NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety
Washington, D.C. 20594

May 9, 2018

Attachment 1- Flight Crew Interview Summaries – Compass Airlines

OPERATIONAL FACTORS

OPS17IA014AB

Interviewee: Manuel Dermanuelian
Date: March 3, 2017
Location: Via Teleconference
Time: 0905 EST

Via Telephone: First Officer Dermanuelian – Incident First Officer, Shawn Etcher, Sathya Silva – NTSB, Mark Adamski – Compass, Ryan Davis – ALPA, Mr. Rob Plunkett – ALPA Legal Counsel

First Officer Dermanuelian was represented by Mr. Rob Plunkett – ALPA Legal Counsel

During the interview, First Officer Dermanuelian stated the following:

He was 42 years old.

He was a first officer with Compass Airlines, was based out of Los Angeles International Airport (LAX) and was a reserve pilot. He expected to be on reserve for 3 or 4 more months. The incident trip was a buildup line and was a 3-day trip. He was hired at Compass on September 29, 2016.

He had an Airline Transport Pilot certificate – multiengine land, Commercial pilot, CFI[1], CFI-I[2], MEI[3]. He also held type ratings in the EMB-170[4], EMB-190, and CL-65[5]. He has a first-class medical certificate with limitation of that he must wear corrective lenses, which he confirmed he was wearing at the time of the incident. The medical certificate was issued on September 17, 2016.

He has never been a checkairman.

He had about 4,600 to 4,700 hours of total flight experience and at the time of the incident he had about 75 hours in the incident aircraft make and model.

He most recent line-oriented experience checkride was December 12, 2016 that was conducted with the FAA for his Embraer type rating. He has never had any part 121 checkride failures.

He was the pilot flying on the incident flight. He had not had any prior incidents or accidents.

He began flying in 1996 and went to Spartan School of Aeronautics in Tulsa, Oklahoma where he received his private, commercial, CFI, CFI-I, and an associate degree in aviation. He then went to Embry-Riddle University where he received his bachelor's degree. He subsequently joined Atlantic Coast Airlines in 2000 as a first officer in the CRJ-200 and then became a captain until he was furloughed in 2004. During the furlough time he received his MEI and flew as a flight instructor and a ferry pilot, which included some international ferry flights. He continued to stay

[1] Certificated Flight Instructor
[2] CFI with instrument rating
[3] Multiengine Instructor rating
[4] 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 Order 8900.1, Figure 5-88
[5] Bombardier Inc. CL-600-2B19, CL-600-2C10, CL-600-2D24, CL-600-2D15. Source FAA Order 8900.1, Figure 5-88

out of the airline world and built a business on the side. He then wanted to continue to fly jets and last year he was hired by Compass Airlines.

His chain of command at Compass is Chief Pilot Jeremy, which is the system wide Chief Pilot, and Andy out of LAX. Has not had too much dealing with either.

In LA they have about 30 reserve first officers and they utilize them well and keep them busy. Reserve pilots are assigned airport ready reserve which, required sitting at the airport.

He had finished IOE in the middle of January and flew an additional 20 hours, in February he flew around 40 hours.

Ready reserve required the crew to sit at the airport during their shift. He usually was assigned the 0600 to 1400 duty period; however, they can be utilized for 15 hours of duty in a day. After they get the call the pilot has 15 minutes to get to the airplane and prepare for the flight. He has only been assigned ready reserve about 2 or 3 times.

When asked to describe the day of the incident, he stated that it was a typical day and a standard flight. He could not recall much about the flight prior to talking with the approach control. They briefed the visual approach to runway 28L, backed up with the ILS. He estimated that the approach was briefed about 30-40 minutes prior to landing. They had everything was programmed into the airplane's system prior to the approach. When they arrived in the approach control area they were kept "high" for a while. When they were cleared for the visual approach they were a little high and busy; but, the airplane was configured and stabilized by 1,000 feet agl[6]. Once stabilized on the approach they were given a frequency change to tower, which was prior to the marker. The captain checked on with tower, stating they were on the approach for 28L. The tower was busy when they checked on and were given "cleared to land 28L" from the controller, who was female. The captain repeated the clearance to land on runway 28L. It was visual metrological conditions and night. He recalled asking the captain to obtain a wind speed check, which the captain did. As they were getting closer to the runway, the area near the numbers area appeared "darker than normal" all of sudden the controller called for a go-around. They executed a go-around, after he asked the captain if that was for them. They were issued runway heading and assigned an altitude. When they checked on with approach control, the controller was confused as to why there was a go-around. On their second approach the tower controller was a different person, as the new controller was male. When the crew asked why they had to do a go-around, they were then told there was an airplane on the runway. They landed uneventfully and flew the return trip to LAX. He did not know much, about the event, until the chief pilot called the next day. He had wished he had found out earlier and had time to digest the event prior to flying another leg.

