



## **NATIONAL TRANSPORTATION SAFETY BOARD**

Office of Aviation Safety  
Washington, D.C. 20594

October 3, 2018

### **Attachment 1 – Flight Crew Interview Summaries and Statements**

## **OPERATIONAL FACTORS**

DCA17LA145

**Interviewee: Laura Elodie Bourguignon**

**Date: July 3, 2017**

**Time: 0905 EDT<sup>1</sup>**

Via Teleconference: Shawn Etcher – NTSB; Captain Rainier Jennings – Delta Air Lines; Captain Michael Schilz – Airline Pilots Association (ALPA)

First Officer Bourguignon was represented by Mr. Andrew Brenner – Attorney – Airline Pilots Association (ALPA)

During the interview, First Officer Bourguignon stated the following:

She was 29 years old.

She was a first officer line pilot on the Airbus A-320 based in Detroit. She has never had any other jobs with Delta Air Lines.

She has an Airline Transport Pilot (ATP) and commercial pilot certificate as well as a certificated flight instructor for initial airplane (CFI), instrument airplane (CFI-I), and Multiengine airplane (MEI). She also has type ratings on the DC-9<sup>2</sup>, DHC-8<sup>3</sup> (Second in Command only), ERJ-170/190<sup>4</sup> and the Airbus A-320<sup>5</sup>. She has a first-class medical certificate, date March 10, 2017, and it has no waivers or limitations.

She has between 5,500 and 6,000 hours of total flight experience, 12 hours of flight experience in the A-320 series aircraft, and 2.8 hours of flight experience in the A-321. She has not had any experience as a captain at an airline. Her most recent checkride was on June 17, 2017. She had failed a checkride in the past but never at Delta or on the A-320.

She had never been involved in an accident or incident prior to this event.

She began working on her private pilot certificate at the age of 15 and took her private pilot checkride a few months after she turned 17 years old. She went to Purdue University for her college education and further pilot training. During the 2<sup>nd</sup> semester she began working on her commercial multiengine ratings. She obtained her CFI, CFI-I, and MEI on her own (not through the university) and was a part-time instructor for Purdue University for about a year. She was subsequently hired as full-time flight instructor for the university. She flight instructed for about 1,800 hours before

---

<sup>1</sup> Eastern Daylight Time

<sup>2</sup> The Boeing Company DC-9-11, DC-9-12, DC-9-13, DC-9-14, DC-9-15, DC-9-15F, DC-9-21, DC-9-31, DC-9-32, DC-9-32F, DC-9-33F, DC-9-34, DC-9-34F, DC-9-41, DC-9-51, DC-9-81, DC-9-82, DC-9-83, DC-9-87, MD-88, MD-90-30, 717-200. Source FAA Publication 8900.1 Figure 5-88.

<sup>3</sup> Bombardier Inc. DHC-8-100 Series, DHC-8-200 Series, DHC-8-300 Series, DHC-8-400 Series. Source FAA Publication 8900.1 Figure 5-88.

<sup>4</sup> Embraer S.A. ERJ-170-100 STD, ERJ 170-100 LR, ERJ 170-100 SU, ERJ 170-100 SE, ERJ 170-200 STD, ERJ 170-200 LR, ERJ 170-200 SU, ERJ 190-100 STD, ERJ 190-100 LR, ERJ 190-100 IGW, ERJ 190-100 ECJ, ERJ 190-200 STD, ERJ 190-200 LR, ERJ 190-200 IGW. Source FAA Publication 8900.1 Figure 5-88.

<sup>5</sup> Airbus (formerly known as Groupement d'Inerte Economique Airbus Industries, France) A-318, A-319, A-320, A-321. Source FAA Publication 8900.1 Figure 5-88.

she was hired at Piedmont Airlines flying the Dash 8 aircraft, which she did for about a year. She was then hired at Shuttle American flying the EMB-170/190 for about a year before she was hired at Delta. When she started at Delta she was hired into the Boeing 717, which she flew for about a year and a half. During that time, she was based in New York for about 7 months, Atlanta for about 3 months, and now in Detroit.

