

**NATIONAL TRANSPORTATION SAFETY BOARD**

Office of Aviation Safety  
Washington, D.C. 20594

July 30, 2020

**Attachment 1 –Crew Statements**

**OPERATIONAL FACTORS**

**DCA20CA038**

Sunday, December 29, 2019

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|             |                   |               |                    |                  |                     |
|-------------|-------------------|---------------|--------------------|------------------|---------------------|
| Flight #    | <b>3960</b>       | Phase of Trip | <b>At the Gate</b> | Pilot            | [REDACTED]          |
| Flight Date | <b>12/16/2019</b> | Affected STA  | <b>SYS</b>         | Employee #       | [REDACTED]          |
| DEP Time    | <b>12:31 PM</b>   | Diversion?    | <b>No</b>          | Pilot Data       | <b>DFW-CA-EMJ-D</b> |
| DEP STA     | <b>DFW</b>        | ARV STA       | <b>GNV</b>         | Debrief Type     | <b>Pipeline</b>     |
| DEP Gate    | <b>E30</b>        | ARV Gate      | <b>2</b>           | Sub-Type         | <b>COMPLIANCE</b>   |
| Tail Nbr    | <b>N805</b>       |               |                    | Workflow         | <b>Pipeline</b>     |
| Fleet Type  | <b>EMJ</b>        |               |                    | Reply Requested? | <b>No</b>           |

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| CC Secondary Respondant | AEMOC           | [REDACTED] | [REDACTED] | [REDACTED] | <a href="#">Remove</a> |
| CC Secondary Respondant | AEMOC           | [REDACTED] | [REDACTED] | [REDACTED] | <a href="#">Remove</a> |
| To Read-Only Admin      | Emp/Gnd Sft     | [REDACTED] | [REDACTED] | [REDACTED] | <a href="#">Remove</a> |
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| To System Administrator | Emp/Gnd Sft     | [REDACTED] | [REDACTED] | [REDACTED] | <a href="#">Remove</a> |
| CC Submitting Pilot     | N/A             | [REDACTED] | [REDACTED] | [REDACTED] | <a href="#">Remove</a> |
| CC System Administrator | Dir Flight Ops  | [REDACTED] | [REDACTED] | [REDACTED] | <a href="#">Remove</a> |
| To Designated Recipient | Emp/Gnd Sft     | [REDACTED] | [REDACTED] | [REDACTED] | <a href="#">Remove</a> |

**One Line Summary** +Severe turbulence in flight**Event Description**

In level cruise flight at FL370 in vmc conditions. Mach .75 indicated. FO [REDACTED] was PF with the autopilot engaged. We were aware of convective activity ahead.

Approximately 50 miles away I make a PA to passengers about weather and possible turbulence ahead. Immediately followed by an intercom call to the FA with instructions to take her seat.

ATC reports other aircraft on our routing and similar altitudes have reported nothing worse than moderate chop, additionally one report of severe turbulence from a CRJ that was at a lower altitude and 45-60 minutes old.

Varying weather radar between -1 and +2 degrees tilt and 25 to 100 mile range. Radar depicts two buildups in front which we deviate in between visually. After passing between the buildups we enter IMC conditions that did not appear convective and was not returning any echoes on the radar.

Shortly after entering IMC we encountered moderate rain and moderate turbulence. The rain subsided but the turbulence soon became heavy, then severe. The following events happened in quick succession. Airspeed and altitude began fluctuating rapidly including the aircraft entering an over speed condition. FO Bahena retarded the thrust levers to idle and deployed the speed brakes. During the severe turbulence, large fluctuations in vertical speed occurred including a 4000+ fpm descent, noted by me. Additional VSI indications were not noted due to task saturation. The autopilot automatically disengaged simultaneous with stick shaker activation. EICAS displayed AUTOPILOT FAIL and YAW DAMPER FAIL. PLI indication was below the horizon. FO Bahena took controls and shortly thereafter returned the aircraft to a normal flight condition. Airspeed was now indicating approximately 200 knots. Altitude was approximately 36,600 feet. Spoilers were stowed and thrust levers were full forward.

FO [REDACTED] hand flew the aircraft and slowly regained airspeed while climbing back to assigned altitude of FL370. Turbulence was moderate and occasionally heavy during this recovery time.

I reported the severe turbulence event to ATC who responded with questions on any damage to the aircraft or injuries on board. I reported no damage or injuries to flight crew, and that we would call back once we've spoken to the FA.