He could not recall any other runway assigned to them during the time while talking with approach control and the tower. He always remembered it was runway 28L.

He has been to SFO a few times, he estimated 3 times. It was not his first time in SFO and he was familiar with company guidance not to taxi on taxiway Juliet, which they briefed as well. Majority

[6] Above Ground Level

of his flights to SFO were at night time, and the majority of his flight time in the Embraer, about 40 hours, has been at night.

Typically, they brief the approach 30-45 minutes from the destination airport. The flight was a quick flight from LAX to SFO. He does not remember being given any runway changes; however, they had the performance numbers for runway 28R just in case there was a change to that runway.

When asked to describe what their requirements would be if there was a runway change, he stated that they would go into the FMS[7] and program the new runway, input their performance numbers, brief the approach, and brief the arrival chart. He felt that it would typically take a few minutes. Typically, the controllers will ask if they can accept a specific runway change. He further stated that if tower, as opposed to approach control, changes runways "it would be a ton of work," if that had happened.

When they checked on with tower the flight was about 8-10 miles from the runway and about 2,000 feet mean sea level. They were lined up, on the ILS, and they had the airport in sight. They could see the approach lights and the edge lights of the runway. When they checked in, the first thing tower told them was that they were "cleared to land 28L"

When asked what the typical speed for the approach would be, he stated that it would be in the 130-knot range.

He further elaborated that right before they were told to go-around it was darker than normal at the threshold. He had decided he would take a better look as he got closer. Runways 28L and 28R were normally "extremely dark" in that area as they are over the water. He did not observe any strobes or beacon lights on the runway.

When asked to describe what lights they have illuminated he stated that the entire flight they have the navigation, beacon and strobe lights on. When they descend below 10,000 feet they when turn on their side taxi lights. Once the flight is cleared for the approach depending on which runway they are assigned will define which landing light was illuminated. He provided the example that when they were cleared for the approach to 28L they illuminated their left landing light. Once they were cleared to land, then they would turn on the nose and the other landing light, in this case the right landing light. Typically, the landing lights will illuminate the runway when the airplane is between 100-200 feet agl. He did not think it that it illuminated sooner than that but that it but may be less than 200 feet. The radar altimeter will call out "50" normally when they are over the threshold. He then estimated that the landing lights illuminated the runway about 100 feet agl.

He estimated that the go-around began about 300-400 feet. They were about or near the beginning of the approach lights.

At the time of the go-around issuance, as the captain was replying to the controllers about the go-around, he asked the captain if that was for them, the captain replied in the affirmative and he advanced the thrust levers to the TOGA line and pressed TOGA. He called for the go-around and flaps 2, the captain called "positive rate" to which he replied, "gear up." As they were accelerating

[7] Flight Management System

the controller issued runway heading and an altitude. He then called for flaps 1 and flaps 0. After which they were given departure frequency to contact. It was a very busy time.

Prior to the incident flight he had only conducted go-around in the simulator only

He felt that the controller at SFO seem perfectly fine; however, he felt the controllers take too much responsibilities working multiple runways. After the incident he wishes there would be more illumination at the end of the runway.

Prior to and during their flight there were no mechanical issues with the airplane.

He could not recall when he turned off the autopilot. Normally he will leave the autopilot on until 200-500 feet agl. He thought he turned it off a few seconds before the go around call. If the aircraft was flying with the autopilot, if the TOGA buttons were pressed, the aircraft would auto advance thrust levers and would keep the autopilot on. He does remember having the autopilot off for the incident. He recalled pitching the airplane to about 8-10 degrees nose up. The engines responded and spoiled up quickly, as they were not at idle. Typically, on the approach they are descending about 700 feet per minute, and if he was guessing he lost about 50 feet o before the airplane started to climb.

He felt the captain was great to fly with during the trip and he enjoyed it. He typically gets along with everyone he flies with and that the captain had great communication with the crew.

He classified his mood as typical. He lives in LA so on the last leg, he's always happy to get home. He felt perfectly fine.

During the day, he had operated two flights, including the event flight, and they had one more flight back to LAX. They had a Sacramento overnight, and departed the gate at 1557 PST[8]. The night before they arrived at the hotel about midnight and he went to sleep around 0030. Coming into SFO he had "zero fatigue" and that day they had all went out to have lunch. He had a full night sleep and had breakfast about 1000.

