

ACCIDENT

Aircraft Type and Registration:	Boeing 787-9 Dreamliner, G-CKWB	
No & Type of Engines:	2 Rolls-Royce Trent 1000-J3 Ten turbofan engines	
Year of Manufacture:	2018 (Serial no: 38788)	
Date & Time (UTC):	12 August 2019 at 0915 hrs	
Location:	London Gatwick Airport	
Type of Flight:	Commercial Air Transport (Passenger)	
Persons on Board:	Crew - 10	Passengers - 342
Injuries:	Crew - None	Passengers - None
Nature of Damage:	Damage to tail cone	
Commander's Licence:	Airline Transport Pilot's Licence	
Commander's Age:	51 years	
Commander's Flying Experience:	18,084 hours (of which 4,492 were on type) Last 90 days - 186 hours Last 28 days - 56 hours	
Information Source:	Aircraft Accident Report Form submitted by the pilot	

Synopsis

G-CKWB was parked on Stand 38 at London Gatwick Airport. The aircraft was loaded, with the doors closed ready to depart for its flight to the USA. Permission was granted by the ground controller for the aircraft to push back and start engines at 0910 hrs. The aircraft was pushed back using the incorrect line and as a result the aircraft tail cone struck the blast screen.

History of the flight

The aircraft was parked on Stand 38 at Gatwick ready to push back. Stand 38 is in a corner of the ramp with blast screens on two sides (Figure 1).

Due to the confined nature of the stand, special procedures are used so that sufficient clearance from the blast screens is maintained both during the pushback and subsequent taxi out. The apron has a line on the ramp to indicate to the pushback tug driver where the aircraft should be pushed to and where the nose wheel should be before the aircraft is disconnected from the tug. The pushback requires the aircraft to be positioned by the driver at an angle to the taxiway, and markings are also provided for the guidance of the flight crew when taxiing for departure. There is insufficient room for an aircraft to be pushed back onto the centreline of the taxiway at right angles to the stand. The markings for the pushback are shown in Figure 2.