I called the FA through the intercom and asked for injury and status reports. FA reports no injuries, just spilled drink and personal items. I relayed this information to ATC.

Approximately 5 minutes later FA calls and reports one injured passenger. I relay this information and a report of the event to dispatch through ACARS. Dispatch instructs me to ask for any doctors on board, and requests additional information about the passenger.

FA reports no doctors on board, additional information about the passenger, also that the passenger was okay with continuing to our destination but requested medical attention upon arriving.

We continue to our destination of KGNV without further incident.

After phone discussions with SOC/MOC, I entered "Severe turbulence encountered at FL370" into the AML book for aircraft N805AE.

**Keywords**[Assoc Keywords](#)

There are no keywords associated with this debrief.

**Message History**

**Created** [REDACTED] **12/26/2019 11:41:42 AM**

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Thank you for your pipeline and professionalism.

**Notes**

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Sunday, December 29, 2019

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|             |                   |               |                    |                  |                     |
|-------------|-------------------|---------------|--------------------|------------------|---------------------|
| Flight #    | <b>3960</b>       | Phase of Trip | <b>At the Gate</b> | Pilot            | [REDACTED]          |
| Flight Date | <b>12/16/2019</b> | Affected STA  | <b>DFW</b>         | Employee #       | [REDACTED]          |
| DEP Time    | <b>12:31 PM</b>   | Diversion?    | <b>No</b>          | Pilot Data       | <b>DFW-FO-EMJ-D</b> |
| DEP STA     | <b>DFW</b>        | ARV STA       | <b>GNV</b>         | Debrief Type     | <b>Pipeline</b>     |
| DEP Gate    | <b>E30</b>        | ARV Gate      | <b>2</b>           | Sub-Type         | <b>COMPLIANCE</b>   |
| Tail Nbr    | <b>N805</b>       |               |                    | Workflow         | <b>Pipeline</b>     |
| Fleet Type  | <b>EMJ</b>        |               |                    | Reply Requested? | <b>Yes</b>          |

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| CC System Administrator | Dir Fght Ln Ops | [REDACTED] | [REDACTED] | [REDACTED] | <a href="#">Remove</a> |
| CC Secondary Respondant | AEMOC           | [REDACTED] | [REDACTED] | [REDACTED] | <a href="#">Remove</a> |
| CC Secondary Respondant | AEMOC           | [REDACTED] | [REDACTED] | [REDACTED] | <a href="#">Remove</a> |
| To Read-Only Admin      | Emp/Gnd Sft     | [REDACTED] | [REDACTED] | [REDACTED] | <a href="#">Remove</a> |
| To Designated Recipient | Emp/Gnd Sft     | [REDACTED] | [REDACTED] | [REDACTED] | <a href="#">Remove</a> |
| To System Administrator | Emp/Gnd Sft     | [REDACTED] | [REDACTED] | [REDACTED] | <a href="#">Remove</a> |
| CC Submitting Pilot     | N/A             | [REDACTED] | [REDACTED] | [REDACTED] | <a href="#">Remove</a> |
| CC System Administrator | Dir Flight Ops  | [REDACTED] | [REDACTED] | [REDACTED] | <a href="#">Remove</a> |
| To Designated Recipient | Emp/Gnd Sft     | [REDACTED] | [REDACTED] | [REDACTED] | <a href="#">Remove</a> |

