CALLBACK

From NASA's Aviation Safety Reporting System

Issue 542 March 2025

What Would You Have Done?

This month, *CALLBACK* again offers the reader a chance to "interact" with the information given in a selection of ASRS reports. In "The First Half of the Story," you will find report excerpts describing an event or situation up to a point where a specific decision must be made, an immediate action must be taken, or a non-normal condition must be actively managed. You may then exercise your own judgment to make a decision, determine a possible course of action, or devise a plan that might best resolve the situation.

The selected ASRS reports may not provide all the information you want, and you may not be experienced in the type of aircraft involved, but each incident should give you a chance to refine your aviation judgment and decision-making skills. In "The Rest of the Story…" you will find the actions that were taken by reporters in response to each situation. Bear in mind that their decisions may not necessarily represent the best course of action, and there may not be a "right" answer. Our intent is to stimulate thought, training, and discussion related to these reported incidents.

The First Half of the Story

Part 121 – Limitations

A CRJ900 First Officer's Report

■ *On our second leg of the day from ZZZ to ZZZ1, the Captain was Pilot Flying and I was Pilot Monitoring. We were at our cruise altitude of 35,000 feet for a while when we unexpectedly felt a vibration and jolt through the aircraft that lasted for a few seconds. We initially looked at each other and wondered if it was turbulence. At that moment, the Captain pointed out the rising Interstage Turbine Temperature (ITT) on the Number 2 engine and then it exceeded the ITT limitation reaching upwards of 1000 C.*

What Would You Have Done?

Part 91 – Hydraulics

A Citation Excel Captain's Report

■ *Upon approaching ZZZ we called for Flaps 15 but they did not move. We then called to lower the landing gear. The handle moved down but the gear did not lower. We got a red Gear warning light and no green lights.*

What Would You Have Done?

Part 121 – Engine Trouble

A CRJ900 Captain's Report

■ *During the climb at approximately FL280 we had a R ENG FLAMEOUT warning message. There was a noticeable yaw, in addition right engine gauges indicated severe damage with diminishing rotation.*

What Would You Have Done?

Part 135 – Broken Glass

A Hawker 400 First Officer's Report

■ *Departed ZZZ enroute to ZZZ2. As we were climbing through FL250, we heard a loud bang and noticed that the Right-Side B Panel Window was shattered. In less than 40 seconds, the window let go and we experienced an explosive decompression.*

What Would You Have Done?

The Rest of the Story...

Part 121 – Limitations

■ *The Captain began to idle the affected engine and simultaneously the parameters began to roll back. Simultaneously, we agreed that I would [request priority handling] with Center and then request an immediate descent down to FL250. I [requested priority handling] and requested a descent down to FL250 and we were approved to descend. As we started to descend, we had multiple quick Crew Alert System (CAS) caution message pop ups. I briefly saw the R Bleed Caution and then it disappeared and we were left with R ITT exceedance status message. As we were descending the Captain noticed that the cabin [altitude] was rising and we both put on our oxygen masks. At around 25,000 feet the engine started operating normally again*

and the cabin [altitude] stabilized. We removed the masks and the Captain continued as Pilot Flying and I continued with my Pilot Monitoring duties. We agreed on diverting to ZZZ2 and received the ATIS, built the approach, received the landing data and did our checklists including the QRH status for R ITT exceedance. ATC vectored us for ILS XXC and the Captain made a PA for the Flight Attendants and another PA to reassure the passengers. We safely landed on Runway XXC and had no further issues after. The fire crews assessed the engine to ensure no damage and then we taxied to the gate. I completed the walk around after and noticed what seemed to be a dent on one of the N1 fan blades on the right engine, however it was hard to tell completely. Cause: In the logbook was a report the day prior from the crew who experienced a R ITT exceedance on Takeoff.

Part 91 – Hydraulics

■ *We did a go around and climbed to 5000 ft per ATC instructions. We requested a box pattern while we sorted things out and ran the appropriate checklists. We elected to divert to ZZZ1 for runway length and [priority handling] facilities. Enroute we completed all of our landing calculations and checklists. We lowered the gear manually and they dropped by just pulling the red T-handle. We blew the nitrogen bottle per the checklist. Upon landing we did not have flaps or speed brakes, we did not attempt to use the thrust reversers. We came to a stop on runway XXL and were met by the emergency vehicles. We were towed off the runway.*

Part 121 – Engine Trouble

■ *We [requested priority handling] and ATC suggested diverting to ZZZ. The FO was the Pilot Flying. I ran through the QRC for Engine Fire or Severe Engine Damage in flight. We then ran ABNORMAL 1-15 for the R ENG FLAMEOUT which directed us to ABNORMAL 1-4 In flight shutdown. We communicated with the flight attendants and passengers our intention to divert. We also messaged Dispatch. We completed all of our checklists, we were vectored onto final for [Runway] XX. Visual conditions and light winds were present upon landing. We landed Flaps 20 without incident and taxied to the gate. We made an announcement to the passengers at the gate regarding the mechanical issue. The FA's (Flight Attendants) reported the passengers were calm and in good spirits. After landing we debriefed the flight, including the situation. We concluded that all went well with the exception of failing to change our transponder to XXXX. Cause: RIGHT ENGINE FLAMEOUT AND SEVERE DAMAGE. Suggestions: It is difficult to provide suggestions until a full inspection is completed on the failed engine.*

Part 135 – Broken Glass

■ *Immediately began an emergency descent with intentions of diverting to ZZZ1. During the emergency descent, ATC was unable to hear our radio calls [requesting priority handling] until we reached a lower altitude when there was less wind noise in the flight deck. It was also hard to hear crew-to-crew communication. We were able to communicate with each other utilizing hand signals. Besides glass, the only known objects that departed through the window were: Oakley Conductor 8 sunglasses and case, Clarity Aloft Headset Case, 6 ft. charging cable for Apple products, aircraft cupholder, tinted sunshade visor, energy drink, plastic Fiji water bottle, and a can of Copenhagen Mint smokeless tobacco.*

The reports featured in CALLBACK are offered in the spirit of stimulating thought and discussion. While NASA ASRS does not verify or validate reports, we encourage you, our readers, to explore them and draw your own conclusions.

NASA ASRS

UAS/Drone Safety Reporting

Anyone involved in UAS/Drone operations can file a NASA ASRS report to describe close calls, hazards, violations, and safety related incidents.

ASRS Alerts Issued in January 2025	
Subject of Alert	**No. of Alerts**
Aircraft or Aircraft Equipment	3
Airport Facility or Procedure	8
ATC Equipment or Procedure	8
Other	2
TOTAL	**21**

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The NASA Aviation Safety Reporting System

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https://asrs.arc.nasa.gov

January 2025 Report Intake	
Air Carrier/Air Taxi Pilots	5,056
Flight Attendants	1,571
General Aviation Pilots	1,312
Military/Other	792
Controllers	267
Mechanics	213
Dispatchers	199
TOTAL	**9,410**