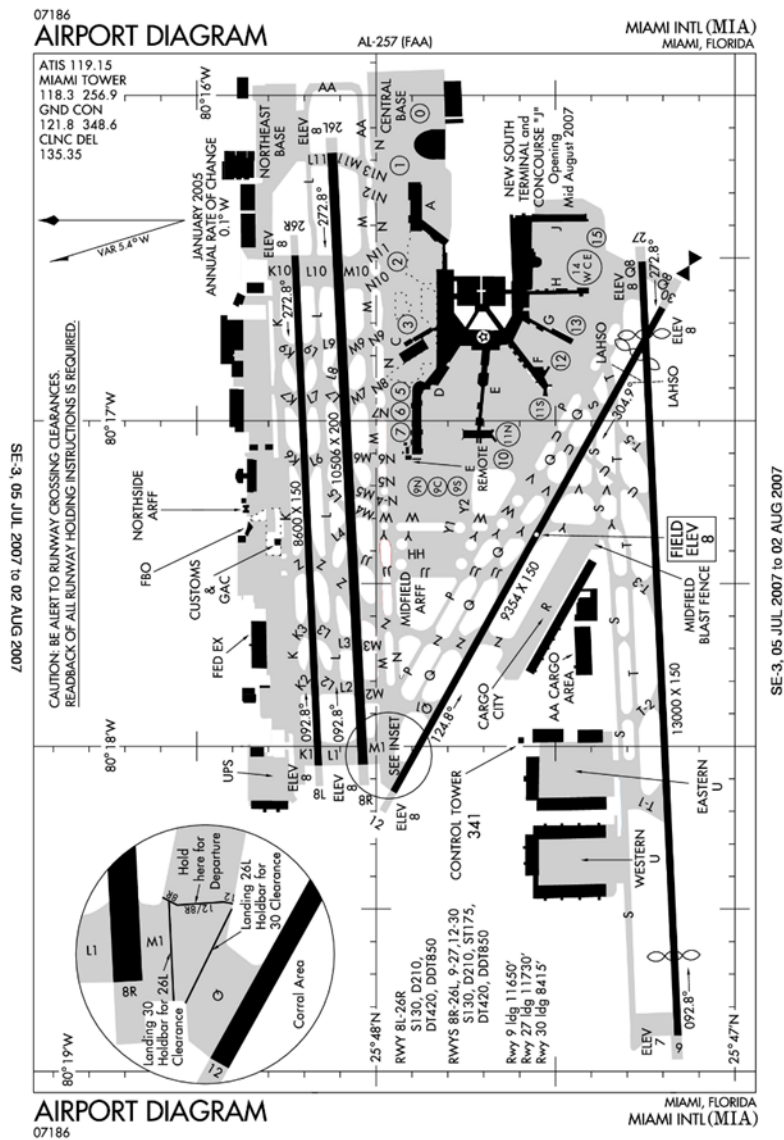


Figure 31- Airport Diagram.

## 7.0 Accident Summary

Before leaving Santo Domingo, the flight attendants briefed with the captain on the weather along the route to Miami, which was described as a little turbulent, and a review of emergency procedures for several types of emergencies which included the scenario of a post-crash fire after running off the runway. After the captain's briefing, they commenced boarding. There were 134 passengers including four lap-held infants and four other additional crewmembers in passenger seats. The safety information was provided to the passengers over the public address system and an exit row briefing was conducted.

The flight attendants described the flight as being calm and normal through takeoff and during service with some slight turbulence on descent. The initial touchdown was smooth, however, as soon as the thrust reversers were activated, the flight attendants felt vibration and it was exceptionally loud inside the cabin, then suddenly, the thrust reversers were turned off. They reported that the thrust reversers were activated quicker and shorter than normal. There was another "extreme shake" which felt harder than the vibrations prior. The vibrations in the cabin were so excessive that everything inside the airplane cabin was shaking. The flight attendants realized something was not right and instructed passengers to remain seated and to "get their heads down." The airplane started to sink toward the left side, then there was another sense of sinking, and then the airplane stopped completely.

Before the airplane stopped, an aft flight attendant saw fire near the right wing. Within 2 seconds after the airplane stopped, the aft flight attendants initiated an evacuation after not hearing anything over the PA from the flight deck and realizing there was a fire. One aft flight attendant immediately blocked his exit door while the other assessed the conditions outside her assigned door, verified the door was armed, and opened it. She stayed back to let the slide inflate automatically and to hold passengers back. Passengers were rushing to get out, she held onto a handle in the galley to brace herself and shouted "sit, slide, and get away from the airplane." While evacuating, she heard the captain say over the PA, "Evacuate left side."

The lead flight attendant waited for the captain to announce evacuation, but within a couple seconds, she heard passengers in the back yell "fire." She did not see fire or smoke however there was a smell of smoke. The lead flight attendant told the captain, "Fire in the rear of the aircraft." The captain announced on the PA, "Evacuate, evacuate, left side." They opened the main cabin door and the slide automatically inflated. It was at that moment, the lead flight attendant saw passengers from the rear of the cabin had already evacuated and those passengers were moving towards the nose of the airplane.

The passengers were "desperate" due to the fire but were cooperative and listened to commands. There was an elderly passenger who was picked up and placed

on the slide to evacuate. During the evacuation, one of the aft flight attendants moved to the OWWE that were opened by a passenger because he noticed some passengers were holding luggage and directed them to stop taking their bags and evacuate. He stayed on the right side to block the opened right-side OWWE and redirected passengers out the left side. Once the passengers were evacuated, two of the four flight attendants evacuated out the L1 exit while one had already evacuated out of the L2 door. The fourth flight attendant went back to the L2 door to retrieve emergency equipment, but he found it was difficult to breathe because of the thick smoke. He could see that the grey and black smoke was coming from the open right OWWE. Instead of getting any other equipment, he checked to ensure no passengers were in the back of the cabin and evacuated out of L2.

