



Internal Memorandum

Date: 7/14/2022

To: Captain Brian J. Pickett, Managing Director, Flight Operations (on behalf of NYC CPO)
Captain Bryan L. Dickerson, Regional Director & Chief Pilot – ATL CPO

From: Captain Kevin L. Carrara

Subject: II22-089: Delta Flight Safety – Mechanical Issue – Potentially “Frozen” Left Aileron
DL211 07JUL22 PRG-JFK N181DN B-767-332 (181)
CAP 1: CARRARA, K.L. (NYC); **CAP 2:** GREENWALD, S.J. (NYC)
FO1: OWENS, M.A. (ATL); **FO2:** BOLZ, M.A.(NYC)

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

I was Captain of Delta Air Lines Flight 211 from PRG-JFK on 07JUL22. A Line Check flight was being flown with two Captains and two First Officers (referred herein as me, LCP, FO #1, and FO #2).

FO #1 and I took the first half of the flight, with LCP and FO #2 taking the second half.

At approximately 1605Z, we were informed of leaking in the mid-cabin lavatories.

At 1610Z, the flight crews were swapped with the changeover brief conducted. Information regarding the leaks was discussed with. FO #1 and I went back to check and report on the lavatories and noted the following:

- > Lavatory 204 was leaking supply water from under the lower right side of the toilet onto the floor.
- > Lavatory 204’s water supply was shut off, and the excess water was mopped up.
- > Lavatory 204 was locked for further use.

- > Lavatory 203 was leaking supply water from on top of the filter canister under the sink, traveling under the sink to settle on the floor under the trash bin.
- > Lavatory 203’s water supply was shut off, and the excess water was mopped up.
- > Lavatory 203 was left open for toilet use only, with wet towelettes provided.

The flight crew was notified of the status of the lavatories.

I was awoken from rest a short time later and advised that assistance was needed in the flight deck.

Upon arriving at the flight deck, LCP and FO #2 were troubleshooting the FMC, MCP, Autopilot with Atlanta Maintenance Control.

It was determined the issue was a possible Flt Control Jam of the left Aileron, with frozen water from the leaking lavatory/lavatories suspected as the cause.

The QRH was ran with the concurrence of Maintenance Control, and it was decided to descend to a lower altitude / warmer air to alleviate the frozen control mechanism.

I assumed PF duties in the left seat while LCP assumed PM duties in the right seat, with FO #1 and FO #2 performing back-up duties.

LCP coordinated a descent and heading toward Goose Bay with an emergency declared and a potential landing into Goose Bay.

Somewhere in the descent (at approx. -2C SAT and + 11C TAT), the aileron unfroze with little or no effort from my control inputs. A check of each control axis confirmed all surfaces were operating normally. QRH 9.4. prudence dictated we remain low at warmer altitudes.

I remained in the left seat as PM. FO #1 assumed the PF role so the LCP and I could manage and coordinate the situation. With the concurrence of OCC and Maintenance Control (our expanded team), we coordinated to proceed to BOS.

The emergency was terminated, and routing was secured to BOS at approximately 11000 ft. Cruise WX was very favorable.

Further along to BOS and with the concurrence of OCC, we again changed our destination to JFK as the fuel burn was acceptable. Routing was initially requested MIILS-PLYMM-Parch 3 Arrival into JFK to join aircraft flow into JFK; any short cuts were asked for, and we were given direct routing JFK.

FO#1 landed uneventfully at JFK.

I acknowledge release of this statement to [Delta Flight Safety](#), the [National Transportation Safety Board \(NTSB\)](#) and to the [Canadian Transportation Safety Board \(TSB\)](#).

Regards,

Captain Kevin L. Carrara
Employee [REDACTED]
(Signature on file)



Internal Memorandum

Date: 7/12/2022

To: Captain Brian J. Pickett, Managing Director, Flight Operations (on behalf of NYC CPO)
Captain Bryan L. Dickerson, Regional Director & Chief Pilot – ATL CPO

From: Captain Stu J. Greenwald

Subject: II22-089: Delta Flight Safety – Mechanical Issue – Potentially “Frozen” Left Aileron
DL211 07JUL22 PRG-JFK N181DN B-767-332 (181)
CAP 1: CARRARA, K.L. (NYC); **CAP 2:** GREENWALD, S.J. (NYC)
FO1: OWENS, M.A. (ATL); **FO2:** BOLZ, M.A.(NYC)

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

On July 7, 2022, I was Captain (#2) of Delta Air Lines Flight #211 from PRG-JFK.

