DIRECTORATE GENERAL OF CIVIL AERONAUTICS
ACCIDENT PREVENTION DEPARTMENT

DPA. OF. ORD. Nº 06/2/509/**14990**

OBJ: Sends a final report of the Investigation of the Aviation Accident, N°2052-24 (JIA) which determines the cause and issues recommendations.

REF.: Investigation of Aviation Accident No. 2052-24 (JIA).

SANTIAGO, 22 de diciembre de 2025

FROM : ACCIDENT PREVENTION DEPARTMENT

PAIR : DOUG BRAZY, AIR CARRIER AND SPACE INVESTIGATIONS (NATIONAL TRANSPORTATION SAFETY BOARD)

Dear Mr. Brazy,

As you are aware, the investigation of aviation accidents and incidents constitutes an administrative process whose sole objective is to determine the causes and contributing factors of an aviation occurrence, with the purpose of preventing the recurrence of similar events in the future. Such investigations are conducted in accordance with the principles established in ICAO Annex 13 and do not seek to apportion blame or determine civil or criminal liability.

Within the Directorate General of Civil Aviation of Chile (DGAC), the Accident Prevention Department is the competent authority responsible for conducting investigations of aviation accidents and incidents, as well as for issuing the corresponding Final Reports for each investigative process.

In this context, and in accordance with the applicable regulations, we hereby forward to you the Final Report corresponding to Aviation Accident Investigation No. 2052-24 (JIA), in which your organization has participated as part of the investigative process. We would also like to express our sincere appreciation for the professional support provided throughout each stage of this important activity.

Furthermore, Chapter 5 of the Final Report No. 2052-24 (JIA) includes the issuance of several Aviation Safety Recommendations addressed to the relevant stakeholders. With respect to those recommendations directed to the aircraft manufacturer, and specifically to the seat

manufacturer, we respectfully request your support, in your capacity as an investigative authority, to facilitate that these safety considerations are duly assessed and lead to a definitive and effective resolution of the aviation safety issues identified during the completed investigation.

We believe that your collaboration and coordination will contribute significantly to the enhancement of operational safety and to the prevention of similar occurrences in the future, through proactive action and the achievement of the highest operational standards for commercial aviation worldwide.

Yours sincerely,

Firmado electrónicamente por
CLAUDIO PANDOLFI GARRIDO
22/12/2025 08:54:40 -0300
Incorpora Firma Electrónica Avanzada
Valide con este código 7873-ABBC en la url:
https://servicios.dgac.gob.cl/sifdoc/validar

CLAUDIO PANDOLFI GARRIDO
DIRECTOR OF ACCIDENT PREVENTION

LAYOUT:
1. SR.
2. DEPARTAMENTO JURÍDICO (I).
3. DEPARTAMENTO DSO (I).
4. DGAC, DPA, SIAA, Investigación N°2052-24 (JIA)
5. DGAC, DPA, Registratura.
6. DGAC, OCP.

CPG / jac

FINAL REPORT
AVIATION ACCIDENT
N°2052-24 (JIA)

The aviation accident that affected a Boeing 787-916 aircraft, during an itinerary flight, between Sydney Kingsford Smith International Airport (YSSY), Australia and Auckland International Airport (NZAA), New Zealand, on March 11, 2024.

1

General Data

Background

THE METHODOLOGY OF THE INVESTIGATION CONSIDERS THE STANDARDS AND RECOMMENDED PRACTICES (SARPS) ESTABLISHED IN ANNEX 13, "INVESTIGATION OF AVIATION ACCIDENTS", TO THE CONVENTION ON INTERNATIONAL CIVIL AVIATION, AND THE PROVISIONS OF THE "REGULATIONS ON THE INVESTIGATION OF AVIATION ACCIDENTS AND INCIDENTS" (DAR-13), APPROVED BY SUPREME DECREE NO. 302, DATED FEBRUARY 12, 2021.

THE TECHNIQUE USED AND THE INVESTIGATIVE PROCEDURES ARE AIMED AT DETERMINING THE CAUSES THAT ORIGINATED THE EVENT, AND DO NOT OBEY ANY PURPOSE OTHER THAN PREVENTION.

THE USE OF THE RESULTS ACHIEVED HEREIN, IF USED FOR PURPOSES OTHER THAN PREVENTION, COULD MISREPRESENT THE EXPECTED RESULTS.

