

First Officer's Statement
UAL 329 DEN-BOS
September 30, 2023
Dept: DEN 1959Z/1359L
Position: Pilot Monitoring

I was the First Officer on UA329 on September 30, 2023, from DEN to BOS, and was acting as the pilot monitoring. It was the first leg starting a four-day pairing. The Captain and I had never flown together before. I was well rested and in good health. The Captain and I met at approximately 1200L in the Planning Office to prepare for the flight. We reviewed the flight plan and maintenance release document and looked at the weather and the NOTAMS. The Captain had noticed that the aircraft had just come out of maintenance. There were no NOTAMS pertaining to our departure. The Captain and I observed that Dispatch recommended a 'bleeds-off' takeoff procedure on Runway 16R. Runway 16R is the longest runway at DEN, 16,000 ft in length, but it was the landing runway at the time. We discussed requesting an exception with ground control to takeoff on Runway 16R and the associated threats of a bleeds-off procedure. I reviewed the bleeds-off takeoff procedure in the flight manual. The weather was VMC, with winds out of the south, and a temperature of 31°C. Release 01 used a temperature of 29°C for its takeoff data planning purposes. We discussed the need to pay close attention to the values that would be entered into ACARS for the takeoff data, due to the high temperatures, density altitude, and being within a few hundred pounds of maximum takeoff weight.

A little over an hour before departure, the Captain and I walked to gate B47, and started our standard preflight routine in the flightdeck. I performed my normal flow and checklists, preparing the flightdeck, to include loading the FMC. To mitigate the bleeds-off takeoff procedure threat, I first requested preliminary takeoff data for Runway 17R, with the bleeds-on. Runway 17R was the runway ATC had anticipated us to depart from. This runway configuration would reduce the threat of a non-standard departure runway and a bleed-off procedure. The takeoff data that ACARS returned was not sufficient for our current weight and was invalid. I then requested takeoff data for Runway 17R with the bleeds to be selected off. The takeoff data was still invalid. Next, I tried requesting takeoff data for Runway 16R with bleeds on. The takeoff data was again, invalid. I then requested takeoff data for 16R with the bleeds selected off. The takeoff data was again, invalid. The Captain and I started analyzing the aircraft weights, temps, winds, runway, and altimeter setting to ensure there were no errors in the performance requests.

We found no errors and concluded that release 01 from Dispatch had a takeoff weight too heavy for the high temperature and elevation in Denver. We also noticed that our actual fuel on board was 400 lbs. heavier than our planned gate fuel, compounding the issue. The Captain called Dispatch and asked them how they got valid takeoff data for Runway 16R, bleeds-off, with our current weight and temperature. I could not hear the conversation, but the result was Dispatch sending us release 02 and shortly after release 03. Release 02 and 03 were modifications adjusting the weights. I attempted to get valid takeoff data with the release 03 numbers but was still unsuccessful. The captain spoke with Dispatch a couple more times and worked with the gate agent to find a solution

suitable for a safe departure by offloading cargo and attempting to keep as many passengers onboard as possible.

Release 04 was the final release; it adjusted the taxi time and fuel to account for the long taxi to 16R. The aircraft weight at the gate was 172,800 lbs., and we needed to be at or below 171,700 lbs. for a safe takeoff on Runway 16R with the current atmospheric conditions. Release 04 had a taxi fuel burn of 1,100 lbs. The plan was to request takeoff data per the final weights manifest for 171,700 lbs. on Runway 16R with a bleeds-off departure, knowing that we would have to burn down 1,100 lbs. of fuel while taxiing and holding short of Runway 16R. After an hour delay at the gate resolving the weight discrepancy, we taxied out to Runway 16R.

On the taxi out, everything appeared normal. I didn't notice any non-standard taxi speed or brake/thrust usage from the Captain. Seeing as we were in DEN on a hot day, at a high altitude, it's not unusual for a heavy aircraft to use more thrust than other airports with different weather and altitude conditions. I didn't have my feet on the rudder pedals during the taxi. Nothing was briefed on burning our 'taxi fuel' any differently other than we would need to hold short of the runway and burn gas until our MTOW was reached. Upon reaching Runway 16R, we notified the tower that we would have to hold short of the runway for approximately 10 minutes before we could safely depart. The Captain set the parking brake and slightly increased thrust on the engines to expedite burning down fuel to get to a safe takeoff weight.

I ran the final items of the before-takeoff checklist when our weight was 171,900 lbs. Once the weight was down to 171,800 lbs., I told the tower we could be ready for takeoff in one minute, per their request. After the weights were correct, we were cleared for takeoff on Runway 16R. The Captain started his takeoff procedure and upon initial takeoff roll, he quickly noticed that something was not normal and rejected the takeoff at what I think was less than 45 kts. I told the tower we were rejecting on Runway 16R; they responded that they saw smoke and said our left engine might be on fire. I scanned the gauges and checked the lights. Everything was normal on the engines, and we concurred that we had no engine fire. The Captain told the tower he suspected the brakes were smoking from the rejected takeoff. Tower said that the crash and fire trucks were on the way. I told the cabin to remain seated twice. The rejected takeoff procedure and checklist were accomplished. The Captain said it was not necessary to evacuate. We were directed to a common frequency of 127.5 when the fire trucks arrived. There, the Captain coordinated with the tower, ops, and the fire crew on a single frequency. The fire crew sprayed the right main brakes.

The Captain diligently coordinated with OPS, crash and rescue, the Flight Attendants, the passengers, Dispatch, and maintenance. After the Captain was assured that it was safe to deplane via the air stairs, the passengers were safely escorted down and onto the busses. They were bussed back to the terminal for the next flight to BOS. There were no injuries. Shortly after, the Captain called a huddle with the crew to debrief. The Captain and I ran a termination checklist and then deplaned with all of the crew. We were shuttled back to the terminal with an OPS vehicle escorting us. At this time, I noticed that both right main tires had separated from the wheels early in the takeoff roll, and the right wheel had been ground down. It appeared that both left main tires had deflated but were still on the wheel.