She has never been terminated or asked to resign from any of her employers.

Her direct supervisors are in the chief pilot's office in Detroit.

Delta has both ASAP<sup>6</sup> and FOQA<sup>7</sup> which are the only two safety programs that she knows of. She has heard that it is a great program, but has not had to utilize ASAP.

The weather for the accident flight's landing was visual with gusty conditions at Atlanta. She recalled thought the wind was from 240 degrees at 12 knots gusting to 20 knots with a few scattered clouds at 7,000 above ground level (agl).

The weather at Boston was good. She thought it was clear skies but could not recall.

The departure from the gate in Boston was about 5 minutes earlier than scheduled.

She did the walk around at Boston and did not observe anything abnormal with the tail. She further elaborated that she thought she would have noticed the scrape had it been there on the walk around.

When asked to describe the takeoff from Boston, she stated that she did not recall much about the takeoff. They did have a pilot sitting on the cockpit jumpseat, who was a Delta pilot, and the flight was full. Everything about the flight was "normal" and there was nothing significant prior to the descent. During cruise flight, the captain was discussing items on the OE<sup>8</sup> checklist and they were discussing some of the A-321 differences. She conducted the arrival approach briefing using the Delta acronym NATS<sup>9</sup>. After the briefing, her and the captain discussed some landing techniques. They discussed the indications if the pitch got to high. Their arrival was the WINNG1 arrival and they were subsequently cleared for the visual approach to runway 26R. She utilized the localizer and glideslope for her lateral and vertical guidance and the approach was stabilized. She described the landing as "firm," and she thought they were a "little higher" than they were and "flared a little late." During the landing flare, the captain instructed her to pull back more on the sidestick and she had no indication of the possibility of a tailstrike.

She explained some of the differences in the A-321, which included the upside down "V" and it will provide and aural "pitch pitch" alert during landing, and that there was a tail clearance concern. She further clarified that the "pitch pitch" aural occurred if the pitch appears to be in the region of potential tail strike. When asked if it would provide the same on takeoff she reported that she was not sure.

---

<sup>6</sup> Aviation Safety Action Program

<sup>7</sup> Flight Operations Quality Assurance

<sup>8</sup> Operating Experience

<sup>9</sup> NOTAMs Arrival/Approach Chart/Automation, Transition level/Terrain/Taxi considerations, Special Pages.

She stated that the tail clearance in the A-321 was 2 degrees less than in the A-320. She further clarified that the pitch in the A-321 was about 9.7 degrees versus about 11 degrees on the A-320.

During the flare, she was looking outside towards the other end of the runway and was not sure if the upside down “V” was visible. She also could not recall hearing any aural alert.

The NATS briefing included discussion about NOTAMs on the arrival and at airport. She also included weather at that point, which she does a little different order than the acronym. It also discusses altitudes; however, Delta flights are not allowed to use altitude descents in Atlanta. It was a visual approach and talked about using the ILS<sup>10</sup> for guidance. They further discussed transition, taxi plan, getting to the gate, go-around, any special pages. They may have briefed tail strikes but she could not recall.

When asked what she recalled about some of the techniques they discussed in landing, she stated the discussion were aimed at what point they would pitch up a little bit and when to transition in the landing flare, applying a little back stick pressure to produce a couple of degrees pitch up as the airplane tends to pitch down. She further stated that the pitch was to be adjusted based on the sight picture.

She had the auto pilot auto thrust, and flight director on for most of the approach. When the flight was about 10 miles from the runway she deselected the flight director for practice and somewhere started to hand fly the approach without the flight director, as they had discussed.

When asked how she felt the side stick was to learn transitioning from a Boeing airplane, she stated that the side stick felt “fine.” She had no issues with it as she had flown the Cirrus SR20 in the past which also had a side stick yoke.