Contents

List of abbreviations and terms

AD	Airworthines Directive.
AMM	Aircraft Maintenance Manual.
AODB	Airport Operation Data Base.
AP	(Auto Pilot) Autopilot.
ARO	Technical Operational Authorization.
ATS	Air Traffic Services.
CAVOK	Visibility of 10 km or more/no clouds below 5,000 feet.
COCKPIT	Cockpit of an Aircraft.
COLUMN FORCE	Dealership Operations Control Center
EAFR	Enhanced Airborne Flight Recorder.
EMO	Emergency Operation Mode.
EOV	Flight Operations Manager.
FCTM	Flight Crew Training Manual.
GOLF	Name of taxiway, at AMB Airport.
HPA	Atmospheric pressure measured in hectopascals.
INDIA	Name of taxiway, at AMB Airport.
IAC	Letter of Instrumental Approximation.
JIA	Accident Investigation Board
HL	Local time.
KT	Speed expressed in knots.
METAR	Aerodrome meteorological report.
MOC	Maintenance Operations Center (aircraft operator).
QNH	Pressure at sea level, referring to the aerodrome.
RWY	Airstrip.

MLB	Maintenance Log Book (Bitácora de Mantenimiento de cabina).
MOM	Multi Operator Message.
NOSIG	No significant change in meteorology.
NB	Narrowbody aircraft category NB (Narrow Body).
NPA	No Parking Area.
NOTAM	Notices distributed by telecommunications informing about the establishment, condition or modification of any aeronautical facility, service, procedure or hazard.
ICAO	International Civil Aviation Agency.
OEM	Original Equipment Manufacturer.
OI	Engineering Order.
OPCO	Ground Control Operator.
ROCKER SWITCH	Rocker switch located on the upper rear of the seat of the pilot/co-pilot.
RTO	Rejected takeoff.
SB	Service Bulletin.
TIAC	Accident Investigation NZ Authority.
UTC	Coordinated Universal Time.
WB	Aircraft category, wide-body WB (Wide Body).

Summary of the event

On March 11, 2024, at 03:45 local time, an aviation event occurred during the flight between Sydney Kingsford Smith International Airport (YSSY), Australia, and Auckland International Airport (NZAA), New Zealand.

While the BOEING model 787-9 aircraft, dedicated to commercial passenger air transport, was en route, it experienced a sudden and involuntary descent, which was corrected by the flight crew.

As a result of the event, three people were hospitalized due to various injuries and the aircraft was damaged inside the main cabin and on the flight deck.

1. Factual Information

1.1. Background to the event.

On March 11, 2024, a public transport aircraft with national registration, composed of a crew of a Captain, a First Officer and 7 flight attendants, were making a regular international public transport flight with 263 passengers, between Sydney Kingsford Smith International Airport (YSSY), Australia, with Auckland International Airport (NZAA) as their destination, New Zealand.

The aircraft involved in the event took off from Sydney (YSSY) at 11:23 AM local time (SYD) without observations, complying with the itinerary proposed by the operating company.

While the aircraft was en route, with a flight level of FL410 and within international airspace, there was an involuntary movement of the Captain's seat forward.

This uncontrolled displacement caused the Captain's legs to compress against the aircraft's command column, pressing the column forward. This pressure on the command column unintentionally disconnected the ATT (attitude) mode of the aircraft's autopilot (AP), which was activated at that stage of the flight.

As a consequence, an unintentional abrupt descent occurred, which was quickly controlled and stabilized by the crew, thus reestablishing a straight and level flight, subsequently reconnecting the autopilot and continuing the flight normally.

The landing was made in Auckland (NZAA), at 04:26 PM local time (NZ) with a flight time of 03 hours and 3 minutes.

After landing, medical personnel who were waiting for the aircraft, who had previously been alerted, carried out a medical evaluation of those affected and transferred them to a hospital in the city. After their evaluation and according to the severity of the injuries, a cabin crew

member of the operating company, a passenger of Chilean nationality and another of Australian nationality were hospitalized. The rest of the passengers evaluated were discharged.

As for the aircraft, after the event it resulted in damage to the interior of the main cabin and the flight deck.

In accordance with the foregoing and because the event occurred in international airspace, the General Directorate of Civil Aeronautics of Chile (DGAC), as the State of registry and operator, initiated an official investigation, in accordance with the provisions of applicable international regulations.

