

Interim Report

Identification

Type of Occurrence:	Accident
Date:	4 June 2026
Location:	Frankfurt Main Airport
Aircraft:	Airplane
Manufacturer:	Boeing Company
Type:	B787-9
Injuries to persons:	21 persons suffered minor, 2 severe injuries
Damage:	Aircraft substantially damaged
Other Damage:	High Loader
State File Number:	BFU26-0454-1X

Abstract

At a parking position at the terminal, a Boeing B787-9 was prepared for a long-range flight. On board were the technicians and ground handling services personnel, when the nose landing gear retracted unexpectedly. The aircraft impacted the concrete with the nose and both engine cowlings.

Factual Information

History of the Flight

On Wednesday evening, the B787-9 took off from Austin Airport, USA, flew overnight to Europe and on Thursday, 4 June 2026 at 07:02 UTC¹, it landed at Frankfurt Main Airport. At 07:19 UTC, the B787-9 was parked at Terminal 1 at Gate A15.

Passenger boarding was scheduled for 11:05 UTC. At 11:50 UTC, departure to Los Angeles should take place.

According to the Pilot in Command's (PIC) statement, the crew boarded via portable stairs at door 4L with a total of 13 persons. At the time, 13 ground handling service members were on board already. Their cleaning and security check in the front part of the aircraft had already been completed so that most of the persons were in the aft part of the aircraft. The majority of the crew was also in the area of the aft galley and waited for the ground handling services to complete their work.

The PIC and the Senior First Officer (SFO) entered the cockpit. There, two technicians sat in the pilot seats and were in the middle of conducting a test to resolve an open complaint regarding the control system for the main landing gear doors. Due to time constraints, electricians were unable to resolve this issue in advance. During this test, the landing gear lever should be set to "UP", among other things. At about 10:45 UTC, immediately after the landing gear lever had been activated, the nose landing gear retracted and the aircraft's front fuselage impacted the ground. After the impact, the cockpit door slammed shut. At the same time, the power and the lighting went out.

¹ All times in UTC. On the day of the accident, local time at Frankfurt Main Airport was Central European Summer Time CEST = UTC + 2 hours

Injuries to Persons

Injuries	Flight crew, technicians and ground handling services	Passengers in the aircraft	Total in the aircraft	Other personnel
Fatal				
Serious	2			
Minor	20			1
None	6			5
Total	28		28	6

Tab. 1: Overview injuries to persons

Source: Operations management of the airport operator

The PIC went into the cabin to get a sense of the situation. The First Officer (FO) and one crew member were in the area of door 1R. With the command “Attention Crew on Station“, the PIC instructed the crew to go on alert. Initially, five injured crew members and four injured ground handling services members were registered. The PIC estimated that an evacuation was not necessary. As a result, he cancelled the alert with “Cancel Alert“. The airport fire brigade and rescue services were alarmed via the operator’s Hub Control Center (HCC).

After about 15 minutes, the rescue services arrived and provided initial medical care to the injured. Together with the airport fire brigade, the PIC left the airplane through door 4L after all 27 persons had left.

According to the PIC, outside the airplane three other ground handling services members had been injured. Two flight crew members and four other persons were transported to hospitals.

Operations management and airport security prepared a list of the persons involved and their injuries. After the BFU consulted with the airport operator and the individual companies involved, a total of 34 individuals directly involved were identified. Twenty-eight persons were in the airplane’s cabin. Five ground handling services members were outside the airplane, one technician was at the nose landing gear. Two ground handling services members were in the front cargo compartment and not injured. One person was in the High Loader and suffered minor injuries.

Personnel Information

Flight Crew

Pilot in Command

The 47-year-old PIC (Captain, CPT) held an Airline Transport Pilot License (ATPL(A)) initially issued on 27 November 2014 by the Luftfahrt-Bundesamt (German aviation authority). It included the valid entries type ratings PIC Airbus A320, PIC B777/787, the Multi Engine Instrument Rating (ME IR) and the Type Rating Instructor (TRI) for Airbus A320.

