

民 航 意 外 調 查 機 構

AAIA

Air Accident Investigation Authority

Runway Excursion (RE)

Interim Statement

Accident Investigation

Boeing 747-481 BDSF

(Registration Mark TC-ACF)

**at Hong Kong International Airport
on 20 October 2025**

ITR-2026-09

1. Introduction

- (1) In accordance with the Hong Kong Civil Aviation (Investigation of Accidents) Regulations (Cap. 448B), an investigation is in progress to determine the circumstances and causes relating to the runway excursion accident involving a Boeing 747-481 Bedek Special Freighter (BDSF), registration mark TC-ACF, at Hong Kong International Airport on 20 October 2025. The aircraft destroyed various airport meteorological sensor arrays, signage, an aviation security ground vehicle, and a section of the airport's perimeter fence during the excursion. The aircraft was destroyed. All four crew members survived the accident uninjured. The two aviation security staff in the stationary ground vehicle perished.
- (2) In accordance with the requirements of Annex 13 to the Convention on International Civil Aviation – Aircraft Accident and Incident Investigation (ICAO Annex 13), the Transport Safety Investigation Center (TSIC) of Turkey (representing the State of Registry and the State of the Operator) and the National Transportation Safety Board (NTSB) of the United States of America (representing the State of Design and the State of Manufacture of the aircraft involved) have appointed their respective Accredited Representatives and advisers to assist in the investigation.
- (3) Based on all collected evidence and information, the investigation team is analysing the causes of the accident. Per paragraph 6.6 of ICAO Annex 13, if the investigation report cannot be made publicly available within twelve months, the State/Administration conducting the investigation shall make an interim statement publicly available on each anniversary of the occurrence, detailing the progress of the investigation and any safety issues raised.

2. Investigation Scope

- (1) The investigation encompasses technical, operational, human factors, and organisational aspects, including:
 - Aircraft systems and performance,
 - Aircraft maintenance,
 - Air traffic management and communications,
 - Environmental conditions,
 - Operator procedures, training, safety management, and regulatory oversight,
 - Flight crew performance, and
 - Emergency response.

3. Investigation Progress

(1) Further to the investigation items covered in the preliminary report, key investigative actions completed by the AAIA include:

- Site survey, wreckage recovery, and retrieval of onboard documents,
- Examination of engines, airframe, and flight deck,
- Data recovery from onboard recording systems including Cockpit Voice Recorder (CVR), Flight Data Recorder (FDR) and Quick Access Recorder (QAR)¹,
- Interviews with operating crew (in English and Turkish), duty air traffic controllers, and rescue personnel,
- Collection of operational records for crew (e.g., licences, experience, rosters, training),
- Collection of applicable meteorological, air traffic control (ATC), and airport data, including forecast and actual airport weather, ATC communications with flight crew, aircraft tracking information, and records from the Automated Foreign Object Debris Detection System (AFODDS) for information on Foreign Object Debris (FOD) sweeps,
- Collection of maintenance manuals and records for aircraft,
- Collection of dispatch briefing package,
- Acquisition of airline operations and safety management manual suite,
- Collection of operator's internal review of accident and report on simulation of runway excursion,
- Collection of Aviation Security Company Limited (AVSECO) company procedures for airport patrols,
- Collection of Closed-Circuit Television (CCTV) footage of aircraft touchdown, landing, and runway excursion from multiple perspectives,
- Acquisition of Wet Lease Agreement between ACT Airlines and Emirates,
- Acquisition of the most recent Directorate General of Civil Aviation (DGCA) (Turkey) audit report on ACT Airlines before the accident, and
- Acquisition of the most recent International Air Transport Association (IATA) Operational Safety Audit (IOSA) report on ACT Airlines before the accident.

¹ The QAR is a device installed in aircraft designed to record extensive flight data for immediate and routine access. Unlike the Flight Data Recorder, which is used post-incident, the QAR's data is utilised for maintenance diagnostics, operational analysis, and enhancing flight training.