The captain and the first officer were last to evacuate. Once off the airplane the fire department kept passengers away from the airplane.

## **8.0 Emergency Response**

### **8.1 Emergency Response Equipment**

#### **8.1.1 Equipment Used**

The airport Aircraft Rescue and Fire Fighting (ARFF) units that were used during the accident were:

- (3) 6x6 3000-gallon Rosenbauer Panther HRET
- (1) 4x4 1500-gallon Rosenbauer Panther
- (1) Rosenbauer Airwolf Quick Response Vehicle (QRV)
- (1) Sutphin 70" Hazmat Platform apparatus
- (1) Sutphin Monarch Pumper apparatus
- (1) International rescue apparatus
- (1) ARFF Fire commander vehicle
- (1) ARFF Division chief vehicle

There was a total of 330 gallons of Chemguard 3% AFFF mill spec foam used to fight the fire.

The non-airport units that were used during the accident were:

- (4) Battalion chief vehicles
- (2) Division chief Vehicles
- (5) Engine apparatus
- (2) Ladder truck apparatus
- (7) Rescue apparatus

- (2) EMS captain vehicles
- (1) Public information officer
- (2) Mobile command post
- (3) Command staff vehicles

Of these units there were 105 personnel on scene from Miami-Dade Fire Rescue.

## **8.2 Emergency Response Summary**

After receiving the “ring down” tones alerting the firefighters of the crash on the airfield, firefighters rushed to the firetrucks. They heard over station speakers tower reporting, “alert 3 already on the ground, off the end of runway 9, and they are on fire.” Foam truck 2 proceeded out and ensured the taxiway was clear of aircraft. They headed straight up taxiway papa towards the airplane. They saw flames, fire, and heavy smoke enroute. Foam truck 2 arrived in less than a minute. When they first approached, passengers were already evacuating from the airplane on the left side. The left OWWE were open, and people were evacuating onto the L2 slide. The L1 door did not deploy until about 5 seconds after they arrived. They did not see any passengers on the right side of the airplane. The fire was coming from the right wing. Foam truck 2 positioned on the right side of the airplane, facing the tail, near the nose in front of the wing (45-degree angle to the wing) and assisted in extinguishing the fire on the right side by deploying the nozzles as they came around to the airplane. Before they had come to a stop, they were already spraying agent. They assigned the bumper nozzle to cool the wing and the fuselage then they deployed the turret to reach the wing that was on fire. The fire was under the middle of the right wing. There was also fire behind the wing beneath the fuselage mounted engine and tail.

As foam truck 1 approached, they saw a dark plume of smoke, they did not see the fire at first but saw passengers scrambling off the airplane. Once they were closer, they saw flames and the melted wing. Foam truck 1 positioned near the R1 door and applied a blanket of foam to cool the fuselage and knock the fire out at the same time. Foam truck 1 noticed the L1 door was not open yet and was concerned they may need to get out to get them. They yelled at passengers from the truck window to get away from the airplane.

The incident commander made a wide approach to the airplane to allow foam trucks to access. The first thing he saw were people coming out of the airplane and on the tarmac walking around. There was a definitive fire building around the right wing. Foam trucks 1 and 2 had already begun protecting the fuselage and knocking the fire.

When the fire was under control (10-15 minutes), the primary search of the airplane was conducted. A secondary search was conducted by foam truck 2 and another firefighter. They accessed the airplane via a ladder at the L1 door. The incident

commander was given a manifest from a folder in the cockpit door. Busses were used to get people off the tarmac. Some passengers had retrieved luggage, and many were recording with their phones. The amount of people on the ramp added a level of complexity.

The incident commander turned over command when foam truck 4 arrived (around 3-4 minutes later). Foam truck 4 was 'fire ground,' one who monitored and managed the foam trucks to maintain the foam blanket.

## **9.0 Evacuation Slide Examination**

The slide deflation was reported to Safran AeroSystems Evacuation (manufacturer of the subject Air Cruisers slide system) and was subsequently shipped to Safran AeroSystems Evacuation in Belmar, NJ for evaluation.

Approximately three minutes after the deployment, a loud pop and hissing sound was heard. The slide was found to have deflated from a tear on the upper section of the side tube on the left-hand side of the slide. The failure of the seam was a result of a failure of the adhesive bond within the seam. The slide was 22.5 years old and the deterioration of the adhesive was a result of age. The weakness of the seam in the side tube may not have been apparent during the last maintenance event, the slide assembly did have several areas of questionable adhesion of cemented seams and components. Specific inspections are recommended in the Extended Maintenance protocol in the CMM for slides older than 15 years. There were visible lifts around the aspirator blister assembly and significantly weak adhesion of the cement surrounding the top off valve on the slide body.

During the examination, it was found the slide system D29982-121 was misidentified as a manual inflation configuration. The appropriate system part number was D29982-125 based on the reservoir and valve assembly and operating cable installed in this D29982 slide system. The D29982-125 configuration was an 'automatic' inflation configuration. The slide system deployed in this manner.

## 10.0 Medical and Pathological Information

### 10.1 Injury Table

Type of injury	Flight Crew	Flight Attendants	Other Crew	Passengers	Total
<b>Fatal</b>	0	0	0	0	0
<b>Serious</b>	0	0	0	0	0
<b>Minor</b>	0	0	0	4	4
<b>None</b>	2	4	4	126	136

## E. LIST OF ATTACHMENTS

Attachment 1- Flight Attendant Interview Summary

Attachment 2- Emergency Response Interview Summary

Attachment 3- Emergency Evacuation RH Door Slide Failure Investigation Report

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