



# CS-CHJ Preliminary Occurrence Report

Release Date 12<sup>th</sup> February 2025

<b>Location</b>	<b>Occurrence Number</b>
Lynden Pindling Int'l Airport (MYNN), Nassau, Bahamas	OCC-2025/0002
<b>Occurrence Date &amp; Time</b>	<b>Registration</b>
20 <sup>th</sup> January 2025 3:55 pm local (2055 UTC)	CS-CHJ
<b>Aircraft Make/Model</b>	<b>Serial Number</b>
Bombardier BD-100-1A10 (Challenger 350)	20832
<b>Flight Conducted Under</b>	<b>Occurrence Category</b>
Visual Metrological Conditions	Serious Incident

## Information:

### Narrative:

On 20<sup>th</sup> January, 2025 at approximately 3:55 pm local (2055 UTC), a Bombardier Challenger 350 with Portuguese registration CS-CHJ, operated by Netjets Europe, was involved in an occurrence while in climb shortly after departing runway 32 at the Lynden Pindling Int'l Airport (MYNN) Nassau, Bahamas.

The commercial flight was operating as Netjets Europe 755E, with a final destination of Teterboro Airport (KTEB), New Jersey, USA. There were a total of six (6) passengers and two (2) crewmembers on board.

The pilot in command (PIC) was the pilot flying (PF) and the first officer was the pilot monitoring (PM).

According to the pilot in command, the takeoff was normal and uneventful. While climbing through an altitude of approximately 5,500 feet and an airspeed of approximately 230 KIAS<sup>1</sup>, the flight crew indicated that they heard a very loud “bang” from the left side of the aircraft, along with associated significant vibration and yaw to the left. The roll yaw moment was quickly corrected (no autopilot).

Additionally, the flight crew heard “cracking” sounds coming from the left engine. This was followed by an observance of an ITT<sup>2</sup> exceedance warning.

<sup>1</sup> KIAS – *Knots Indicated Airspeed* is the speed of an aircraft as displayed on its airspeed indicator, expressed in knots

<sup>2</sup> ITT - *Interstage Turbine Temperature* is the temperature of the exhaust gases between the high pressure and the low pressure turbines

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The left engine was quickly then brought to idle and the N1<sup>3</sup> seemed to show normal parameters. However, there was still some residual vibration.

Subsequently, the PM declared an emergency (MAYDAY) with Nassau Departure Control and the flight crew proceeded to secure the left engine in accordance with the manufacturers' specifications.

The flight crew were able to safely land the aircraft without further incident. There were no injuries reported in relation to this occurrence.



*Fig.1: Photo of aircraft parked at MYNN*

*This is preliminary information, subject to change, and may contain errors. Any errors in this report will be corrected when the final report has been completed.*

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<sup>3</sup> N1 - is the rotational speed of the low pressure turbine and compressor spool expressed as a percentage of the maximum normal operating RPM of the spool.



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## Aircraft and Owner / Operator Information:

Aircraft Manufacturer	Registration
Bombardier	CS-CHJ
<b>Model / Series</b> Bombardier BD-100-1A10 (Challenger 350)	<b>Aircraft Category</b> Large Aeroplane
<b>Registered Owner</b> NetJets Transportes Aereos S.A	<b>Air Carrier Operating Certificate</b> Yes

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## Meteorological Information and Flight Plan:

Conditions at Accident site	Condition of Light
Visual Meteorological Conditions	Day
<b>Observation facility</b> <b>Elevation</b> 16 feet	<b>Observation Time</b> 2000 UTC
<b>Distance from Site</b> N/A	<b>Temp /Dewpoint</b> 25°C/22°C
<b>Lowest Cloud Condition</b> BKN 015 FT	<b>Wind Speed / Gust Direction</b> 030/08KTS
<b>Lowest Ceiling</b> BKN 015 FT	<b>Visibility</b> >6 Statute Miles
<b>Altimeter Setting</b> 30.14 in. HG	<b>Type of flight Plan Filed</b> Instrument Flight Plan