When asked to describe the approach speed stability, she stated that the approach speed was about 142 knots, which was a little below the VLS<sup>11</sup> hook, the captain manually adjusted the speed in the computer and explained the process and reason to her so she would understand. She thought the flight path was a “little above” the glideslope at the beginning of the approach, which she adjusted. Otherwise she was able to maintain the glideslope during the approach to the runway. There may have been a few knots fluctuation on the airspeed due to the gust. She could not recall if they added any to the speed for the gust factor.

There were no warning or distractions during the approach.

The jumpseater was friendly and was not meddling, during the flight. The jumpseater talked a little in cruise, but he did not talk below 10,000 feet [above mean sea level].

The landing was a “little more firm” than her landing the day before but not significantly different. She recalled having firm landings on the Boeing 717 as well and this one did not feel anything worse than those.

---

<sup>10</sup> Instrument Landing System

<sup>11</sup> Minimum speed auto thrust will maintain

When asked how many landing she had done in the actual airplane she stated that she had accomplished 3 landing before the accident flight, all of which were in the A320.

When asked to describe the training she stated that during training, there were 10 simulator sessions 9 of which were in the A-320. Simulator number 4 was in a flight deck of an A-321 but the profile was that of an A-320. The differences between the variants of the A-320 were trained, but they did not particular do any training with landing flares in the A-321. She classified the training as good and felt prepared for the procedures prior to the simulator sessions. The program was geared toward the A-320 as a standard and then they discussed the different variants between the various models.

She began her training for the A-320 series on May 23, 2017. The ground school portion was 9 days in length, which included training in the “flight training device.”

When asked to describe how the landing flare appeared to her, she stated that she thought she was about a second late in getting the thrust reverses out but otherwise they slowed down and taxied into the gate. During taxi, she apologized to the cockpit crew for the firm landing but she did not believe there was any discussion to potential damage. After the aircraft was parked at the gate, they conducted the shutdown checklist and discussed what could have been done better for the landing. The jumpseat rider was present for some of that discussion. However, at that point neither questioned there had been a tailstrike. The feedback, the OE captain provided was that she flared a little low near 20 feet agl instead of 30 feet agl, and did not provide enough pitch back on the side stick. Her and the captain discussed getting her sight picture a little better by looking down the runway during beginning about 50 feet agl.

The airplane was going to depart shortly after their arrival so she did not have to do a post flight inspection. One of the flight attendants told them they heard something that sounded like a blown tire during the landing. She, went down and checked all three sets of tires (both mains and the nose landing gear). There was no damage to any of the tires.

She was first notified, about the tail strike, about 45 minutes later when they were in the crew room when the captain received a phone call from someone that there may have been some damage to the airplane. The Captain then called her and let her know they may have had damage at the airplane. They met each other at the gate.

Following the event, she was not given a drug or alcohol screening.

She stated that the accident flight was day 3 of a 4-day trip. Prior to the trip she had never flown with captain. Their report time, for the day of the accident was 1002.

She stated that she had went to bed about 2300 but could not remember exactly when she woke up; however, she likes to get at least 9 hours of sleep. The morning of the accident she had a half a cup of coffee and she always carries cereal bars. However, when she arrived at the airplane there was left over crew meals and the flight attendants offered them to the pilots. Which was a breakfast sandwich with fruit, which she consumed before departure.

The day prior to the accident they had to dead head out of Fargo, North Dakota, on a regional jet. They also had one leg that day to operate, which was their flight into Boston out of Minneapolis. She was the pilot flying on that flight as well. The report time for the dead head was 1323 local time<sup>12</sup>. They arrival into BOS was scheduled in at 2145 and they arrived at the gate at 2135. The rest was “good” in Fargo and she went for a run prior to their report time.

Prior to her report for her trip, she had 3 days off. During that time off, she spent time catching up personal items, as she had been in training for about month.

When asked what flap setting they used for the landing she stated that it was flaps full with low brakes landing.

When asked if there were any audible warning associated with the landing she stated that she does not recall hearing or seeing any warnings. The captain mentioned during the flare to “pull back, pull back” she could not recall if the captain touched the controls but he never took over control of the airplane.