Mid-flight at FL360, a flight attendant reported a water leak emanating from the two mid lavatories (Loc 203 & 204). We advised them to write it up so maintenance can look at it at JFK after landing. This was a few minutes prior N56W040.

I had just come off of a break with First Officer Mike Owens. He and I were to fly the second half of the flight. We were operating as an augmented crew of four – I, as LCA, had performed a successful one leg line check ride on Captain Kevin Carrara on the flight to PRG, and I opted to act as a working crew member to afford the working crew a greater break.

Approaching N56W040 and after assuming the left seat as PM (F/O Owens assuming the role as PF in the right seat), the right autopilot disengaged. F/O Owens reengaged the center autopilot where it remained engaged for approximately 30 seconds before disengaging again. His reengaging the L autopilot had a similar result so I directed him to “hand fly” the airplane. At that point, First Officer Owens indicated we had minimal authority in the roll mode to the left (authority to the left was approximately 1-2° at most). I briefly took the controls to confirm First Officer Owens’ observation and then passed control back to him.

At this point, we had our purser wake Captain Carrara and ask him to come to the flight deck. Upon his arrival, we explained the situation; the airplane WAS controllable but could not turn left. I assumed controls and briefly had Captain Carrara assume the right seat to confirm our observations. After Captain Carrara’s concurrence, First Officer Owens reassumed the right seat as PF. I got out of my seat allowing Captain Carrara to assume his designated left seat position. I then assumed First Officer Owens’ right seat, being a Line Check Airman and qualified in that seat. Captain Carrara would be PF and I would be PM in the right seat for a potential divert/landing.

SATCOM calls were made to both Dispatch and Maintenance Control. After discussing the issue, we decided the best course of action was to descend, per item 3 of the QRH Procedure for “jammed flight controls” which suggests a descent if ice is suspected (due to the excessive water leaking at the lavatories we felt ice could be the culprit). We began to plan a divert to CYR/Goose Bay. By then, we were in VHF communication with Gander ATC Center.

We declared an emergency and requested direct CYR and a descent to as low of an altitude as possible. 27,000 feet was given, and, after a communication change to Goose Bay ATC, we were given a further descent to 9,000 feet.

After briefing the Flight Attendants on our divert (yellow emergency), we set up for a visual RNAV 8 at CYR and proceeded direct to the IAF for the RNAV approach. Decent and approach checklists were run, and we proceeded direct to CYR (Captain Carrara was PF).

Descending through 12,000 feet, a minor "jolt" was felt by all of us in the cockpit (First Officer Michael Bolz had since joined us). The minor jolt possibly contributed to freeing the suspected ice (now-melting) that had been jamming our flight controls. A brief flight control check in all axes confirmed this assumption.

We leveled at 9,000 feet, but subsequently opted to climb to 11,000 feet when it was determined we would continue toward Boston. In warmer air, we did not have any concerns about subsequent system issues reoccurring. All systems indicated normal.

We terminated the QRH procedure at step 3, which does not have the suggested "land at nearest suitable airport" (that is step 4 if flight controls do not free up).

At 11,000 feet, with flight controls and all systems normal, our Dispatcher "ran" numbers and indicated that with the airplane systems and flight controls operating normally, and considering our fuel state at 11,000', KBOS was a suitable alternate and opted to proceed to Boston for a crew change/ airplane swap. The emergency was cancelled with Goose Bay.

An hour later, we determined we had enough fuel to continue to our original destination (JFK). After the concurrence of the Dispatcher, we proceeded to JFK.

A flawless landing was performed by First Officer Bolz, with Captain Carrara as PM. Fuel at block in was 13.1.

I acknowledge release of this statement to [Delta Flight Safety](#), the [National Transportation Safety Board \(NTSB\)](#) and to the [Canadian Transportation Safety Board \(TSB\)](#).

Regards,

Captain Stu. J. Greenwald
Employee # [REDACTED]
(Signature on file)



Internal Memorandum

Date: 7/13/2022

To: Captain Brian J. Pickett, Managing Director, Flight Operations (on behalf of NYC CPO)
Captain Bryan L. Dickerson, Regional Director & Chief Pilot – ATL CPO

From: First Officer Michael A. Bolz

Subject: II22-089: Delta Flight Safety – Mechanical Issue – Potentially “Frozen” Left Aileron
DL211 07JUL22 PRG-JFK N181DN B-767-332 (181)
CAP 1: CARRARA, K.L. (NYC); **CAP 2:** GREENWALD, S.J. (NYC)
FO1: OWENS, M.A. (ATL); **FO2:** BOLZ, M.A.(NYC)

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

On July 7, 2022, I was the First Officer and the pilot flying (PF) of Delta Air Lines Flight #211 from PRG-JFK.