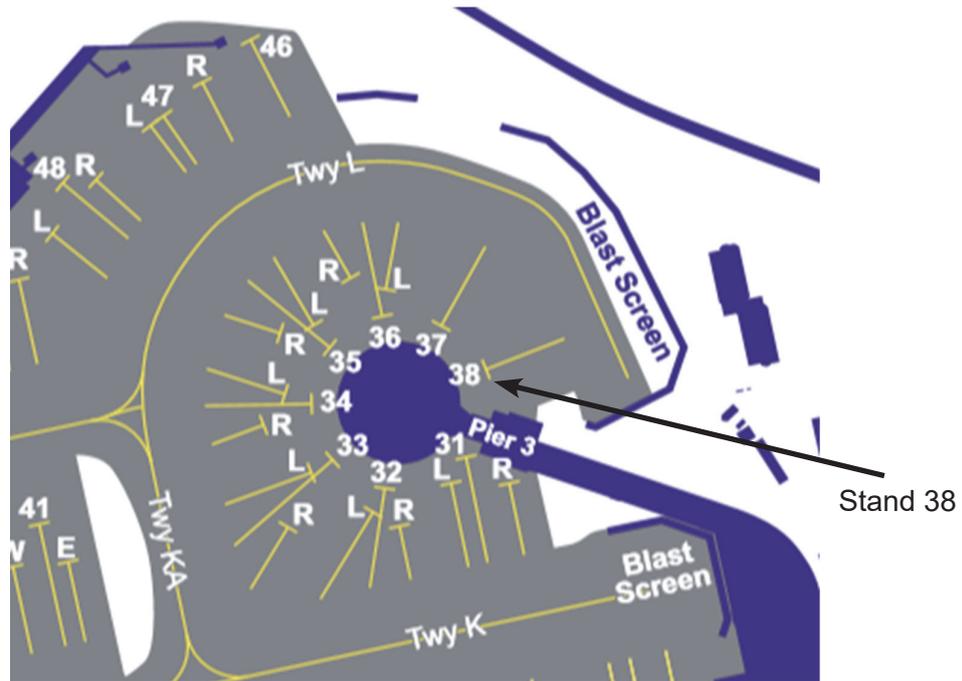


Figure 1

Position of Stand 38 at Gatwick

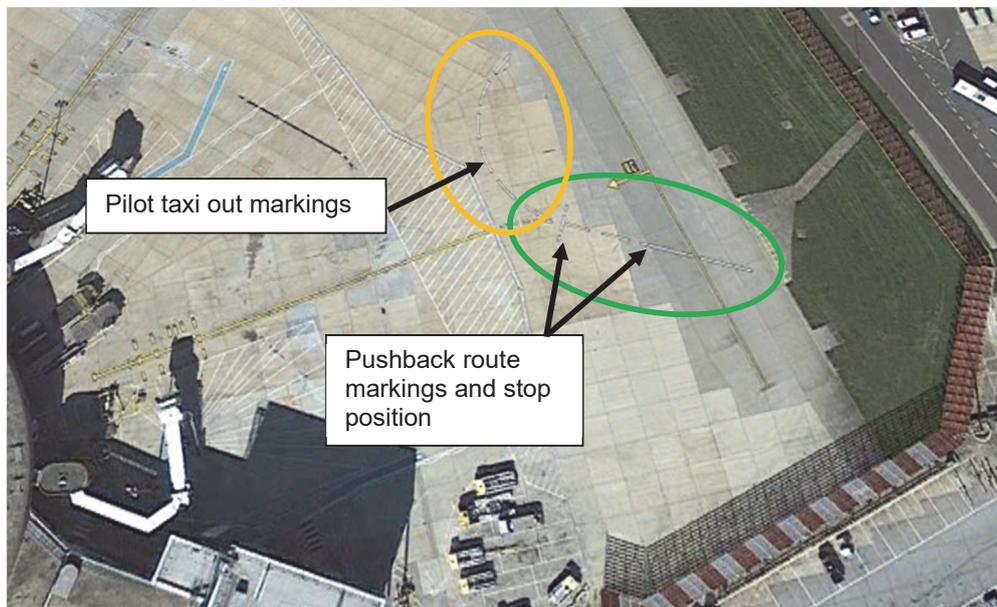


Figure 2

Apron markings Stand 38

At 0910 hrs, the crew received permission to push back from Stand 38. The tug driver began the pushback, and CCTV showed the aircraft pushing straight back along the yellow line for the initial part of the pushback before beginning to deviate from the route markings off the back of the stand. The headset operator signalled to the driver to slow down, with

the intention of directing him to pull the aircraft forward into the correct position but, before this could be done, the aircraft tail cone struck the blast screen. The final position of the aircraft is shown at Figure 3.

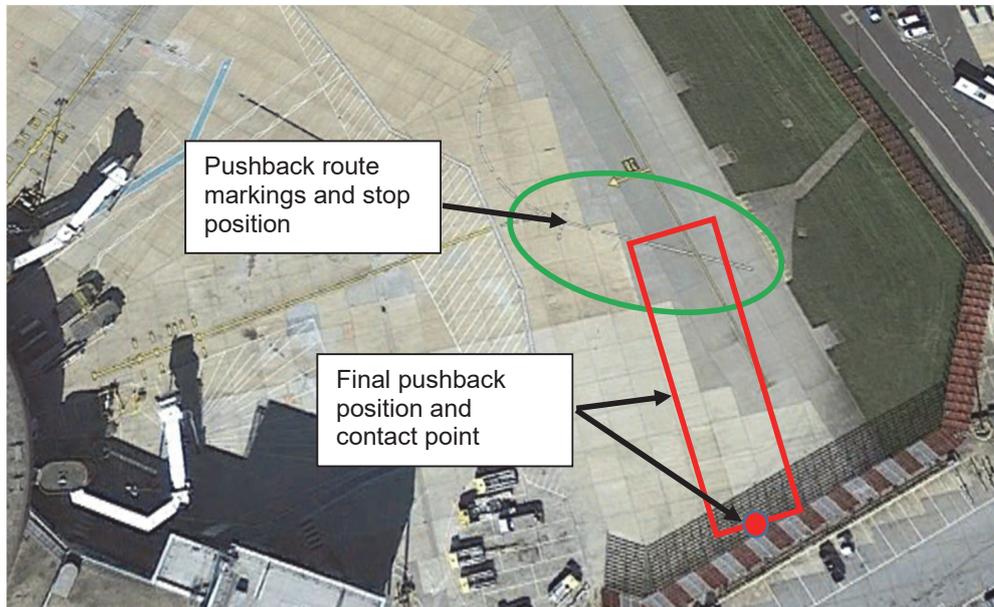


Figure 3

Final pushback position

Neither the headset operator nor the tug driver was aware of the contact, but they were alerted by another ground handler who was in a vehicle within the equipment parking area at the stand and had observed the contact and damage to the aircraft. The flight crew were also unaware of the contact but noted that the Auxiliary Power Unit (APU) had shut down automatically. The headset operator informed the flight crew of the damage who then advised ATC. After the damage was assessed, the aircraft was positioned under its own power onto Stand 37, where the engines were shut down and the passengers were disembarked.

The APU exhaust fairing was subsequently found to be damaged.

Ground handling personnel

Both the headset operator and the tug driver had significant experience operating on the ramp at Gatwick and had pushed aircraft back from Stand 38 previously. Both had begun their shift at 0400 hrs, and were around half way through their rostered shift, and had finished work the previous day at 1230 hrs.

Neither the driver nor headset operator was able to see the tail of the aircraft during the pushback.

The tug driver was retrained and returned to duty. The tug driver also spent a two-week period with the safety team, which included a focus on aircraft safety processes. The Safety

Manager also spent time with the driver to ensure he was in the correct mindset prior to returning to work.

Analysis

Stand 38 at Gatwick requires a non-standard pushback due to the limited space. The stand has pushback route markings and a stop line to assist the tug driver and headset operator position the aircraft correctly.

G-CKWB was not pushed from the stand onto the required line or stopped at the correct point. This meant that the aircraft came into contact with the blast screen and the APU exhaust fairing was damaged. As a result, the aircraft was withdrawn from service for repairs.

Pushing back any aircraft can present a challenge to the ground crew especially when there is limited space, they are unable to see all parts of the aircraft, and the noise on the ramp may prevent verbal communications. Stopping the pushback immediately when any of the team has concerns about the aircraft position or direction of travel is a vital part of ensuring the safety of the aircraft and ground personnel.

Safety action

The aircraft operator took the following safety action:

- Use of Stand 38 by the operator was suspended temporarily.
- The aircraft operator decided to prepare a risk assessment on the use of additional ground staff to watch the wingtips and tail of aircraft during the pushback. The airport operator agreed to consider this assessment once it was complete.
- Notices were issued by the aircraft operator to all pushback crews to remind them of the procedures and importance for stopping a pushback should the aircraft deviate from the centreline.
- Additional training was given to headset operators to increase their understanding and awareness of pushback hazards.

The airport operator took the following safety action:

- A 'STOP' mark was painted on the ramp beside the nosewheel stop line on Stand 38 to make it clear that the aircraft should not be pushed back further than this line. This mark matches others at Gatwick where the pushback is limited by the confined space.