He had a total flying experience of more than 10,900 hours, of which more than 200 hours were flown on B787-9. In the last 90 days he had flown more than 100 hours as PIC on B787-9.

Senior First Officer

The 44-year-old SFO held an ATPL(A)) initially issued on 4 May 2025 by the Luftfahrt-Bundesamt. It included the valid entries of the type ratings COP B777/787, the Multi Engine Instrument Rating (ME IR) and the Type Rating Instructor restricted privileges (TRI/r) for B777/787.

He had a total flying experience of more than 8,400 hours, of which more than 1,100 hours were flown on B787-9. In the last 90 days, he had flown more than 40 hours on B787-9.

First Officer

The 49-year-old FO held an ATPL(A)) initially issued on 29 June 2021 by the Luftfahrt-Bundesamt. It included the valid entries of the type ratings COP B777/787, the Multi Engine Instrument Rating (ME IR) and the class rating PIC SEP² (land).

He had a total flying experience of more than 5,500 hours, of which more than 140 hours were flown B787-9. In the last 90 days, he had flown more than 100 hours on B787-9.

² Single Engine Piston

Maintenance Personnel

At the time of the accident, two technicians were in the cockpit. They had divided their tasks so that one was reading the instructions in the maintenance handbook and the other carried them out.

The reader sat in the right-hand seat. The 45-year-old technician (TEC2) held a Part-66 aircraft maintenance licence last issued on 17 July 2024 by the Luftfahrt-Bundesamt for category A1 and B1.1, valid until 14 September 2028.

He held the category B1.1. rating for the following aircraft types:

B777-200/300 (GE90)	since 16 July 2018
B777-200/300 (PW4000)	since 22 October 2019
B787-8/9/10 (GENx)	since 22 October 2019
B787-8/9/10 (RR Trent 1000)	since 22 October 2019

The 61-year-old technician (TEC1) sitting in the left-hand seat, performing the task, held a Part-66 aircraft maintenance licence last issued on 15 September 2023 by the Luftfahrt-Bundesamt for category A1 and B1.1, valid until 14 September 2028.

He held the category B1.1. rating for the following aircraft types:

A318/A319/A320/A321 (CFM56)	since 18 March 2004
A318/A319/A320/A321 (IAE V2500)	since 17 February 2003
A330 (GE CF6)	since 19 October 2006
A330 (PW4000)	since 19 March 2008
A330 (RR Trent 700)	since 19 October 2006
A340 (CFM56)	since 17 February 2003
A340 (RR Trent 500)	since 19 October 2006
B737-300/400/500 (CFM56)	since 17 February 2003
B737-600/700/800/900 (CFM56)	since 17 February 2003
B747-400 (GE CF6)	since 17 February 2003
B747-400 (PW4000)	since 19 October 2006
B777-200/300 (GE90)	since 19 October 2006
B777-200/300 (PW4000)	since 19 October 2006
B777-200/300 (RR Trent 800)	since 19 October 2006
B787-8/9/10 (GENx)	since 20 January 2015
B787-8/9/10 (RR Trent 1000)	since 16 December 2014

On the day of the accident, a 37-year-old employee had been assigned to the two licensed technicians as support staff. At the time of the accident, he was on the apron

close to the nose landing gear. In-house, he had a rating as Maintenance Assistant (MA) issued by the maintenance organisation, valid until 2 October 2027.

In addition, he held a Part-66 aircraft maintenance licence issued by the Irish Aviation Authority (IAA), category A1 last issued on 21 February 2025 and valid until 20 February 2030.

Working Hours of the Maintenance Personnel

The duty rosters of the technicians involved were made available to the BFU. These showed that all three technicians started their workday at 06:15 UTC on 4 June 2026. It was their second day on the shift. Scheduled were three early shifts followed by two days off.