Approximately mid-flight, at cruising altitude, a flight attendant called the flight deck to report a water leak emanating from the two mid lavatories (Loc 203 & 204). I was just about to go on break; CAP2 and FO1 were just coming off break and came into the cockpit. They were to fly the second half of the flight. We were operating as an augmented crew of four – CAP2 was an LCA and had performed a successful one leg line check ride for CAP1 on the flight to PRG, and CAP2 opted to act as a working crew member to afford the working crew a greater break.

After we changed from working to rest crew, CAP1 and I went to the lavatories to investigate while CAP2 and FO1 took the control seats of the aircraft. CAP1 and I discovered and confirmed water coming from and leaking out of (what appeared to be) potable water lines that fed water to the toilets and sinks. We cleaned up as much water from the deck as we could with paper towels and also shut off the valve that provided water to the sink. We thought that might slow or abate some of the water leakage.

We then told the flight attendants to tape off both sinks and put hand sanitizer by them, so that passengers might still use the toilet, but not the sinks. After telling the flight attendants what we had done, I went to seat 5A and started my break.

A flight attendant woke me up from my break about 30 or 45 minutes later to inform me the forward galley left side drain was overflowing with water. I immediately went to the forward galley and confirmed water was overflowing from the drain. I went into the 1L lavatory but did not see any sign of water leakage. I called the flight deck to let them know and asked if anything else going on. FO1 told me about a flight control issue. At that point, I returned to the flight deck.

When I entered the flight deck, CAP1 was hand flying the plane from the right seat, CAP2 was in the left seat. They informed me of what was going on: the autopilot had disengaged (uncommanded) and was unable to be re-engaged. They were hand flying the jet but had limited (1 or 2 degree) left aileron authority.

CAP1 and CAP2 and FO1 were already in contact with Dispatch and Maintenance Control via SATCOM. They were running the QRH procedure for jammed flight controls. Collectively (the pilots, Dispatch, and Maintenance Control), the decision was made to descend to a lower, and thus warmer, altitude. This was in an effort to potentially melt what we had deduced was ice on the flight controls (due to the water leak in the cabin) and that ice was the reason for the jammed controls.

We declared an emergency and requested direct CYYR and a descent to as low of an altitude as possible. 27,000' was given, and, after a communication change to Goose Bay ATC, we were given a further descent to 9000'.

CAP2 briefed the flight attendants of our divert (yellow emergency). We set up for a visual RNAV 8 at CYYR and proceeded direct to the IAF for the RNAV approach. Descent and approach checklists were run, and we proceeded direct to CYYR (CAP1 was PF).

Descending through 12,000 a minor "jolt" was felt by all of us in the cockpit: we all thought the jolt had freed the suspected melting ice that was jamming our flight controls. A brief flight control check in all axes confirmed this assumption, and we leveled at 11,000', approximately 75 miles east of CYYR.

In warmer air, we did not have any concerns about subsequent system issues reoccurring. All systems indicated normal. We terminated the QRH procedure at step 3 which does not have the suggested "land at nearest suitable airport" (that is step 4 if flight controls do not free up).

At 11,000 feet, with flight controls and all systems normal, our Dispatcher "ran" numbers and indicated that with the airplane systems and flight controls operating normally. Considering our fuel state at 11,000', BOS was a suitable alternate and opted to proceed to Boston for a crew change / airplane swap. The emergency was cancelled with Goose Bay.

At some point after all the above events happened, I reassumed the controls and the designation of pilot flying.

We determined we had enough fuel to continue to our original destination (JFK). After the concurrence of the Dispatcher, we proceeded to JFK.

I performed the landing at JFK without incident, and CAP1 was Pilot Monitoring. Fuel at block in was 13.1.

I acknowledge release of this statement to [Delta Flight Safety](#), the [National Transportation Safety Board \(NTSB\)](#) and to the [Canadian Transportation Safety Board \(TSB\)](#).