1.2. Injuries to people

Injuries	Crew	Passengers	Others	Total
Mortals	-.-	-.-	-.-	-.-
Bass	1	2	-.-	3
Minors	0	0	-.-	0
None	8	261	-.-	269
Total	9	263	-.-	272

1.3. Damage to the aircraft

It was verified that the damage to the aircraft was limited exclusively to the main cabin and the flight deck, according to the following detail:

Main cabin: Damage to the armrest of a seat and an impact indentation in the upper part of a baggage compartment were found.

Flight deck: Damage was observed in the Captain's seat, specifically, the damage occurred in the support structure of the left thigh pad and the detachment of the SWITCH CAP of the ROCKER SWITCH ASSEMBLY, (Switch located in the upper rear of the seat and that performs the forward and backward movement of it).

1.4. Other damages

There was none.

1.5. Crew Information

1.5.1. Captain

Age	44 years old	
Nationality	Chilean	
License Type	Airline Transport Pilot	
Ratings	Class	Not applicable
	Type	B787-9 B787-8
	Function	Instrument Flight English Proficiency N6 / Instrument Flight
Medical examination	Current	Si
	Suitable	Si
Previous events	Does not register	

1.5.2. Flight Experience

Experience	Flight hours
Previous days	12.526,09
By Boeing 787-9	650,01
Day of the event	06,03
24 hours prior	06,00
	21,02
07 days prior	251,04
90 Previous days	Information provided by the aircraft operating company.

1.5.3. First Officer

Age	38 years old	
Nationality	Chilean	
License Type	Airline Transport Pilot	
Ratings	Class	Not applicable
	Type	B787-9 B787-8
	Function	Instrument Flight English Proficiency N5 / Instrument Flight

Medical examination	Current	Yes
	Suitable	Yes
Previous events	Does not register	

1.5.4. Flight Experience

Experience	Flight hours
Previous days	3.670,00
By Boeing 787-9	470,07
Day of the event	06,03
24 hours prior	06,00
07 days prior	22,02
90 Previous days	233,05
Source of information	Information provided by the aircraft operating company.

1.6. Aircraft Information

1.6.1. General Information

Aircraft	Airplane	
Manufacturer	Boeing	
Model	787-916	
Series No.	38461	
Year of Manufacture	2015	
Flight hours	24.195,70	
Certified Weights	Empty Weight (PV)	120.632,11 kg.
	Maximum Take-Off Weight (PMD)	252.650 kg.
Last inspection	08/03/2024	

1.6.2. Engines

Position	1	2
Manufacturer	Rolls Royce	Rolls Royce

Model	Trent-1000-J2	Trent-1000-J2
Serial Number	10537	10247
Last inspection	08/03/2024	08/03/2024

1.6.3. Fuel

The aircraft used aviation kerosene, JET-A1, corresponding to the fuel authorized by the manufacturer, without observations.

1.6.4. On-board documentation

Documentation	Condition
Certificate of Enrolment	Yes
Airworthiness Certificate	In effect at the time of the event
Flight manual	In effect at the time of the event
Flight log	After the flight of the event, the following note was stamped: "*Captain Seat Upper Fore/Aft Switch Deffective".*

1.6.5. Aircraft Loading

According to the information provided by the operator, the weight of the aircraft at the time of the event was within its limits, according to image No. 1.

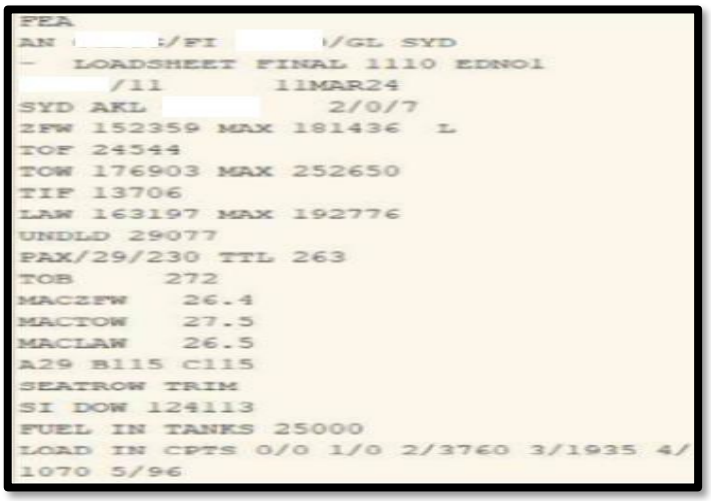


Image N°1

1.6.6. Aircraft Maintenance Status

The operator carried out maintenance of the aircraft in accordance with the frequencies established in the Maintenance Program approved by the Directorate General of Civil Aeronautics (DGAC), in an authorized Aeronautical Maintenance Center (CMA), authorized in the type and model of aircraft, with which it had a current maintenance contract.