Aircraft Information

Aircraft Information B787-9

The twin-engine transport aircraft type B787-9, “Dreamliner”, of the US-manufacturer Boeing, is a wide-body aircraft of carbon fibre reinforced polymer. The low-wing aircraft is fitted with a retractable landing gear in nose wheel configuration (Fig. 1).

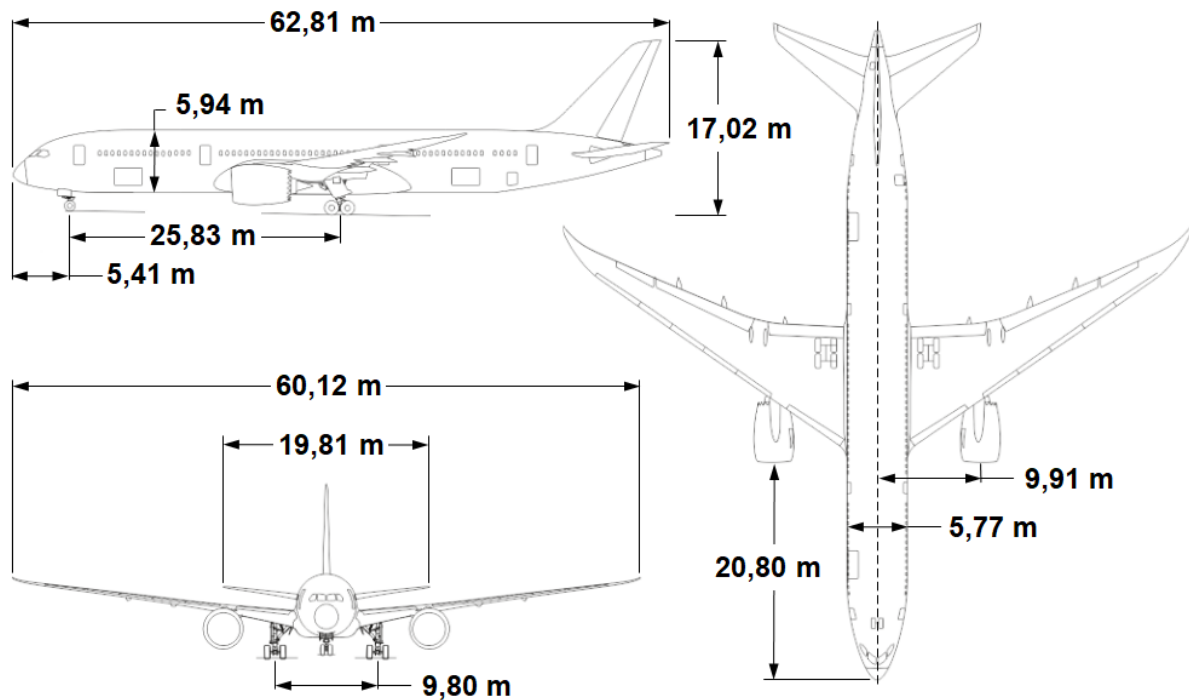


Fig. 1: Three-way view of B787-9

Source: Aircraft manufacturer, adaptation BFU

The B787-9 was designed as medium and long-range aircraft. The freight, consisting either of standard container or pallets, was loaded via two cargo doors at the right-hand fuselage side below the cabin.

Information of the Aircraft Involved

The aircraft was operated by a German operator and was initially certified for commercial passenger air transport and freight on 19 January 2026 by the Luftfahrt-Bundesamt. The last Airworthiness Review Certificate (ARC) was issued on 20 January 2026 at 18 flight hours and valid until 15 January 2027.

The operator had fitted the aircraft with a passenger cabin seating 253 passengers in three seating categories (Fig. 2).

