

I was the First Officer (SIC) for flight JBU1256 on September 24th 2023.

The night started off normal, arriving at the airport rested and on time with the captain.

The departure was normal, and we were cleared up to an altitude of FL280. We did not have enough performance to make the crossing restriction of, "At or above FL190" at the TOLAV fix on the TOLAV 2 departure. The captain as PM talked to ATC and we were given no altitude restrictions and continued our climb uneventfully. We continued our climb to FL340 in dark, smooth, and what we perceived to be clear air. We experienced no issues with communication, switching air traffic controller frequencies, or any aircraft issues.

There was significant precipitation and storms north of our current location over the Cuba area roughly 200 miles away. We had the aircraft radar on, and both the captain and I had changed between weather ranges multiple times to keep our situational awareness up. My iPad was connected to the onboard Wifi and successfully was updating the radar images on the JeppFD application along with the WSI application. There were no returns noted between us and the weather over the Cuba area. My PFD, MFD, CPDLC display, FMS were all dimmed down for night flying. The dome light inside the flight deck was on the dim setting.

Suddenly without warning we encountered severe turbulence and extreme precipitation for approximately 20 seconds. The aircraft ballooned up and down, and the autopilot disconnected. We immediately pulled the speed knob to slow us down. The captain made a PA for everyone to take their seats. The seatbelt sign was on before entering the cloud. We had flown into a cloud that was not painted on the radar. We did not visually see the cloud ahead of us. The weather was not depicted on any weather application on our iPads. There was no lightning.

Once our normal flight path was recovered we contacted the inflight crew to check the conditions of the cabin. Inflight reported an injured inflight crew member and a customer with an injured finger. Also reported loose panels on the interior of the cabin.

As task loading requirements allowed, we contacted dispatch via sat phone to have EMS, Maintenance, and a company representative meet us at the gate upon arrival at FLL.

The inflight crew continued to update the condition of the cabin, regarding reports of injuries.

Approximately 20 minutes to the top of descent we had a report of a possible broken leg. A doctor was onboard and was reported to be treating the customer.

Upon landing dispatch was contacted, maintenance was contacted, and the EMS and company representatives met us at the gate.