When asked if he had any colorblindness issues, he stated no.

He felt Compass was "good" to work for and they have given him a great opportunity. He felt every airline could be better but there were no issues with Compass, at all.

When asked about flying for Compass, he felt it was great being based where he lives. If he could change anything at Compass, he would change the reserve rules if he could and increase pay. He would like to see a little more flexibility for the 2-hour call out because in Los Angeles it could take more time than other times to get to the airport due to traffic. He'd also like them to get rid of ready reserve.

When asked if at any point he heard tower issue a line up and wait, he recalled that when they transferred to tower he heard a takeoff clearance, and someone issued a line up and wait clearance,

[8] Pacific Standard Time

and possibly a crossing runway call. However, they were running the landing checklist and were busy doing that at the time. He could not recall what was stated. He also thought that the controller was working both runways at the time.

In the past everything seemed normal, the extra work load of the controllers didn't bother him.

The TCAS was in TA/RA mode as per the before takeoff flow. It was in that mode from takeoff to landing. After he found out what happened he began to notice that when someone was taking off the symbol is amber; however, the TCAS is not necessarily part of his scan when on final.

The go around was practiced in the simulator and in the real world you rarely do it. So, when they actually do a go-around, it was just instinct and training kicks in. He felt that he was adequately trained to do a go-around. He did remember asking the captain to press the TOGA button for him, on climb out, during their go-around.

When asked the location of the TOGA buttons, he stated that they were on the back of the thrust levers.

He was shocked that the aircraft was not "lit up" that you couldn't see the other aircraft. He had talked to a Virgin America Pilot who had told him that as they line up on the runway, they turn on the taxi side lights and only turn on landing lights when cleared to takeoff. The strobes on the Airbus point side to out forward. The beacon was partially blocked by the tail.

When asked what could have been done to prevent this incident, he stated that while at Embry-Riddle he was studying aviation safety. It fascinated him with the SkyWest and USAir event in LAX years ago, that is why he always scans the runway. Unless the airplane on the runway is lit up it is hard to see an airplane on the runway. When they taxi onto the runway they do not turn on landing or taxi lights which is how he heard that Virgin America did it also. He felt that the only light that they would have seen was the tail navigation light and a partial view of a red beacon.

When asked what the policy was at Compass, he stated that they only have the strobes, navigation, and beacon lights on. He would like to see the wing inspection lights on and the taxi lights as well. Every captain he has flow with follows the standard operating procedures. However, he flew with one captain that left the wing inspection and taxi lights on when they were given a clearance to line up and wait. They are also instructed to hold in position off centerline; however, he added that not all captains do that.

At no time did the controller advise them or say that traffic was "in position" on the runway. Typically, he has heard tower say, "line up and wait, traffic so many miles out." He felt that their flight was so far out on final, that maybe that is why it did not happen.

When asked what the lighting conditions were, he stated that it was 2000 at night and it was dark. He further stated that it was "pitch black."

The interview concluded at 1013 EST.

Interviewee: Chad Andrew Gravesen
Date: March 3, 2017
Location: Via Teleconference
Time: 1102 EST

Via Telephone: Captain Gravesen – Incident Captain, Shawn Etcher, Sathya Silva – NTSB, Mark Adamski – Compass Airlines, Ryan Davis - ALPA

Captain Gravesen was represented by Mr. Rob Plunkett – ALPA Legal Counsel

During the interview Captain Gravesen stated the following:

He was 27 years old.

He was a captain at Compass Airlines and currently was unemployed as his last day was a few days ago and he has a start date at Delta Air Lines of March 6th.

He was a line pilot and based out of Los Angeles International Airport (LAX) the entire time he was employed at Compass Airlines.

He has an Airline Transport Pilot certificate with type ratings in the ERJ-170 and ERJ-190 aircraft. He has never been a checkairman.

He estimated his total flight experience was about 4,300 hours, with 1,600 hours of those in the incident aircraft make and model, and 600 hours as pilot-in-command. He became a captain in June 2016. He has a first-class medical certificate dated May 17, 2016 with no waivers or limitations.

His most recent checkride occurred on his 6-month training event which occurred in December 2016. His most recent line check occurred in September 2016.

For the incident flight he was the pilot monitoring.

He has never been in an accident or incident.

He started flying at 14 years of age and was trained by his father. He then went to the University of North Dakota and began instructing during his sophomore year. He then flew hail specialist flights and flew turboprops as a crop duster.

His chain in command was the Chief Pilot at LAX.