The major inspection (MAJOR CHECK) was carried out on February 5, 2024, when the aircraft registered 23,827.10 total hours of operation, with no news observed.

The last inspection carried out before the event corresponded to a minor inspection (MINOR CHECK), carried out on March 8, 2024, at 24,162.10 hours of operation, also without observations.

After the arrival of the aircraft in the city of Auckland, after the event, the following notation was recorded in the MAINTENANCE LOGBOOK: "CAPTAIN SEAT UPPER FORE/AFT SWITCH DEFECTIVE".

On the same day, March 11, 2024, the corresponding CMA carried out the inspections required for exposure to severe turbulence, in accordance with the directive: "PERFORM INSPECTION FOR SEVERE OR UNUSUAL TURBULENCE, EXCESSIVE MANEUVER, STALL, OR SPEEDS MORE THAN THE DESIGN LIMITS CONDITIONS". These inspections were duly certified under the task T00S0QK5.

As part of the corrective actions, the pilot seat was replaced, removing the component identified as "OFF" PN 3A380-0007-01-7 SN 78592, and installing the new component "ON" PN 3A380-0007-01-7 SN 84967.

Once the inspections, tasks and corrective actions were completed, all duly recorded in the MAINTENANCE LOGBOOK (MLB), the return to service of the B787-9 aircraft involved in the event was authorized.

The inspection carried out in Auckland, New Zealand, was reported to the Airworthiness area of the Sub-Department of Public Transport (SDTP). After reviewing all the items and confirming that they had been correctly executed and certified, the SDTP Airworthiness Officer authorized, by email dated March 13, 2024, the return of the aircraft to Chile.

The operating company maintains its Airworthiness Certificate in force, valid from June 22, 2023 to June 30, 2025.

1.6.7. Maintenance status of the Captain's seat

According to the maintenance records provided by the operator, the seat located in the Captain's position has a total of 12 discrepancies recorded from December 6, 2018 to the

date of the event. These discrepancies refer to various seat anomalies, three of which are directly related to the electrical system associated with the SEAT BACK FORE/AFT SWITCH CONTROL (ROCKER SWITCH ASSEMBLY) assembly.
The electrical discrepancies recorded were:

Date: September 05, 2022
Discrepancia: CAPTAIN SEAT ELECTRICALLY INOP. (ONLY MECHANICAL MOVEMENT).
Corrective action: A visual inspection of the Captain's seat was performed, with no damage or failures detected. The electrical system was restarted and an operational verification was carried out, which was satisfactory, in accordance with DMC-B787-A-25-11-00-02C-320A.
Observation: The action was executed and certified by specialized technical personnel on Sep 5, 2022.

Date: July 01, 2023
Discrepancia: CAPTAIN SEAT ROCKER SWITCH ON BROKEN DURING PREFLIGHT.
Corrective action: On 04-Jul-2023 at 18:38 UTC, the cover assembly switch of the Captain's seat was replaced, without further observations. The intervention was performed in accordance with the CMM 25-11-69.
Observation: The corrective action carried out involved a component other than the one indicated in the reported discrepancy.

Date: August 22, 2023
Discrepancia: Cap Seat Electrically Inop.
Corrective Action: An operational test of the Captain's seat was performed, in accordance with AMM DMC 8787-A-25-11-00-00A-273A, Rev. 064 of June 30, 2023, steps 12 to 17. The entry was declared operational, without observations and with satisfactory results.

NOTE: According to the records reviewed and provided by the operator, no annotations or discrepancies were identified specifically related to the SWITCH CAP, a component that is part of the ROCKER SWITCH ASSEMBLY assembly, linked to the event under investigation

1.7. Weather Information

According to the Meteorological Operational Technical Report, provided by the New Zealand aeronautical authority and the operating company, the following information was obtained:
Preliminary calculations were made to estimate the location and altitude of the aircraft at the time of the event. From the available data, the geographical location was estimated at: Latitude 37° 14' 19.12'' S / Longitude 171° 41' 06.30'' E.
In aeronautical meteorology, altitude is often expressed in terms of pressure levels, which decrease with altitude.
Using the international standard atmosphere model, it was calculated that the pressure corresponding to the level of flight FL410 was 178 hPa.
The weather conditions en route were unobserved, and the charts did not show the existence of turbulence that could affect the operation.
The origin and destination forecasts were in optimal conditions for the operation. In conclusion, based on this evaluation, no adverse weather conditions were identified that would prevent the flight from taking place, as shown in images N°2 and N°3.