She requested an LPR<sup>13</sup> following the flight.

When asked what some of the suggestions were from the captain about her landings, she stated that the captain mentioned that she was letting the nosewheel come down too quickly and he [the captain] suggested sitting the nose down easier. She was trying not to let the nosewheel come down quickly and she did pull back when the captain told her to pull back but she did not recall if it was a lot more back pressure on the side stick.

When asked where she felt they touched down on the runway, she stated that she thought they touched down well within the touchdown zone but could not recall the exact location. She felt they landed in the area that was flatter but there was a slight downslope to the runway. She could not recall if the airplane’s nose began to rise after the main landing gear was on the ground or not.

She described her health as “good.” She does exercise and run and she has no health issues.

She does not use tobacco but does drink socially. The last time was the night prior to the accident on the 22<sup>nd</sup> in Boston.

She does take one prescribed medication and there have been no personal changes in her life within the last year.

When asked if it was her first landing on runway 26R in Atlanta, in the Airbus, she stated it was and that it was the first day landing in the Airbus. The landing occurred about 1330 and the two days prior she had done all night landings.

---

<sup>12</sup> Fargo was in central time zone and the report time converted to 1423 EDT

<sup>13</sup> Landing Performance Report

She was pilot monitoring on the first leg, which was during the day time, but could not recall if she was able to see a different sight picture. She then recalled that that flight's landing may have been at night as well as they had a ground stop.

She felt it would be beneficial to do a video in the simulator to show the approach to landing with multiple scenarios where one leads to a tail strike and another one gets close so you can see the warnings. She felt that would have been helpful ahead of time. There are a lot of documentation on tail strikes in their manuals but that would have provided a better understanding to her.

### **The interview ended at 1016 EDT**

**Interviewee: Walter Henry Johnston Jr.**

**Date: July 3, 2017**

**Time: 1105 EDT**

Via Teleconference: Shawn Etcher – NTSB; Captain Rainier Jennings – Delta Air Lines; Captain Michael Schilz – Airline Pilots Association (ALPA)

Captain Johnston was represented by Mr. Andrew Brenner – Attorney – Airline Pilots Association (ALPA)

During the interview, Captain Johnston stated the following:

He was 62 years old.

He was a line check airman on the Airbus A-320 series aircraft based in Detroit.

He was originally hired on by Northwest Airlines<sup>14</sup> on May 4, 1996. He was a line pilot with Delta at the time of the accident.

He has an Airline Transport Pilot and Commercial pilot certificate and was type rated in the A-320, A-330<sup>15</sup>, B-707<sup>16</sup>, B-720, B737<sup>17</sup>. He further provided that he was a first officer on the A-320 beginning in 2004 for about 2 years, then an A-330 first officer for about 7 years, and then about 3 years prior the accident became a captain on the A-320. He received his check airman letter around January 2015.

He had approximately 20,000 hours of total flight experience, of which about 4,500 hours were in the A-320 series aircraft, and about 1,800 hours as a captain in the A-320 series. He was not certain how many hours he had flown the A-321 model.

---

<sup>14</sup> Northwest Airlines merged with Delta Air Lines and began a single operation on January 31, 2009.

<sup>15</sup> Airbus (formerly known as Groupement d'Inerte Economique Airbus Industries, France) A-330-200/300 Series, A-330-200F. Source: FAA Order 8900.1 Figure 5-88.

<sup>16</sup> The Boeing Company, 707-100 Long Body, 707-100B Long Body, 707-100B Short Body, 707-200, 707-300, 707-300B, 707-300C, 707-400, 720 Series, 720B series and includes military designators KC-135 (all variants), C-135, C-18B, E3-A/B/C, E6-A/B, E-8C, EC-18B, EC-18D, VC-137. Source: FAA Order 8900.1, Figure 5-88.