He felt that they were short staffed on the captain side and that there is not a lot of flexibility to change the schedule. The last few months he has flown about 94 hours and his line was built with 11 to 12 days off which was the minimum days allowed. He further classified it as “it was little fatiguing” after doing it for 4 to 5 months.

He has never been junior manned for flight assignments.

The event flight occurred on the last day of a 3-day trip. They arrived into Sacramento about midnight the night prior. He further stated that the day of the incident was "an easy day." They had stated at 1445 PST and flew from Sacramento to LAX, the LAX to SFO. On the event flight, they checked on with approach control and were told to expect the visual for runway 28L. Once they checked on with tower, the tower controller cleared them to land runway 28L. He further stated that, after the incident, he found out Virgin was in line up and wait on runway 28L; however, the tower controller did not tell them of the traffic. He saw a vague light on the runway, and about 300-400 feet the controller told them to go-around. The go-around was what he classified as uneventful and then they were vectored around by the approach controller who vectored them for another approach.

They briefed the approach from the start of arrival to the ILS[9] 28L and they thoroughly briefed it. About 9,000 feet they were given vectors by the approach controller for runway 28L. The approach briefing was conducted about 30-35 minutes prior to landing.

The controller cleared them for visual approach and they were told to slow. They were also kept "kind of high" and he classified their workload as "busy." They were stable by about 1,000 feet as required by their standard procedures. They were both looking outside, and he further stated he spent some of the time looking inside to make sure the approach was still stable.

He further described being busy as he was checking on with the air traffic control facility at the time as well as he was monitoring the first officer to verify no limitations were exceeded, as he would with any first officer. He was looking inside and outside the aircraft. He further clarified that the first officer was "super sharp" and did a great job during their 3-day trip.

When asked if tower issued any other runway assignments to their flight he stated that the controller cleared them to land on runway 28L only.

He was asked to describe what they would have to do if they got a runway change to runway 28R. Since they had not briefed an approach to runway 28R he would have been required to be heads down in order load the FMS[10], change frequency, etc. but they would have only done that if they were about 1,000 feet or higher, otherwise he would not accept it had that occurred. He would then provide the flying pilot a quick briefing on the approach and go-around procedures. It was night time and there were gusty winds from the south. He could not recall any moonlight and further stated that it was "a very dark approach from the east."

He thought the first officer turned off the autopilot about 500 to 600 feet. Their limitation for autopilot use was down to category 1 minimums.

When asked how many times he had operated out of San Francisco International Airport (SFO), he stated that he was not sure how many times but thought it was "quite a few times". The most recent was on January 27th and it was at night and the same flight number as the incident flight. He also had flown into SFO on January 20th as well recently.

[9] Instrument Landing System
[10] Flight Management System

The procedures for Compass Airlines was once they were cleared for the approach they would turn on the respective landing light for the runway. For the approach to runway 28L he would turn on the left landing light. Once cleared to land, he would then turn on the other two landing lights. He is responsible to make sure the flight was stable by 1,000 feet agl[11] and he is splitting his time looking inside and outside. If it was a single runway they were approaching, he would turn on both the outer landing lights and turn on the center landing light when cleared to land.

He estimated that their speed was 130-140 knots with a 700 foot per minute descent. He has landed on both runway 28R and 28L previously. They were visually very similar.

When asked to describe the lights he saw illuminated on and around the runway he stated that he saw the standard approach lights, and everything looked "normal." He also saw a very small white light that "looked out of place" and it got his attention. He wanted to get closer to look at it better before he called a go-around. It caught his attention but not to the point where he thought he should tell the first officer or call for a go-around.

When asked to describe what altitude he thought the landing lights illuminated the runway, he stated that they start to illuminate the runway about 50 feet agl.

When asked about what altitude they were issued the go-around, he estimated about 350-400 feet agl. When they were issued the go-around the first officer asked if that was for them which he had confirmed. The first officer then called flaps two and advanced the thrust levers. He called positive rate and the first commanded gear up, to which he complied. The first officer had missed the TOGA[12] buttons at the beginning of the go-around. The first officer requested that the captain press the TOGA for him; however, the first officer had manually brought in power as well as pitched the airplane up. He estimated the pitch attitude was about 10-12 degrees nose up. Once the TOGA was pressed the first officer was following the flight director command bars. The first officer was already pitching up and was applying power prior to TOGA being pressed. He estimated that the first officer flew for about 2 seconds without TOGA before he caught it. He estimated that the flight descended about another 50 feet before they started to climb, which he classified as "normal." When they began the go-around, he was looking more inside than outside of the cockpit, and he also communicated with the air traffic controller. He never saw anything on the runway, during the go-around, but his focus was not on the runway and more on the inside of the cockpit.