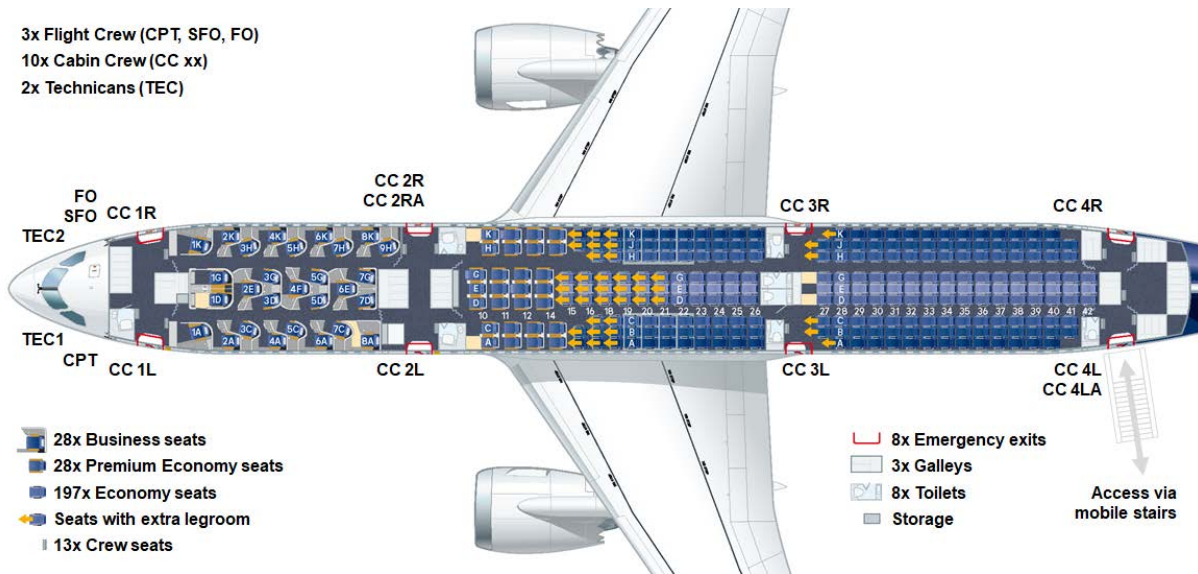


Fig. 2: Cabin layout in three seating categories and crew assignments to the emergency exits.

Source: Operator, adaptation BFU

The aircraft was fitted with three galleys and eight lavatories in the areas of the eight emergency exits, which were also used as doors. At the time of the accident, the rear-most door on the left-hand side was open (4L). Entry was possible via portable height-adjustable stairs.

Further technical information of the aircraft involved:

Manufacturer / model:	Boeing / B787-9
Engines:	2x Rolls Royce Trent 1000-K3
Year of manufacture	2025
Manufacturer's serial number	66827
Operating hours / landings	1,093:19 h / 147
MTOM / fuel mass	254,011 kg / 71,500 kg

Tab. 2: Aircraft information

Source: Operator

Meteorological Information

According to the aviation routine weather report (METAR) of 1020 UTC, horizontal visibility was more than 10 km at Frankfurt Main Airport. Wind direction was 230° at

15 kt; gusts 25 kt. A cloud base below 5,000 ft AGL was not determined. Temperature was 17°C, dewpoint 13°C, and QNH 1,006 hPa.

Aerodrome Information

Frankfurt Main Airport (EDDF)³ is located 12 km south-west of Frankfurt am Main. Aerodrome elevation is 363 ft AMSL. The airplane was parked at Terminal 1 at Gate A15 (N50 02 53.33 / E008 34 07.31) (Fig. 3).



Fig. 3: Parking position A15 (red circle) at Frankfurt Main Airport

Source: Air navigation service provider, adaptation BFU

Gate A15 was equipped with an automated docking system SAFEDOCK A-VDGS⁴. This system records the docking procedure of the airplane with a video camera, among other things. The video from 4 June 2026 at 07:07:46 UTC until 5 June 2026 at 02:42:33 UTC was made available to the BFU for evaluation purposes.