<sup>17</sup> The Boeing Company, B-737-100, B-737-200, B737-300, B-737-400, B737-500, B737-600, B-737-700C, B-737-800, B737-900. Source: FAA Order 8900.1, Figure 5-88

He had a first-class medical certificate, dated January 13, 2017, with the limitations that he must wear corrective lenses, which he reported he was at the time of the accident.

He could not recall when his most recent training sessions were, but he did have a line check as a line check airman within the preceding 2 months. He has never failed a checkride.

He was the pilot monitoring on the accident flight.

He began flying in the Air Force, while training at the Air Force Academy, about 1976 and flew there for 20 years. He went into pilot training and flew various models of training aircraft. After that he flew the KC-135 tanker for about 5 years, then went into the NATO AWACS and was an instructor and evaluator for the pilot's program. He subsequently went to Tinker AFB and was the head of the Wing's Standard Division. He then went to the Naval War College for a year and also was as a flight instructor at the base's aero club. After he left the Air Force he was employed by Northwest Airlines beginning in 1996 and flew as a DC-9 first officer for about 2 years. He then transitioned to a flight engineer position on the Boeing 747 and flew that from 1998 until about 2003 when the Hawaii base closed. In 2003, he transferred to the Detroit base and was a flight engineer on the DC-10 until he could be a first officer on the A-320 in 2004. He then became an A-330 first officer for 7 years and during that time he was a line qualification first officer. Then in 2014 as a captain on the A-320 and then a line check airman for about 2 1/2 years. He further stated he has flown Airbus aircraft for about 12 years total. He described his current flying as about 2/3rds of the flights have been OE training trips. He has flown 303 hours in the last 6 months, and about 572 hours for the last 12 calendar year.

He has never been terminated from either of his employers.

He feels staffing was "just fine" which he based on not always being able to pick up extra trips. Delta Air Lines instructors have known for while that there would be a lot of training. He usually gets about 15-16 days off per month with his normal schedule.

He knows a lot about ASAP and FOQA. He attended every meeting for the past 8 years. Has used ASAP in the past and felt it was very responsive. They [ASAP group] would call back and provide him with feedback.

There was a monthly newsletter from the "Standards people" where they cover some of the recent events that every pilot gets. There was also a quarterly video on their CCQ's<sup>18</sup> as well as sometimes information was provided in the flight ops newsletter.

On the day of the accident they departed from Boston. The first officer conducted the walk around and did not recall mentioning anything abnormal. Prior to the walk around he had pointed out the differences for her to observe while she conducted it. When she returned to the flight he reported that she was surprised at the length of the airplane and noted the differences. He did a walk through with her on the inside of the airplane to show the difference in the escape doors and the number of doors.

---

<sup>18</sup> Cross Crew Qualification

He described her as very curious and open about everything and she was a very receptive student to learning things.

They were scheduled to depart the gate at 1100 and they departed at 1057. He described the taxiout as “fine” and the first officer was very involved and active. He further described the taxi as a “typical taxi” for Boston. He also reported that the first officer had been to Boston prior when flying the Boeing 717 and she was familiar with the airport.

The flight was full of passenger with no empty seats and they had a cockpit jumpseater. Who was a Delta 767-400 pilot, although he could not recall if he was a first officer or captain.