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**Departure Point**

Lynden Pindling Int'l  
Airport (MYNN)  
Nassau, Bahamas

**Destination**

Teterboro Airport  
(KTEB)  
New Jersey, USA

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**Wreckage and Impact Information:**

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**Crew Injuries**

NONE

**Aircraft Damage**

N/A

**Passenger Injuries**

NONE

**Aircraft Fire**

NONE

**Ground Injuries**

NONE

**Aircraft Explosion**

N/A

**Total Injuries**

NONE

**Latitude, Longitude**

N/A

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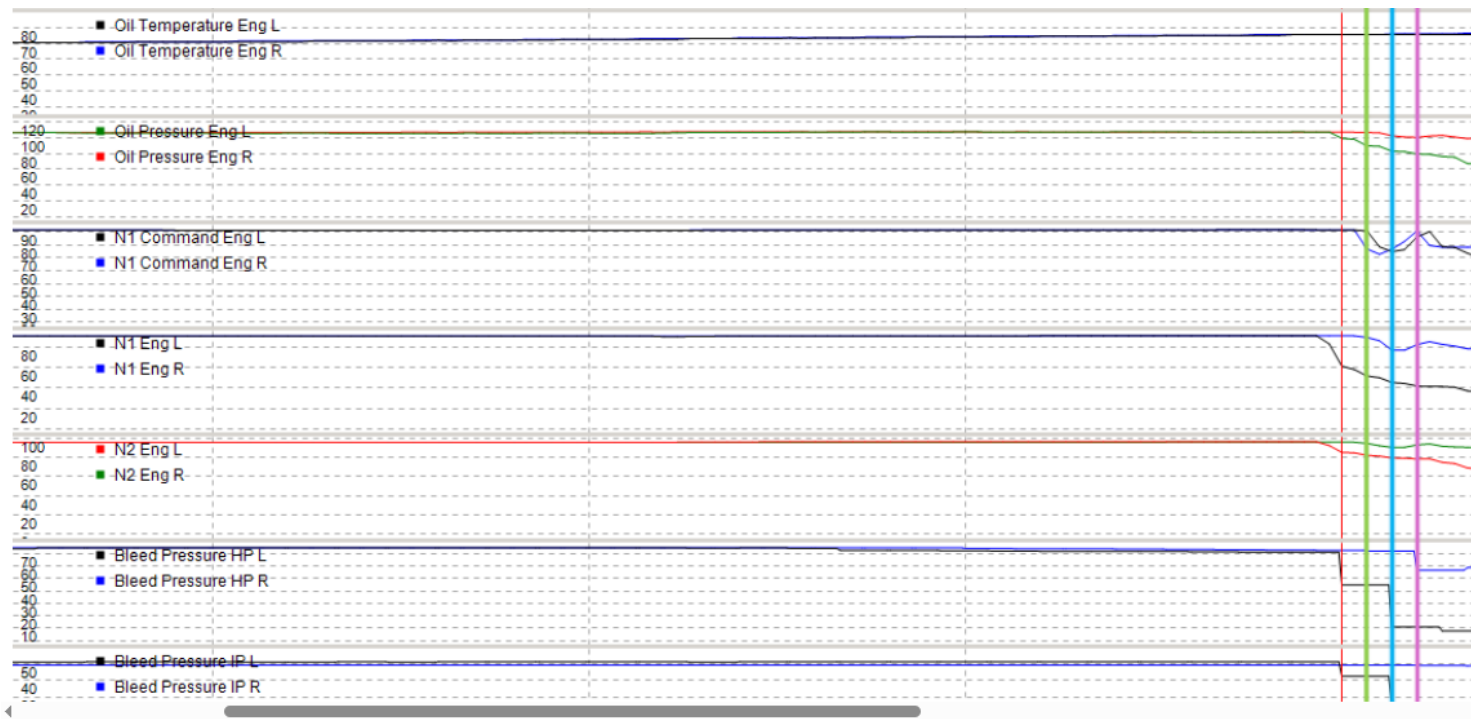
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### Initial Flight Data

In the aftermath of the occurrence, data from the Flight Data Recorder (FDR) L3 Harris FA2100 Series was retrieved and analysis conducted by engine and airframe manufacturers.