When asked to describe when they did the landing checklist, he stated it was done prior to 1,000 feet agl and likely was done at 1,500 feet agl. The landing checklist required both crewmembers to confirm that the landing gear indicator lights were illuminated as 3 green lights, both had to visually verify the flaps as 5, flight attendants were notified, and that they were cleared to land.

When asked if illuminating the light that was representative of the runway assigned was a Compass policy, he stated that it was part of their standard operating procedures.

[11] Above Ground Level
[12] Takeoff/Go-Around

When asked if there was anything mechanical or deferred on the airplane, he stated that there was nothing mechanical on the airplane no MEL[13]/CDL[14] and that the airplane was "100 percent correct."

He stated that he had plenty of sleep the night prior and that he woke up around 0700 to 0730. They had a 1430 van from the hotel to the airport. The day consisted of a flight from Sacramento to LAX, while at LAX they had a 1-hour sit before their flight to SFO. He further stated that he felt fine. The flight was not too demanding.

When asked if he had any colorblindness issues, he stated that he did not.

The TCAS[15] was on and was their standard to be used. They did not receive any alerts prior to the go-around from the TCAS. He could not remember if he saw the symbol for the airplane, that was on the runway, on the display.

He stated Compass Airlines was a great place to work and most everyone was great to work with. He had no issues with management and felt that morale was "pretty good" around the company.

He stated that the first officer was really good and that they communicated well with each other.

There was no one, occupying the cockpit jumpseat on the flight.

When asked if there were any issues with communication between them and air traffic control, he stated that there were no issues with communications or understandability with the controllers. When he checked on he thought there may have been confusion with airplanes crossing the runway. He further felt that the controller seemed busy with the gusty winds out of the south and the runway configuration. None of the transmissions was garbled and all communication was "clear cut" with standard English.

When asked if he had every been extended when it came to his duty time, he stated that he did not think he had ever been extended.

When asked to clarify pilot staffing he stated that he felt staffing on the captain side was lacking and that they could use more captains. When he was a first officer he would have about 15-16 days off and have 85 hours of credit for the month.

When asked when he first realized there was an airplane on the runway, he had seen the out of place light prior, but he stated as soon as tower said go-around and thought that there may be an airplane on the runway. When the checked on with the tower controller during their second attempt to land, that was when he was told that there was an airplane on the runway and that was the reason for the go-around.

[13] Minimum Equipment List
[14] Configuration Deviation List
[15] Traffic Collision Avoidance System

When asked what lights he has illuminated on the airplane when he is given a line up and wait clearance by tower control, he stated that he has the navigation, beacon, and strobe lights on. If he is taxing onto a runway at night he will illuminate the taxi light; however, once he stops the airplane he would turn off the taxi light. He further provided that that is what was required within their standard operating procedures.

When asked how many go-arounds he has done, he stated that he has done two go-arounds since he upgraded to captain. The first one was due to an unstabilized approach that his first officer was flying, which remained unstable on the approach until about 1,000 feet, which was when he commanded the go-around. The other go-around was the incident go-around.

He classified the training for go-arounds was good but that there was a disconnect between the training environment and real life. He further clarified that during training in the simulator, pilots know to expect a go-around; however, when flying the line and they are given a go-around it catches them off guard, so there is a startle factor. Which he further explained that the off guard is due to the increased workload as well as it may not have been expected as it was in training.

He classified SFO as a very busy airport. He further felt that when everything was "running smoothly" spacing between airplanes could be a "little tight." The night of the incident he classified operations at SFO was "pretty standard." He thought that the winds had changed their operations a bit.

When asked to clarify the light he saw on final approach, he stated that what he saw would have been right when you line up with the runway and the light mixed in with the approach lights. He said it could have been a runway light, but it was not out of the ordinary enough at the time he saw it to mention it.

He stated that the parallel runways are kind of tight. But he did not think there was traffic on the 28R approach so that is why he elected to leave the TCAS on TA/RA mode.

Going into SFO, approach control tends to change a flight from a visual approach and then vector the flight off the approach and then vector the flight in behind other flights. Or approach control will give the flight a "slam dunk." He felt that SFO controllers do increase the workload for crews and NorCal[16] approach does not always stick to what they tell the crew to plan for, but he wishes they would.

When they first checked on with the tower control he could not recall if they had pointed out traffic on the runway or advise them of the traffic, but it would be helpful if they informed them of traffic holding in position.

Interview concluded at 1200 EST.

[16] Northern California