Flight Recorders

The aircraft was equipped with two Enhanced Airborne Flight Recorders (EAFR) identical in design. The combined Cockpit Voice and Data Recorders (CVDR) record

³ The information is part of the Aeronautical Information Publication, AIP Germany, which was published by the air navigation service provider.

⁴ Advanced Visual Docking Guidance System

digitally voice and flight parameter. Two installation locations provide additional fail safety.

Manufacturer / Model	GE Aviation / EAFR-2100 WT 9.0 LB
Parts and Serial Numbers	189911-002 / 0000475
Installation location	In flight direction front left
Parts and Serial Numbers	189911-002 / 0000582
Installation location	In flight direction aft right

Tab. 3: Flight recorder information

Source: BFU

Both EAFR were secured by BFU. The data could be read out and stored. According to the manufacturer⁵, the recordings start if the destination airport is entered into the board computer, one of the two engines is started, if the airplane is airborne or the TEST switch for the CVR is pushed. Therefore, the accident occurrence was not recorded.

Wreckage and Impact Information

The accident site was located at Gate A15 at Frankfurt Main Airport (Fig. 3). After the nose landing gear had retracted, the fuselage nose and both engine cowlings impacted the concrete. Parts of the fuselage and the nose gear box were substantially damaged.

The airbridges on door 1L and door 2L were still pulled up; the doors 1L, 2L and 3L were closed. Door 4L on the left-hand side was open and there stood portable stairs.

On the right-hand side, the four doors (1R - 4R) were closed and both cargo doors were open. At the front cargo door stood a High Loader. The High Loader had been pushed down by the fuselage nose and the cargo door.

Figure 4 shows the damage in the area of the front cargo door close to the Static Port (red circle) and a detailed close-up with a scale on the left side of the High Loader. The photo, taken from the right-hand side, shows the bent door mechanism of the front cargo door.

⁵ System Description B787-9: „Flight Recorder System“, Operation Description, 1. Automatic Start/Stop (DMC-B787-A-31-31-00-00A-110A-A, Issue 019, 31 May 2026)



Fig. 4: Fuselage damage at the front cargo door

Source: BFU

In the front cargo compartment, the partition to the avionic compartment below the cockpit was opened. The storage box for the landing gear downlock pin was stored in the avionic compartment. The landing gear downlock pin for the nose landing gear including the red flag was found inside (Fig. 5).

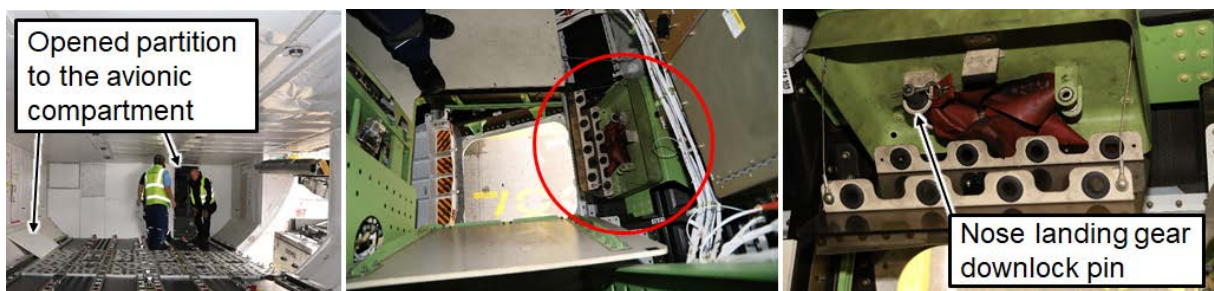


Fig. 5: Opened partition to the avionic compartment in the front cargo compartment

Source: BFU

Four other landing gear downlock pins were properly installed in the two main landing gears.