Regards,

First Officer Michael A. Bolz
Employee # [REDACTED]
(Signature on file)



Internal Memorandum

Date: 7/14/2022

To: Captain Brian J. Pickett, Managing Director, Flight Operations (on behalf of NYC CPO)
Captain Bryan L. Dickerson, Regional Director & Chief Pilot – ATL CPO

From: First Officer Michael A. Owens

Subject: II22-089: Delta Flight Safety – Mechanical Issue – Potentially “Frozen” Left Aileron
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FO1: OWENS, M.A. (ATL); **FO2:** BOLZ, M.A.(NYC)

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

I was one of two First Officers on Delta Air Lines Flight 211 from PRG-JFK on 07JUL22.

I was occupying the right seat during cruise when we were advised of a water leak in the vicinity of the mid-plane lavatories. The two pilots on break aided the flight attendants in dealing with that issue, and we asked the flight attendants to document it so we would be able to notify maintenance for repair after landing.

A few minutes later, shortly after passing point N56W040 (with the right autopilot engaged), we received the aural beeper and AUTOPILOT caution message on the EICAS Screen. Assuming from this indication the right autopilot system had become somehow compromised, I disconnected the autopilot and engaged the center autopilot system. This system engaged but the aircraft made no lateral course corrections, and I noticed it was drifting right of course.

Shortly thereafter, we again received the AUTOPILOT caution and an audible indication. I disengaged the autopilot once more and attempted to make the lateral corrections manually. I then discovered I was unable to roll the yoke to the left or right more than a couple of degrees of deflection and was thus unable to input the needed course corrections. In a last diagnostic attempt, I engaged the left autopilot with the same result. I transferred control of the aircraft to Captain Greenwald, and he confirmed my findings of minimal lateral control with normal vertical control.

Captain Greenwald then transferred control of the aircraft back to me and contacted the purser to have them call Captain Carrara to the flight deck for further consultation. Captain Greenwald then contacted ATC to declare an emergency for a flight control malfunction and to notify them we were having difficulty maintaining our track due to the malfunction.

Upon Captain Carrara’s arrival on the flight deck, we briefed him on the situation. After transferring control to Captain Greenwald, I gave my seat to Captain Carrara so he could feel the controls for himself. After he confirmed our finding of minimal roll capability, Captain Carrara and I once again swapped positions. I resumed my role as pilot flying until roles/responsibilities were discussed for handling this event. After that, we assumed the following positions following proper control transfer procedures:

- Captain Carrara - Left Seat Pilot Flying
- Captain Greenwald - Right Seat Pilot Monitoring
- First Officer Owens (me) – in the observer’s seat.

While we were contacting Maintenance and Dispatch, a Flight Attendant called us to say water was appearing in the area of the L1 door that did not seem to be coming from the lavatory. I instructed the FA to contact First Officer Michael Bolz and have him consult on the matter and then come up to the flight deck when he was ready. It was discovered water was emerging from the drain under the flight attendant jumpseat in front of the L1 door.

While accomplishing QRH procedure 9.12 for jammed flight controls – in concurrence with Maintenance – we determined freezing water was a suspected cause due to the multiple water leaks throughout the aircraft. We began coordinating with ATC for a lower altitude in accordance with step three and possible diversion to Goose Bay out of an abundance of caution. We also coordinated with the flight attendants for a yellow emergency and diversion to Goose Bay.

While descending through 12,000 feet, a jolt was felt throughout the aircraft, and the controls appeared to free up. Captain Carrara confirmed the control column felt normal. We leveled at 9,000' to allow any other ice accumulation to melt.

We consulted with Maintenance and Dispatch and determined, with the freeing of the controls, the emergency was now concluded and QRH procedure 9.12 was complete. It was also agreed it was safe to continue at least as far as Boston at 11,000' to allow flight above 250 kts while still preventing any refreezing of the flight controls.

This plan was communicated with the flight attendants and customers, and the emergency was terminated with ATC.

As we were proceeding to Boston, we discussed our fuel status with Dispatch and concluded we were able to safely continue to JFK. This was coordinated with ATC and the flight attendants and communicated to the passengers.

We then proceeded to JFK without further incident.

I acknowledge release of this statement to [Delta Flight Safety](#), the [National Transportation Safety Board \(NTSB\)](#) and to the [Canadian Transportation Safety Board \(TSB\)](#).

Regards,

First Officer Michael A. Owens
Employee # [REDACTED]
(Signature on file)