(2) Specialist examinations or tasks conducted to date include:

- Flight data derived sequence of events reconstruction with CVR overlay. Based on FDR data, the aircraft touched down at 03:52:13 hours on Runway 07L at Hong Kong International Airport with no anomalies,
- Recovery of QAR data for the accident flight until 03:51:33 hours, with the aircraft at a radio altitude of 499 ft above the ground. QAR data for the flight after 03:51:33 hours was not available²,
- Translation of cockpit voice recording from Turkish to English by the TSIC,
- Production of flight data animation with CVR overlay for the accident,
- Examination and data download from the Electronic Engine Control (EEC) units by British Aerospace Systems (BAE),
- Examination and testing of the thrust control module and resolvers by Boeing,
- Examination and testing of the #4 Engine N2 speed card and the EEC / Thrust Management Computer (TMC) card,
- Non-Volatile Memory (NVM) data from a Collins Flight Control Computer (FCC) and two Central Maintenance Computers (CMCs) were successfully downloaded, and
- Among the supervised specialist technical examinations conducted by the respective manufacturers of the EECs, #4 Engine N2 speed card, thrust control module, and resolvers, no faults relevant to the accident were identified for the aircraft parts.

(3) Specialist examinations or tasks, performed in tandem with those in paragraph 3(2), planned to be completed by the end of 2026:

- The NTSB sound spectrum analysis report of the autothrottle electromechanical servo motor using the CVR recording, which aims to distinguish whether the thrust lever's forward movement was driven by the autothrottle electromechanical servo motor or advanced by external forces,
- Further examination and testing of the EEC / TMC card is being conducted by Boeing,

² The issue was consulted with the NTSB. AAIA is of the view that the accident probably happened before the completion of the processing of the data after 03:51:33 hours for storage by the QAR, hence no data was available.

- Recovery of NVM from various other electronic components, including two Honeywell Flight Management Computers (FMCs) and the Crane Brake System Control Unit (BSCU),
- Flight simulation trials of runway excursion, and
- Human factors and operational analyses, including an examination of historical B747-400 accidents with similar characteristics.

4. Safety Actions

- (1) Safety advisory notices or safety recommendations will be issued without delay to relevant parties if any critical safety issues are identified during the course of the investigation.
- (2) In light of the lessons learnt from the accident, ACT Airlines and Boeing have implemented the following safety actions for enhancing safety. The implementation of the safety actions does not imply that the investigation has determined the causes or contributing factors of the accident:
 - i. ACT Airlines integrated the accident scenario into its initial and recurrent flight crew simulator training program effective 17 December 2025.
 - ii. Boeing, published a *WINGTips*³ newsletter article on 3 April 2026 to remind all Boeing 747 operators about Boeing's 747 Flight Crew Operations Manual (FCOM) and Flight Crew Training Manual (FCTM) guidance on crew callouts and pilot handling techniques for thrust levers and their associated reversers.

5. Further Work

- (1) The investigation is ongoing and involves multiple technical streams of work. The complexity of the technical analyses, which are being conducted abroad by respective authorities, and verification and validation of information with participating accredited representatives and their technical advisors, affect the investigation timeline. Interim investigation updates will continue to be issued, as required, and/or if any significant safety issues emerge.
- (2) Technical examinations of the identified aircraft parts are ongoing, and some of the reports for the specialist examinations are still pending. An investigation report will be issued and processed per the following regulations of Cap. 448B after the completion of all investigative activities and internal and external review processes:

³ *WINGTips* is a proprietary Boeing publication designed specifically for airline flight operations departments.

- a) Regulation 11 Notice of report and representations – The investigation report will be disseminated to relevant parties for representations. AAIA will review the representations made and incorporate in the investigation report where appropriate.
- b) Regulation 12 Notice of review – After the investigation report is finalized, it will be disseminated to relevant parties for notice of review. Any person, who has made representations on the investigation report per Regulation 11, may serve a notice of review on the findings and conclusions in the investigation report if it appears that the person's reputation is likely to be affected by them.
- c) Regulation 15 Publication of reports – If no person serves a notice of review, the investigation report will be submitted to the Chief Executive for consideration for publication.

13 October 2026

Air Accident Investigation Authority Information

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

<https://www.tlb.gov.hk/aaia/eng/index.html>

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