The accident flight departed runway 22R and he had transferred control to the first officer prior to the departure roll. During the taxiout, they discussed how to look up the performance numbers if there were ships in the harbor; however, on the day of the accident there were none but showed her how to obtain that information. Explained the difference in the feel of the A-321 versus the A-320. She did a normal rotation and climb out and hand flew to around 10,000 feet everything was normal on the ACARS<sup>19</sup> takeoff report, which showed a 3.2 rotation rate. They talked about that during the cruise portion and he explained that although fine it was on the quicker rotation end than it needed to be. They were cleared as filed by air traffic control and there were no issues during cruise. During the cruise portion of the flight, they continued with the OE checklist. They discussed that the A-321 was about 40,000 pounds heavier and that they need to be sure the plane reacted the way they wanted. They discussed the OE guide and training references and discussed tailstrike concerns which included pictures of the “carrots” which would occur if the plane determined there would be a tail strike as well as provide an aural “pitch pitch” alert. They had about a 12- 14 knot crosswind, counting the gust, for the landing. They discussed flying it in a crab until about touchdown and then add rudder to land straight with a little aileron. The descent was “fine,” no weather, very standard “plain vanilla” with a little gusty. On the initial descent, they discussed flying with the flight director off prior to glideslope intercept. The first officer called for the landing gear and they were completely configured on time. Initially, the airplane was flying about a ½ dot high but the first officer got it back on glideslope. The speed bug was right at top of the tape. He explained to the first officer that he was going to bump up the speed in manual by a few knots. He had showed her how to pull up the calculated and the actual gross weight and how the airplane senses the weight. The flight was on speed and stable, about 50 feet above ground level (agl) he told her to look down the runway and prepare to pull back on the stick at 30 feet agl. She had started to flare but he noticed that it was not quite enough so he told her to “pull up” or something similar. It appeared to him as though the landing was tracking down the runway and he felt her apply rudder to straighten the nose. They rolled out and taxied in to the gate. After they parked the lead flight attendant reported to them that they thought they had blown a tire. He sent the first officer down to examine the landing gear; however, there was no indication during the taxi that they had blown tire. The first officer reported that there were no blown tires. They had a two-hour sit in Atlanta, until their next flight to Boston. The head of the A-320 fleet called him and said that it appeared they had a tailstrike. Both he and the first officer went down and saw the damage on the airplane.

---

<sup>19</sup> Aircraft Communication and Addressing Reporting System

When asked to describe the landing flare he stated that the first officer did not flare as much as he thought they should and the landing was a “firm” landing.

When asked to describe the rotation rate he described coming out of Boston he stated that normally he sees about 2.6-3.1 for the rotation rate. He has seen 3.4-3.5 which was a little more aggressive. He did not know what range would result in a tail strike.

When asked were that at or near maximum takeoff weight, he stated that they were well below the maximum weight for takeoff.

They did discuss in cruise the difference in the A-321, and that on her previous landings she tended to “underflare.” He told her at 50 feet agl to start looking down the runway. He told her that due mass and weight it would take more effort.

He could not remember if she had mentioned seeing the “V” before they discussed it on the topic of interest information from the past. She did not indicate that she had seen that information before. He also explained there was a warning aural of “pitch pitch,” which was triggered based on a combination of angle and/or rotation rate would exceed what the airplane would think was too much. During the accident flight, there were no aural warnings. He was looking outside during the landing as the first officer had no previous crosswinds of more than a few knots so he was watching outside. The initial sight picture was too nose low. After he told her to pull back he could not recall seeing a change in the sight picture.

He reported that there was a chart that shows when the tail would strike the runway, and it indicated that between 8.5 and 11 degrees, depending on if the struts are compressed, which was about 2 degrees less than a normal A-320/319. He could not recall if she had seen the chart before, although he thought she had, as it was right out of the flight training manual.

The first officer used the normal landing briefing context that they do and briefed everything. He felt it was a “thorough” brief. She did not seem hesitant on the crosswind component. When asked if there was a crosswind component during OE he replied that there was not. He further provided that during the first 100 hours there were some limitations but not on OE. His personal limitation, when teaching a new student, has not been experienced yet, but he probably would consider it should it became an issue. He would not have imposed a limit for her with the weather they had.

The approach was with the autothrust on and flying with the flight director off. He did not notice any abnormal changes to the speed vector as when compared to any other approach in an Airbus. He felt that the approach was not unstable at all.

They were landing on runway 26R, at 50 feet agl she was to begin looking down the runway and then at 30 feet agl start to pull back on the side stick. The landings were getting a little better in the flare, when the first three landings were compared. However, the accident landing, which was the fourth landing, was similar to the first landing and was more “shallow” than others. She had been progressing.

The first officer's left right control was better than most pilots he has flown on OE with. He felt that the first officer's biggest issue was the flare and they would discuss it, she may have been a little behind on getting the nose pitch attitude compared to others. The touchdown was similar to a "navy style," which he further described as no flare. They did discuss that runway 26R had a bit of a downslope which may "help" her.