Aircraft Recovery

The operator and the airport fire brigade recovered the aircraft. After power was restored, about 60,000 kg fuel were drained from the fuel tanks. The fuselage nose was lifted up with the help of an air cushion (Fig. 6, left). At about 2 m lifting height, the nose landing gear extended and locked on its own (Fig. 6, right).



Fig. 6: Aircraft recovery (left) and extended nose landing gear (right)

Source: BFU

After the aircraft had been lifted up, the BFU documented that the landing gear downlock pin was not inserted into the designated hole on the nose landing gear and was not in the vicinity of the nose landing gear either (Fig. 7).



Fig. 7: Documentation of the missing landing gear downlock pin on the nose landing gear of the B787-9

Source: BFU

The nose landing gear was secured with the landing gear downlock pin found in the avionic compartment and the aircraft taken to a hangar for further examination.

Fire

There were no indications of fire on the ground.

Organisational and Management Information

The technicians had a tablet available with the operator's handbooks containing the fault analysis methods.

In this case, the Fault Isolation Manual (FIM)⁶ was used. Prior to activating the landing gear lever (10), Item (5) notes that the landing gear downlock pins have to be installed if they had not already been (Fig. 8).

A. Initial Evaluation

WARNING: KEEP PERSONNEL AND EQUIPMENT AWAY FROM THE AREA AROUND THE DOORS FOR THE NOSE AND MAIN LANDING GEAR. THE DOORS OPEN, AND CLOSE QUICKLY. THIS CAN CAUSE INJURIES TO PERSONNEL, AND DAMAGE TO EQUIPMENT.

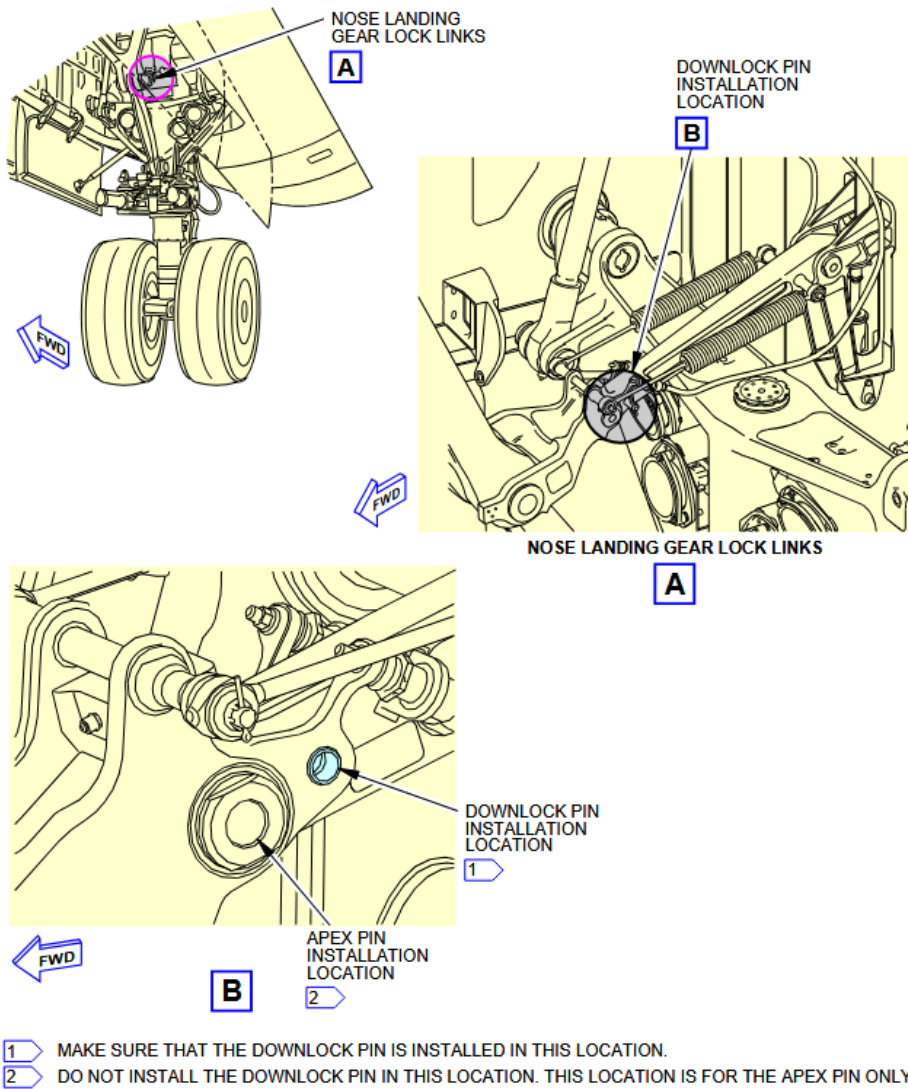
- (1) Make sure that the landing gear control lever is set to DN.
- (2) Set the GND TEST switch to ENABLE.
- (3) Open these circuit breakers: CE2471839, MAIN DC FEED RPDU 81 and CE2471825, STANDBY DC FEED RPDU 81.
- (4) Close these circuit breakers: CE2471839, MAIN DC FEED RPDU 81 and CE2471825, STANDBY DC FEED RPDU 81.
- (5) Install landing gear downlock pins if they are not already installed. This is the task:
Landing Gear Downlock Pins - Installation, AMM B787-A-32-00-30-00A-720A-A.
- (6) Make sure that the area around the doors for the nose and main landing gear is clear of persons and equipment.
- (7) Pressurize the center hydraulic system to 5000 psi and wait a minimum of 15 seconds. This is the task:
Hydraulic System - Center (Task Selection) - Pressurization, AMM B787-A-29-11-00-20E-210B-A.
- (8) Use the CMCF to start this special function: 32 Landing Gear Actuation System, Landing Gear Actuation Allow Door Normal Close.
NOTE: Do not press the STOP FUNCTION button until you are finished with door normal close operation. This special function will continue to operate until the special function is stopped.
- (9) Push the LOCK OVRD button before you move the landing gear control lever to UP and wait a minimum of ten seconds. The landing gear doors will open now.
- (10) Move the landing gear control lever to DN.