Initial assessment of flight data indicated the following:

Highlight 1 —    Highlight 2 —    Highlight 3 —    Highlight 4 —



*Fig. 2: Excerpt taken from Initial Assessment of FDR readout (Plot 1)*

### 20h55min38s: Plot 1 – Highlight (1)

After take-off from MYNN, at 20h55min38s UTC, at 6405ft pressure altitude (“Altitude Pressure L”) and airspeed equal to 218kts (“Computed Airspeed ISI”), vibration in Engine #1 (“Vibration Eng L”) equaled 0.34in/s, while Engine #2 vibration (“Vibration Eng R”) equaled 0.13in/s.

The vibration increase on engine #1 only lasted circa 2 seconds, as it can be seen on plot 1.

“Bleed Pressure HP L” and “Bleed Pressure IP L”, which had been similar, respectively “Bleed Pressure HP R” and “Bleed Pressure IP R”, had a drop:



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- “Bleed Pressure HP L” from 71.5Psi to 45Psi
- “Bleed Pressure IP L” from 51.3Psi to 42.5Psi

These values continued decreasing:

- “Bleed Pressure HP L” reached 0.3Psi (at 20h59min08s) and value was the same for the remainder of the flight.
- “Bleed Pressure IP L” reached minimum value of 11.3Psi (at 20h59min14s) increasing afterwards to values similar to “Bleed Pressure IP R”.

“Oil Pressure Eng L” dropped from 108psid to 100psid. Continued decreasing to 0psid (at 20h59min33s).

“Fuel Flow Eng L” had a drop. Previously 2978lb/hr, at this moment equaled 2830lb/hr; later reduced to 0lb/hr (at 20h58min59s) and so it remained for the remainder of the flight.

### **20h55min39s: Plot 1 – Highlight (2)**

One second later, parameter “CAS Alert L Engine Exceedance” was equal to “Exceed”.

“N1 Command Eng R” was reduced from 91.9% to 77.1%. Minimum value recorded was 73%. It was later increased again.

“Throttle Lever Angle L” and Throttle Lever Angle R”, which had been equal to 40.2° and 40.1°, respectively, changed to 17.8° and 17.6°, respectively.

“Throttle Lever Angle L” continued decreasing until 0° (at 20h55min49s); “Throttle Lever Angle R” later increased to 40.1° (at 20h55min56s)

### **20h55min40s: Plot 1 – Highlight (3)**

Parameter “ITT High Eng L” equal to recorded value ITT High.

“Lateral acceleration” and “Longitudinal acceleration” minimum values recorded: -0.103g and 0.101g, respectively.

### **20h55min41s: Plot 1 – Highlight (4)**

“ITT Eng L”, which had been similar to “ITT Eng R”, reached the maximum of 1162°C (for reference, “ITT Eng R” was equal to 840°C).

“ITT Eng L” then started to decrease to the minimum of 42°C (at touchdown)

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*Fig. 3: Excerpt taken from Initial Assessment of FDR readout (Plot 1)*



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### Administrative Information:

#### Investigator in Charge

Saint-Tino Morley

#### Additional Information

##### Accredited Representatives

Robert Hunsberger – National Transportation Safety Board (NTSB)

Nuno Aghdassi - Aircraft and Railway Accident Prevention and Investigation Office (GPIAAF)

Jean Pierre-Regnier –Bureau of Enquiry and Analysis for Civil Aviation Safety (BEA)

### Publishing information

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### **About the AAIA**

The Aircraft Accident Investigation Authority (AAIA) is the independent accident investigation agency under the Bahamas' Ministry of Energy & Transport (MOET) charged with the responsibility of investigating all aviation accidents and serious incidents in the Bahamas.

**The AAIA does not investigate for the purpose of apportioning blame or to provide a means for determining liability.**

The AAIA performs its functions in accordance with the provisions of the Aircraft Accident Investigation Authority Act 2019 and Regulations 2021, International Civil Aviation Organization (ICAO) Annex 13 and, where applicable, relevant international agreements.