In his opinion, most of the students in the A-321 do not have that big of issue with the airplane. He felt any issues was due to more mass, than the A-320

He felt that he was "pleasantly surprised" with the training the pilots received based on how they were well versed coming out of training.

Their report time in Boston was 0945 with a 0915 pickup. He slept well, and he was in bed by 2300 and woke up before his alarm woke him up. He had his alarm set for 0800, he thought he may have awoke 5 – 10 minutes before 0800.

The night before they arrived into Fargo with a later evening departure which he thought was a 1430 pickup. He had time to go have a nice lunch, went from Fargo to Minneapolis as a deadhead crewmember, then flew to Boston. He described his sleep in Fargo as "fine" and woke up about 0800 local. The arrived into Fargo two nights prior to the accident and were in their rooms about midnight.

Prior to the start of the trip he had about one week off.

When asked what flap setting they used for the landing, he stated the landing was flaps full. He did pull up an LPR on every leg.

When asked if the airplane bounced after they touched down, he stated that he did not sense the plane come up after main touch down nor the nose. He further described it as there was no bounce at all felt like a "plant" with both mains.

He could not recall if he pulled the stick back, but he could have as he felt they were going to "smack hard." There was no "pitch pitch" aural nor did he hear the "dual input" aural either.

He increased the Vref because of the VLS hook only, as he wanted a 2 to 3 knot pad above the hook.

He did not observe the g-meter read out on the ECAM<sup>20</sup> nor on any of the landings. This landing was firmer than the others.

He could not recall where they touched down on runway 26R, but he thought it was in the target zone for sure. The approach was stable, other than the initial intercept which was likely because the first officer was on raw data and within a short amount of time the airplane was on course.

---

<sup>20</sup> Electronic Centralised Aircraft Monitor

When asked what information he would have provided another OE captain if he had to get off the trip and he stated he would have said that the first officer under rotates or under flares. Otherwise she did a nice job as pilot monitoring and pilot flying.

His considered his health as “good” and considered himself in “great shape.”

Other than a big raise the Delta pilots had achieved, due to the new contract, there have been no changes personally for him within the last 12 months.

He does consume alcohol occasionally and had two glasses of wine when they got into Boston.

He does take Ibuprofen as needed for back and neck issues. Which he further described as “maybe twice a week.”

When asked if there was anything that could be done to make sure this did not occur again he stated that it would be great if Airbus made sure both joysticks move together. He felt that would be a fix to preventing over rotating or helping with the flare.

**The interview ended at 1227 EDT**



**Internal Memorandum**

**Date:** 6/29/2017

**To:** Captain John O'Neil, Regional Director – DTW CPO

**From:** Captain Walter Johnston, A320 DTW

**Subject:** II17-126 FLT SAFETY/NTSB – TAIL STRIKE: DAL800 23-JUN-17 BOS-ATL N315DN (3015)  
CAP: JOHNSTON, W.H.; FO: BOURGUIGNON, L.E.

This statement is provided at the request of the Chief Pilot's Office.

I was giving IOE to First Officer Laura Bourguignon ([REDACTED]). We were on the third day of a 4-day rotation. I operated the first leg of the trip and the F/O served as the Pilot Flying for the remaining legs. The 4th leg, from BOS to ATL was the first time that the F/O was operating an A321.

During landing on each of her previous legs, she flared late. Consequently, I discussed with her the need to add more backpressure and for more of a pitch change at the 30-foot call as well as instructed her to transition to looking further down the runway during the flare. F/O departure numbers from the ACARS showed normal rotation on takeoff. Her late flare was not out of the normal range of pilots with whom I've flown, especially those pilots that transition from the 717 and smaller aircraft. Prior to the leg to BOS, I used the OE guide and the 321 Differences topics of interest to discuss with her the potential tail strike issue with the A321 and the aural and visual indications it would give.

