

Safety Investigation Preliminary Report

Accident File No. 19-23

Ground Accident During Pushback

Date	July 17th, 2023
Aircraft	B747-400F & B757-200F
Registration	OE-LRG & N918FD
Location of event	Ben Gurion Int. Airport, N Apron

For Safety Purposes Only

The law regarding the safety investigation and its results

Relevant Articles from the Air Navigation Law, 2011 and ICAO Annex 13)

Safety investigation - An investigation of a safety incident to this chapter is a procedure that includes gathering information and analyzing it, drawing conclusions, including determining the causes of the safety incident or the factors that contributed to its occurrence, and providing recommendations related to the matter for the purpose of improving aviation safety, as far as the Aircraft safety Investigation Authority Israel (AIAI) deems it necessary (section 104 of the law).

Purpose of a safety investigation - The sole purpose of a safety investigation is the prevention of safety incidents, and its purpose is not to attribute civil, criminal or disciplinary liability to such incidents (section 105 of the law).

Duties of the AIAI - The IIC will be in charge of conducting safety investigations according to the provisions of this chapter. In fulfilling his duties, the IIC will act in accordance with the provisions of ICAO Annex 13, insofar as they are applicable in Israel, with the exception of such provisions for which the CAAI informed ICAO, according to the provisions of Section 4(b) of the Civil Aviation Authority Law, that Israel operates in a different manner (section 108 of the law).

Independence - in carrying out a safety investigation according to this chapter, there is no prejudice against the AIAI director, other than the law and justice; The provisions of this section shall also apply to an investigator authorized under section 115, subject to the provisions of subsection (c) of said section (section 109 of the law).

Publication of the Final Report - The AIAI will publish the final report on its internet site and will also make the report available for public inspection, free of charge unless, if there is any contradiction with the country's security or its foreign relations. (section 119 of the law).

The recommendations of the AIAI - the CAAI and anyone for whom the AIAI included recommendations in the final report will examine the aforementioned recommendations concerning him, will decide as to their implementation and will notify the AIAI of his reasoned decision in writing; The CAAI will forward his reasoned decision to the minister as well (section 122 of the law).

Inadmissibility of the final report - The final report will not be accepted as evidence in a trial, except in an appeal according to section 39, in an administrative petition or in an administrative appeal against decisions according to this law, according to the Law of Courts for Administrative Matters, 2000, and will not be used in a procedure taken by an employer against his employee, and regarding a procedure against a pilot employee according to section 38 - will not be used unless the circumstances stated in section 138(b) are met (section 124 of the law).

Confidentiality and inadmissibility of safety investigation material - Safety investigation material will not be given and will not be accepted as evidence in a trial and will not be used in a disciplinary procedure, in an administrative procedure or in a procedure taken by an employer against his employee. (section 123 of the law).

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1. Factual information

1.1 History of the flight

On Monday, July 17th, 2023 at 01:15 AM local time, a ground accident during pushback occurred in Ben Gurion International Airport (Israel) between a Boeing 747-400F operated by Challenge Airlines (BE) (hereinafter: "the aircraft"), a parked FedEx Boeing 757-200F aircraft (hereinafter: "the cargo aircraft") and a Tug vehicle (hereinafter: "the vehicle").

The aircraft, that was parked at stand N-21, was ready for departure and pushed back from its stand to starting point 71 in November Apron by a Tug vehicle connected to a tow-bar. During the pushback process, the aircraft started its engines and began to move forward, opposite to the vehicle's direction of motion.

Simultaneously, interphone voice communication between ground personnel and the flight deck was lost. Ground personnel attempts to signal the flight crew to stop the continuous forward motion of the aircraft, were unsuccessful.

During its motion, the aircraft overtook the vehicle, pushed it sideways while its left wingtip hits the rudder of the parked cargo aircraft. The pins of the tow-bar sheared and the vehicle stopped and got stuck underneath the aircraft's belly, between the left main and body landing gears.

The aircraft, the vehicle and the parked cargo aircraft sustained damage, but with no fatal or any injuries of the ground crew.

The incident was reported to the director of the Aviation safety Investigation Authority of Israel (hereinafter: "AIAI"). A team of investigators from the AIAI arrived at the accident scene and began investigating the occurrence.



The Damaged Cargo Aircraft



The Vehicle Underneath the Aircraft

1.2 Injury to Occupants

Injuries	Crew	Passengers	Others
Fatal	0	0	0
Serious	0	0	0
None	2	3	4
Total	2	3	4

1.3 Damage to aircrafts (upon initial inspection)

The aircraft – damage to aircraft's body landing gear doors and two landing gear tires in addition to damage to the left-hand wingtip.

The cargo aircraft – damage to the aircraft rudder.

1.4 Other damage

The vehicle – damage to the forward passenger cabin and right-hand body exterior structure.

Tow-bar – shear pins sheared off due to overload.

1.5 Aircrew and other personnel involved

1.5.1 Captain

Current and valid licence.

1.5.2 First Officer

Current and valid licence.

1.5.3 Tug Driver

Holds a current permit to tow aircrafts within Ben-Gurion Int. Airport

1.5.4 Head of Towing Team

Qualified aircraft mechanic

Holds a current permit to tow aircrafts within Ben-Gurion Int. Airport

1.5.5 Right wing walker.

1.5.6 Left wing walker.

1.6 Information about the aircrafts

1.6.1

1.6.2 Aircraft - B747-400F:

- Registration - OE-LRG.
- State of registration - Austria.
- Operator - Challenge Airlines (BE).
- Engines - Pratt & Whitney 4056.
- Weight & Balance - within the limits.
- The aircraft was carrying HAZMAT on board

1.6.3 Cargo Aircraft - B757-200F:

- Registration - N918FD.
- State of registration - USA.
- Operator - FedEx.

1.7 Weather

- CAVOK (at Ben Gurion Int. Airport).
- Visibility conditions - night, fully lit apron.

1.8 Radio Navigation aids - N/A.

1.9 Communication - Ben Gurion airport ground (east) channel.

1.10 Aerodrome Information

- Ben Gurion Int. Airport, Apron N, fully operational apron and taxiway lighting.
- Engines start up point 71 on the center line of the apron.

1.11 Flight Recording data - under inspection.

1.12 Aircraft wreckage and information regarding the ground impact – N/A

1.13 Medical and Pathological information - N/A.

1.14 Fire - N/A.

1.15 Elements of Survival - N/A.

1.16 Tests and Research – to be investigated.

1.17 Information about the organization and management relevant to the event of the companies and the regulator:

to be examined.

1.18 Other relevant information - as much as can be found.

1.19 The technique and methods of investigation - in accordance with the Israel Air Navigation Law (2011) and ICAO Annex 13.

Sincerely,



Gad Regev
Director of Aircraft Safety Investigation Authority Israel

Date: 13.08.2023

Ref.: 4000-0098-2023-0000390

Returning objects seized during a safety investigation

In accordance with Section 114(b)(5) - (7) of the Aviation Law, 2011, the director of the Aviation Safety Investigation Authority will return seized objects, with the exception of aircraft debris, within 45 days from the date of publication of the final investigation report. The objects will be returned to the person from whom the objects were seized, or to their owners. Fragments of an aircraft will not be returned except at the request of the owner of the aircraft and at his expense. A request for their reinstatement must be submitted to the Aviation Safety Investigation Authority, no later than 45 days from the date of publication of the report. A person interested in having seized objects not returned to their owners may submit an appropriate request to the Magistrate's Court, in whose jurisdiction the object was seized.