



Preliminary Report

Boeing 777-333ER

C-FITW

11 December 2018

ARC: Abnormal Runway Contact



General details

Occurrence details

Date and time:	11 December 2018 – 1454 HKT (0654 UTC)
Occurrence category:	Accident
Primary occurrence type:	ARC: Abnormal Runway Contact
Secondary occurrence type:	Hard/heavy landing
Location:	Hong Kong International Airport (VHHH)

Pilot in Command details

Licence details:	ATPL (Aeroplane)/ Initial Operating Experience Training Captain (IOETC)
Aeronautical experience:	22,375:39 hrs
Command time on type:	6,416 hours
Medical certificate:	Class 1
Ratings:	B777,B767,B727, A340, A330, A320, DC-9
Crew composition:	Captain, First Officer, 2 x Cruise Relief Pilots

Aircraft details

Manufacturer and model:	Boeing 777-333ER	
Serial number:	35298	
Registration:	C-FITW	
Operator:	Air Canada	
Number of engines:	Two	
Type of engines:	General Electric GE90-115B turbo-fan engines	
Type of operation:	Scheduled Passenger Service	
Departure:	Toronto Pearson International Airport (CYYZ)	
Destination:	Hong Kong International Airport (VHHH)	
Persons on board:	Crew – 17	Passengers – 376
Injuries:	Nil	
Aircraft damage:	Substantial	

Automatic Terminal Information Service (ATIS)¹

ATIS Hong Kong Arrival Information 'F'	
Time:	0607 UTC (14:07 HKT)
Arrival runway:	07 Left
Wind:	350 DEG 12 KT
Visibility:	10 KM
Cloud:	FEW 2800
Temperature:	18 DEG / DEWPOINT 10
QNH:	1022 HPa

¹ https://www.hko.gov.hk/aviat/decode_metar_e.htm

Safety Investigation Summary

On 11 December 2018, an Air Canada Boeing 777-333ER (B777) aircraft, registration C-FITW was operating from Toronto Pearson International Airport (CYYZ), Canada, to Hong Kong International Airport (VHHH), as a scheduled passenger flight.

As the aircraft approached Hong Kong, the crew briefed for the approach and landing as normal. The First Officer (FO) was the Pilot-Flying from the Top of Descent (ToD), the Captain was the Pilot-Monitoring and the Initial Operating Experience Training Captain (IOETC) for the FO, with two cruise relief pilots also in the cockpit.

The FO had recently been qualified on the B777, receiving the B777 aircraft type rating on 6 December 2018.

This flight was the first B777 operating flight for the FO, the first actual landing of a B777 outside of a B777 Level D flight simulator and the first arrival into Hong Kong as an operating crew member.

The crew were expecting to land on runway 07 Left (07L) as indicated on the Automatic Terminal Information Service (ATIS) broadcast, however there was a late change to the arrival runway with the runway switched from 07L to 07 Right (07R).

The arrival meteorological conditions, including the forecast and actual weather was as expected, wind from 350 degrees and at twelve knots wind speed, with no gusting. The aircraft was landing 07R with a crosswind.²

The aircraft was stabilised on the approach to 07R, although marginally above the glideslope; the FO was the Pilot-Flying operating under the supervision of the IOETC.

The FO disengaged the autopilot system at 400 feet in accordance with the operator's procedures, manually controlling the aircraft during the descent to the touch down point on runway 07R. The IOETC provided verbal guidance during the approach.

At approximately 200 feet above the runway while continuing to descend to the touch down point the aircraft entered into series of minor lateral roll deviations followed by a pronounced roll first to the left and then to the right, the Pilot-Flying introduced large control inputs into the aircraft to control the sudden and unanticipated roll behaviour.

The aircraft was not wings level at the touchdown point as it was rolling to the right. On touchdown the right-hand main gear contacted the runway first.

With a high rate of descent in conjunction with a nose high pitch attitude, the underside of the rear fuselage contacted the runway surface during the hard landing, the aircraft then bounced before returning to the runway centreline.

The aircraft then continued to the parking stand and the passengers disembarked.

Subsequent inspection of the underside of the rear fuselage indicated the aircraft sustained damage to the rear lower fuselage requiring major repair or replacement of the affected components.

The aircraft is currently unserviceable and is undergoing a major repair process to rectify the lower fuselage damage prior to a return to operational service.

² The runway heading for 07R is 70 degrees. For details, see: https://www.ais.gov.hk/HKAIP/AIP/AD/HK_AD2.12.pdf

Opening the Investigation

The Chief Accident and Safety Investigator ordered an investigation into the circumstances and contributing factors that resulted in this accident, in accordance with the Hong Kong Civil Aviation (Investigation of Accidents) Regulations (CAP448B) and the requirements of Annex 13 to the Convention on International Civil Aviation (ICAO Annex 13).

The Transportation Safety Board of Canada (TSB), the National Transportation Safety Board (NTSB) of the United States of America, representing the State of Registry and Operator, the States of Design and Manufacture and of the aircraft and engine respectively, were notified.

Investigation Progress and Completion

The investigation team is conducting detailed analysis of the data and information collected in order to determine the circumstances and causes of this accident in conjunction with identifying areas that need further investigation and/or lines of investigation to be followed up.

The anticipated duration of this accident investigation is twelve months.

Preliminary Report

This preliminary report is published to communicate the information obtained during the initial phase of the ongoing investigation. The purpose is to provide a brief update on how the investigation is progressing as well as a preliminary description of the sequence of events. When matters directly affecting safety are involved, they will be disseminated as soon as the information is available.

During the further course of the investigation, should any safety recommendations be necessary, they will be promulgated immediately.

The information contained in this preliminary report is released in accordance with CAP448B and the requirements of ICAO Annex 13. It is derived from the initial investigation of the occurrence, and must be regarded as tentative.

Readers are cautioned that new evidence will become available as the investigation progresses that will enhance the Air Accident Investigation Authority's understanding of the accident, as such, *no analysis or conclusions are included in this report.*

Air Accident Investigation Authority Information

Check the Air Accident Authority Investigation website for information, reports and updates:

<https://www.thb.gov.hk/aaia/eng/index.htm>

The Air Accident Investigation Authority 24/7 Duty Investigator Hotline:

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