

## Serious Incident

<b>Aircraft Type and Registration:</b>	1) Boeing 787-9, G-VDIA 2) Airbus A350-1041, G-XWBC
<b>No &amp; Type of Engines:</b>	1) 2 Rolls-Royce Trent 1000-K2 turbofan engines 2) 2 Rolls-Royce Trent XWB-97 turbofan engines
<b>Year of Manufacture:</b>	1) 2016 (Serial no: 37975) 2) 2019 (Serial no: 362)
<b>Date &amp; Time (UTC):</b>	6 April 2024 at 1120 hrs
<b>Location:</b>	London Heathrow Airport
<b>Type of Flight:</b>	1) N/A 2) Commercial Air Transport (Passenger)
<b>Persons on Board:</b>	1) Crew - 1                      Passengers - None 2) Crew - 14                     Passengers - 107
<b>Injuries:</b>	1) Crew - None                 Passengers - N/A 2) Crew - None                 Passengers - None
<b>Nature of Damage:</b>	Both aircraft sustained structural damage
<b>Commander's Licence:</b>	1) N/A 2) N/A
<b>Commander's Age:</b>	1) N/A 2) N/A
<b>Commander's Flying Experience:</b>	1) N/A 2) N/A
<b>Information Source:</b>	Aircraft Accident Report Form submitted by the operator and further enquiries by the AAIB

## Synopsis

During a pushback operation to reposition G-VDIA, the aircraft's left wingtip struck the right horizontal stabiliser of G-XWBC. Both aircraft were damaged but there were no injuries. The operator of G-VDIA found that the pushback tug turned too soon, so the pushback did not follow the correct angle. Contrary to their company airport operating manual, the pushback was conducted without wing walkers; a wing walker on the left side of the aircraft would probably have seen the impending collision and could have stopped the pushback operation.

Safety actions were implemented by the aircraft and airport operators in response to this serious incident.

## History of the flight

G-VDIA was parked on Stand 323 at London Heathrow Airport, and G-XWBC was parked alongside, on Stand 325. G-VDIA was scheduled to depart from Stand 211, so the aircraft needed to be pushed back and repositioned. G-XWBC was in the process of boarding passengers for flight.

Three people were involved in the pushback operation: a tug driver, a headset operator and a 'brake-rider'<sup>1</sup> in the cockpit.

As G-VDIA was pushed back, the aircraft was turned in preparation for it entering the taxiway. The left wingtip struck the right horizontal stabiliser of G-XWBC causing damage to both aircraft. Nobody was injured but the collision was reportable to the AAIB because people were onboard G-XWBC with the intention of flight.

### **Aircraft examination**

Both aircraft were structurally damaged but there were no fluid leaks and no requirement for emergency intervention or containment.

### **Operator's investigation**

Under the provisions of their Safety Management System, the operator of G-VDIA carried out their own investigation and shared their findings with the AAIB.

G-VDIA has a wingspan that is approximately 1 m inside the allowable limit for Stand 323, and G-XWBC is 0.25 m and 1.71 m inside the respective limits for wingspan and length<sup>2</sup>. The operator of G-VDIA considers the pushback to have been '*on reduced safety margins*' but within normal operations.

The operator concluded that as the aircraft was pushed away from the stand, the turn to enter the taxiway was initiated too early. This meant that the left wing passed over the cross-hatched area, which should be kept clear of objects, between the two stands. The cross-hatched area was noted to contain several items of ground equipment relating to G-XWBC, so the pushback was paused to allow this equipment to be removed. The possibility of a collision between the two aircraft was not identified at this time and the pushback resumed. None of the people involved in the pushback had a clear view of the left wing and, contrary to the operator's procedures, wing walkers<sup>3</sup> were not being used. The collision occurred shortly after the pushback resumed, and ATC intervened with an instruction to hold position.

The operator reported that they introduced a requirement for wing walkers in 2021 but, in this event, this requirement was not followed by their ground handling agent. As such, the pushback operation did not comply with the operator's procedures.

### ***Safety action***

The aircraft operator issued a safety alert highlighting their requirement for wing walkers during aircraft push back operations.

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### **Footnote**

- <sup>1</sup> The brake-rider sits in the aircraft cockpit and can apply the aircraft brakes if the towbar snaps.
- <sup>2</sup> The airport operator advised that these limitations are defined in airfield licensing requirements.
- <sup>3</sup> The wing walker watches and monitors the path of an aircraft's wing whilst the aircraft is being manoeuvred to ensure there is sufficient clearance from objects in the vicinity.

## Other information

The airport operator does not mandate wing walkers when operating from Stand 323, so the push back operation met those standards.

### *Safety action*

The airport operator issued an Aerodrome Safety Alert highlighting the following safety considerations:

- *'If you are unsure about the safety of the pushback, then stop immediately and re-assess. Contact ATC if required.'*
- *The use of wing-walkers should be considered for pushbacks or where the visibility of the tug driver may be obscured due to the nature of the manoeuvre.*
- *Headset operators should be positioned in such a manner that they are able to provide additional observation of any potential risks.*
- *Company processes, policies and training should be followed at all times.*
- *Hatched areas should always be clear of vehicles and equipment so as not to impede safe operations.'*

The airport operator also advised that they were reviewing 'non-standard pushbacks'<sup>4</sup> and the associated Operations Safety Instruction.

## Conclusion

G-VDIA collided with G-XWBC when it was being pushed back to allow it to be repositioned on another stand. The aircraft was being moved in accordance with airport requirements, but the turn was initiated too soon. Contrary to the aircraft operator's processes, the pushback was being carried out without dedicated wing walkers. A wing walker on the left side of the aircraft would probably have seen the impending collision.

## Safety actions/Recommendations

- The operator of G-VDIA issued a safety alert to highlight their requirement for wing walkers during aircraft pushbacks and towing operations.
- The airport operator issued an Aerodrome Safety Alert outlining factors that should be considered during aircraft pushback or towing operations.
- The airport operator advised they were reviewing non-standard pushback operations and the associated Operations Safety Instruction.

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## Footnote

<sup>4</sup> The airport operator described non-standard pushbacks to be 'those that are not pushed at 90 degrees to the taxiway centreline'.