Fig. 8: Excerpt from the Fault Isolation Manual

Source: Aircraft manufacturer, adaptation BFU

⁶ Maintenance Message 32-59016 Fault Isolation Procedure, Fault Isolation Manual B787-9 (DMC-B787-A-32-30-F2-19A-421A-A, Issue 017, Apr 2026)

Item (5) also referred to the Aircraft Maintenance Manual (AMM)⁷, which described the procedure to secure the landing gear with the landing gear downlock pins. It also depicted the installation of the nose landing gear downlock pin (Fig. 9).



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Fig. 9: Excerpt of the Aircraft Maintenance Manual regarding the installation of the nose landing gear downlock pin

Source: Aircraft manufacturer, adaptation BFU

⁷ Landing Gear Downlock Pins – Installation, B787-9 Aircraft Maintenance Manual (DMC-B787-A-32-00-30-00A-720A-A, Issue 017, 30 Apr 2026)

Investigator in charge: Ekkehart Schubert

Field investigation: Uwe Berndt, Norman Kretschmer,
Andreas Rennert, Ekkehart Schubert

This investigation was conducted in accordance with the regulation (EU) No. 996/2010 of the European Parliament and of the Council of 20 October 2010 on the investigation and prevention of accidents and incidents in civil aviation and the Federal German Law relating to the investigation of accidents and incidents associated with the operation of civil aircraft (*Flugunfall-Untersuchungs-Gesetz - FIUUG*) of 26 August 1998.

The sole objective of the investigation is to prevent future accidents and incidents. The investigation does not seek to ascertain blame or apportion legal liability for any claims that may arise.

This document is a translation of the German Investigation Report. Although every effort was made for the translation to be accurate, in the event of any discrepancies the original German document is the authentic version.

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