**One Line Summary** +Severe Turbulence Encounter**Event Description**

The following information is provided to the best of my ability and recollection. Flight 3960 departed from DFW bound to GNV. I was the pilot flying. The planned route was FORCK2 FORCK ELD MEI SZW KGNV. After turning eastbound on the departure procedure, ATC issued a heading for us to fly around the weather ahead. We turned to a heading of 120 degrees, with deviations approved as needed. The Captain asked ATC if other aircraft had successfully made over the line of weather and at what altitude. ATC confirmed that multiple aircraft had made it across at various altitudes with some deviations around the buildups with no more than light to moderate chop. We requested an altitude of FL370 and we continued on our heading and approached the cells. We leveled off at FL370. There was one cell to left (North) of us and one smaller cell to right (South). The captain made a PA that where approaching the area of weather. The Captain also advised the flight attendant to be seated. We passed in between the two cells with very little chop. We then got handed off to a different ATC frequency. The Captain checked in with ATC and we were given a single report from a CRJ, that passed through a nearby area 45 minutes to 1 hour prior, approximately 50 nm to our southeast. I adjusted our course to approximately 095 degrees to get in between two more cells ahead of us. The Captain asked ATC if there were any other ride reports. ATC advised that the aircraft getting through that area were reporting between light to moderate chop. I continued ahead referring back to my radar return and it showed no returns ahead of us. My tilt angle was set at 1 degree and the captain's radar tilt was set at 0 degrees. We both had our ranges set to 50 nm but were switching between 25, 50 and 100 nm to confirm there were no radar returns ahead of us. While maneuvering around the buildups, we were in VMC and were able to see the buildups. Ahead of us, we noticed that there were clouds and we would probably end up going into that visible moisture. I continued ahead verifying that my radar did not show any returns. Upon entering the visible moisture, the turbulence began. It started as moderate but increased in intensity rapidly. We had been cruising at mach .75 and the airspeed began to increase rapidly. I reduced the thrust levers to flight idle but the speed continued to increase. I then deployed the speed brakes and the speed began to decrease. The auto pilot was still engaged. The turbulence continued to its peak severity and items in the cockpit were tossed about. I then noticed that the airspeed was rapidly decreasing. I stowed the speed brakes and increased power to the thrust set detent. While scanning my instruments, I noticed that vertical speed indicator was showing a rate of descent of approximately 4000 feet per minute. I then noticed that the PLI was moving erratically. The stick shaker actuated and the autopilot disengaged. I took control of the control yoke tried to keep the aircraft in level flight attitude. The turbulence stopped shortly thereafter. I maintained manual control of the airplane and slowly accelerated back to cruise from a speed of 200 kts. I noticed that, at one point, we may lost approximately 500 feet of altitude. We returned to level flight at FL370. The Captain then reported to ATC that we had just encountered severe turbulence. ATC queried if there was any aircraft damage or injured passengers. The Captain called the flight attendant to confirm that she was ok and to check on the passengers. Her initial assessment was that that no one was injured. The Captain then relayed that information to ATC. I asked the Captain to request a direct route from our current location to SZW VOR. That was approved and we flew to the VOR. After a few minutes, the flight attendant called the Captain to advise that a passenger was injured. The Captain asked what kind of injury. The flight attendant stated that the passenger had received a blow to the head and was suffering from neck pain. The flight attendant also stated that the injured passenger wanted to know our ETA to GNV. The Captain told the flight attendant that the time remaining was

approximately 50 minutes and that he would notify dispatch of the injury. The Captain contacted dispatch via ACARS. The flight attendant then called back to say that the injured passenger would wait to get to GNV before receiving medical attention. I continued the flight to GNV without further difficulty. We shot the ILS approach to runway 29 and landed safely. We taxiied to the ramp where emergency personnel were waiting and the passenger was attended to.

**Keywords**[Assoc Keywords](#)

There are no keywords associated with this debrief.

**Message History**

**Created** [REDACTED] 12/26/2019 11:40:04 AM

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Sunday, December 29, 2019

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|             |            |               |             |                  |              |
|-------------|------------|---------------|-------------|------------------|--------------|
| Flight #    | 3960       | Phase of Trip | At the Gate | Pilot            |              |
| Flight Date | 12/16/2019 | Affected STA  | GNV         | Employee #       |              |
| DEP Time    | 12:31 PM   | Diversion?    | No          | Pilot Data       | DFW-CA-EMJ-D |
| DEP STA     | DFW        | ARV STA       | GNV         | Debrief Type     | Pipeline     |
| DEP Gate    | E30        | ARV Gate      | 2           | Sub-Type         | COMPLIANCE   |
| Tail Nbr    | N805       |               |             | Workflow         | Pipeline     |
| Fleet Type  | EMJ        |               |             | Reply Requested? | No           |

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| To Designated Recipient    | Mgr Dispatch    |                             |                                |                           | <a href="#">Remove</a>       |
| To Designated Recipient    | VP Cust Svcs    |                             |                                |                           | <a href="#">Remove</a>       |
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| CC Secondary Respondant    | AEMOC           |                             |                                |                           | <a href="#">Remove</a>       |
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| CC Submitting Pilot        | N/A             |                             |                                |                           | <a href="#">Remove</a>       |
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**One Line Summary** +severe turbulence**Event Description**

