



# QATAR 777 COLLISION PROBE FOCUSES ON INTERSECTION RIDDLE

News / Airlines



Investigators have revealed that a departing **Qatar Airways Boeing 777-300ER** overran the runway at Miami airport before becoming airborne and striking approach lights as it climbed away.

The inquiry into the accident has disclosed that the captain chose to depart from the T1 intersection of runway 09 despite carrying out the calculations for a full-length runway departure, and despite a prohibition on intersection take-offs from this runway.

It indicates that the root of the event lay partly in the terminology displayed by the take-off calculation tool within the aircraft's electronic flightbag.

This tool offered the pilots only a single take-off option, displayed to the crew as '09#T1'. The Qatari civil aviation authority, which has released a series of preliminary findings, says the pilots "understood" that this referred to a full-length take-off, adding that the tool "displayed" the

information that intersection departures for this runway were not permissible.

But Miami's runway 09 coincidentally has an intersection designated 'T1'. As the 777 taxied parallel to the runway, in darkness, the captain "decided" that the aircraft could depart from this intersection.

The captain "could not recall" his reasons for the decision, says the inquiry, but says he believed the information subsequently printed by the calculation tool displayed the label '09#T1' in a "compelling way".

This printed information did not mention that intersection departures were not permitted from runway 09.

When the first officer was asked to tell air traffic control about the intersection departure plan, he checked his own notes, in which he had referred to the 'T1' label used by the tool. This convinced the first officer that the T1 intersection was acceptable as a line-up point for take-off and advised controllers accordingly.

The flight crew included a relief captain and first officer, both present in the cockpit. They queried the decision to use the T1 intersection but, during the subsequent conversation, came to believe that they had missed the pilots' re-calculation of the take-off performance to account for the shorter departure.

Although the captain – who had nearly 1,000h on type – had been tracking the 777's taxi route on a cockpit display, the short-range view selected disguised the position of T1 relative to the rest of the runway. None of the four crew members realised that the T1 intersection was some 1,000m from the beginning of runway 09, leaving the 342t aircraft with only 2,610m available for the departure.

The false perception was further reinforced by an aircraft which, as a result of a displaced touchdown, landed close to the 777's position.

As the aircraft rolled for take-off the crew started to become concerned as it approached the V1 decision speed.

"The [captain] assessed the speed of the aircraft, the rate of acceleration and the runway remaining and concluded the safest course of action was to continue," says the inquiry. It states that the captain recalled initiating rotation with only 300m of runway remaining.

Flight-data recorder information shows the ground roll was 2,866m and that the 777 was "still on the ground" as it left the runway area. The subsequent collision with approach lights for runway 27 was captured on airport surveillance cameras.

None of the crew was aware of the impact and the aircraft – operating flight QR778 to Doha on 16 September – landed at its destination without further incident.

But inspection of the aircraft showed it had suffered a 46cm tear in its fuselage, which breached the pressure vessel, behind the rear cargo door. The inquiry says the aircraft sustained damage across some 18m<sup>2</sup> of aircraft skin, as well as parts of its main landing-gear, with 90 individual areas needing assessment.

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