On the approach to 26R we had the flight director off and auto thrust was on. The aircraft was stable for the entire approach. The aircraft went a bit high on glide scope at initial intercept but then was on glide scope and course for the remainder of the approach. When we fully configured and selected managed speed, the speed bug was right at the hook. I added about 2-3 knots to have a pad above the hook. I have seen this happen many times before and even briefed the F/O on an earlier flight about it and showed her how via the AIDS system you can see the FAC estimated weight and the FMGC weight.

As we approached the runway and got the 40 and 30-foot callouts, the F/O raised the nose of the aircraft a bit but not quite enough; I said to pull up more. It appeared as if she was starting to pull up the nose as the aircraft touched down on the runway. It was a firm landing. Airspeed was within normal range. There was no aural warning on this landing.

The aircraft landed well within the target landing area and did not in any way float or have the nose too high during the flare maneuver. The part of the runway we landed on actually has a bit of a down slope. This was a full flap landing.

During deplaning, one of the FA's reported that it sounded like we had blown a tire so I had the F/O go look. She returned to the aircraft and indicated there was nothing of note. There was a 767-400 ATL pilot in the jumpseat during the flight. I had no indication or feeling that the aircraft's tail had made any contact with the runway. Nor did the F/O or jumpseater give any such indication.

Subsequently, A320 Fleet Captain Art Smith called and informed me of the reported tail strike and asked that I go inspect the aircraft. While at the aircraft, a Tech Ops representative stated that it looked like it had been just a minor touch and, in his view, likely occurred during landing, not T/O.

I understand that this statement may be released to the National Transportation Safety Board (NTSB).

Captain Walter Johnston  
Employee [REDACTED]  
(Signature on file)



**Internal Memorandum**

**Date:** 6/29/2017

**To:** Captain John O'Neil, Regional Director – DTW CPO

**From:** First Officer Laura Bourguignon, A320 DTW

**Subject:** II17-126 FLT SAFETY/NTSB – TAIL STRIKE: DAL800 23-JUN-17 BOS-ATL N315DN (3015)  
CAP: JOHNSTON, W.H.; FO: BOURGUIGNON, L.E.

This statement is provided at the request of the Chief Pilot's Office.

On Day 3 of my Operating Experience (OE) trip, we departed BOS to ATL. I was the Pilot Flying and the Captain/Line Check Pilot (LCP) was the Pilot Monitoring. It was my fifth flight on the Airbus fleet (1 leg as PM and 4 legs as PF), and my first flight on the A321 (having transitioned from the B717).

We came in on the WINNG 1 Arrival and we were cleared for a visual approach to runway 26R. The winds were gusting (240° at 12 knots gusting 20 knots) but we had overall good weather conditions. The LCP requested that I fly the approach with the flight directors off but auto thrust on. We decided on a Flap FULL, low auto brakes landing. During the approach, the LCP noticed that Vapp was very close to the Vls hook. He opted to use selected speed and added 2-3 knots to Vapp to keep us just above the hook. The approach was stabilized.

My prior landing the day before had been firm due to late flare. Although I discussed landing techniques with the Captain ahead of time to work on that as part of our Approach Briefing (NATS), I still flared a little late during the landing. I added some back pressure on the side stick between 30 and 20 feet. The sight picture was still high. The LCP noticed the low pitch attitude and late flare. He instructed me to pitch back more. The landing was firm. However, nothing indicated that we had experienced a tail strike. Neither the Captain nor the jumpseater, who was present in the flight deck, mentioned any concerns. After we parked at the gate, a Flight Attendant reported that she had heard a noise during landing like a blown tire. I exited the aircraft and inspected the tires.

We were subsequently informed that the following crew noticed indications of a possible tail strike during their preflight of the aircraft. We returned to the gate where the aircraft was parked and confirmed damage to the tail.

I understand that this statement may be released to Delta Flight Safety and the National Transportation Safety Board (NTSB).

Regards,

First Officer Laura Bourguignon  
Employee [REDACTED]  
(Signature on file)