Flt 3960 DFW-GNV \*Deadheading crew\*

Encountered severe turbulence en route to GNV 12DEC19 at FL370 approx over AEX. The CA had the seatbelt sign on prior to encountering the area of turbulence. The seatbelt sign remained on during and after the turbulence. The FA had just finished her service when the CA informed her and the cabin to take their seats and be certain that their seatbelts were fastened. This occurred approximately 5 minutes prior to the event. We began to encounter moderate chop, which turned into moderate turbulence for a minute or two. The DH FA was seated in the last row and made an additional PA for everyone to make sure their seatbelts were fastened. Shortly after that we encountered the severe turbulence. The violence was something that I have never experienced in my 40 years of flying commercial aircraft as a pilot or as a passenger. At least two times any loose articles were thrown throughout the cabin. After the event we continued to GNV. The FA asked if any medical personnel on board the aircraft to assist with an injured passenger. Nobody offered to assist. I noticed and overheard a lady saying that she had severe abdominal pain could not stop vomiting. After we landed medical personnel were waiting on the jet bridge. Then I noticed a different passenger in need of medical assistance sitting a few rows behind me. I asked her what happened and she stated she hit her head pretty hard. Shortly after paramedics showed up to remove her from the aircraft and she was carried off on a stretcher.

## Keywords

[Assoc Keywords](#)

There are no keywords associated with this debrief.

## Message History

Created  12/26/2019 11:38:08 AM[Edit](#)**Closed**

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## Notes

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|             |            |               |             |                  |              |
|-------------|------------|---------------|-------------|------------------|--------------|
| Flight #    | 3960       | Phase of Trip | At the Gate | Pilot            |              |
| Flight Date | 12/16/2019 | Affected STA  | SYS         | Employee #       |              |
| DEP Time    | 12:31 PM   | Diversion?    | No          | Pilot Data       | DFW-FO-EMJ-D |
| DEP STA     | DFW        | ARV STA       | GNV         | Debrief Type     | Pipeline     |
| DEP Gate    | E30        | ARV Gate      | 2           | Sub-Type         | COMPLIANCE   |
| Tail Nbr    | N805       |               |             | Workflow         | Pipeline     |
| Fleet Type  | EMJ        |               |             | Reply Requested? | No           |

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| Role                       | Pos             | Name                        | Loc                            | Email                     |                              |
| To System Administrator    | Emp/Gnd Sft     |                             |                                |                           | <a href="#">Remove</a>       |
| To Designated Recipient    | Mgr Dispatch    |                             |                                |                           | <a href="#">Remove</a>       |
| To Designated Recipient    | VP Cust Svcs    |                             |                                |                           | <a href="#">Remove</a>       |
| CC System Administrator    | Dir Fght Ln Ops |                             |                                |                           | <a href="#">Remove</a>       |
| CC Secondary Respondant    | AEMOC           |                             |                                |                           | <a href="#">Remove</a>       |
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| To System Administrator    | Emp/Gnd Sft     |                             |                                |                           | <a href="#">Remove</a>       |
| CC Submitting Pilot        | N/A             |                             |                                |                           | <a href="#">Remove</a>       |
| CC System Administrator    | Dir Flight Ops  |                             |                                |                           | <a href="#">Remove</a>       |
| To Designated Recipient    | Emp/Gnd Sft     |                             |                                |                           | <a href="#">Remove</a>       |

**One Line Summary** +Sever Turbulence Event**Event Description**

I am submitting this report due to what I understand to be a request by Envoy's Safety Department. I was a dead heading crew member on flight 3960. I was seated in 8A for the event that occurred. The aircraft was in the vicinity of AEX when a PA was made by the captain that we would be encountering turbulence in the next 5-10 minutes. The seatbelt sign was on. The passengers, in addition to the flight attendant, were instructed to return to their seats and fasten their seatbelts. Minutes later, the aircraft entered the turbulence at Flight Level 370. The seatbelt sign remained on. Much of the turbulence was moderate, however, there were two violent jolts experienced during the event. This caused any loose items in the cabin to become airborne and separated from their person. Drinks covered the walls and ceiling of the aircraft as well as passengers several seats away, magazines and electronic devices were located multiple rows from their original location, and a few of the PSU panels became slightly dislodged from their secure position. In the aftermath, fellow dead heading crew member FA Moore, made a secondary announcement for everyone to remain seated with their seatbelts fastened. While en route, one passenger reported severe stomach pain, and vomited multiple times. In addition, another passenger reported back and neck pain after the turbulence. This passenger eventually required medical attention. When arriving in Gainesville, she was met on board by EMT's who placed her in a neck immobilizing brace and rolled her down the jet bridge on a stretcher.

**Keywords**[Assoc Keywords](#)

There are no keywords associated with this debrief.

**Message History****Created** 12/26/2019 9:49:49 AM[Edit](#)**Closed**

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