- TAF - Los pronósticos de origen y destino se encontraban sin observaciones.
  - YSSY -SYD - SYDNEY K.SMITH.
    - FT 102026Z 1021/1200 30005KT CAVOK
    - FM110100 05012KT CAVOK
    - FM110500 04018KT CAVOK
    - FM110900 02012KT CAVOK
    - FM111300 34006KT CAVOK=
  - NZAA -AKL - AUCKLAND
    - FT 102017Z 1021/1200 24015KT 9999 BKN025
    - FM111600 24005KT 9999 -SHRA SCT008 BKN014
    - TEMPO 1116/1200 6000 SHRA BKN008=

Image N°2

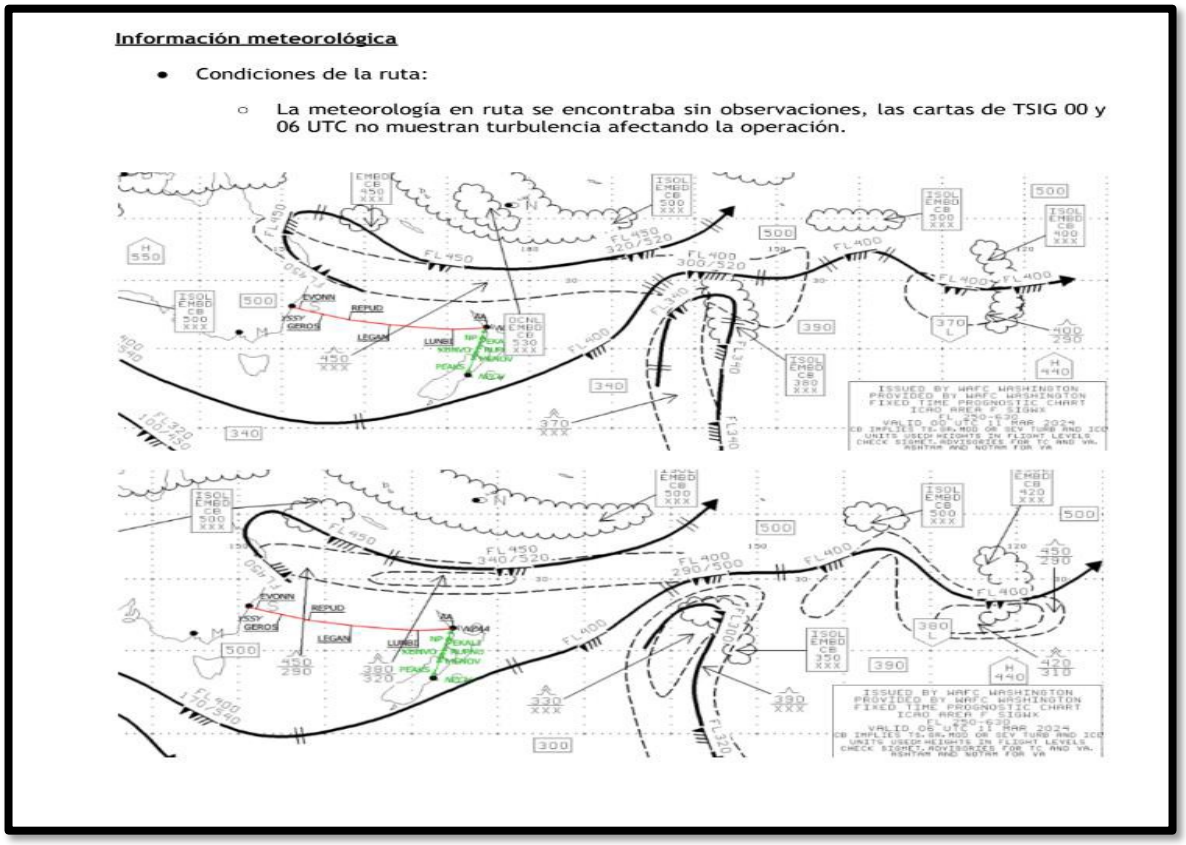


Image N°3

1.8. Aids to navigation

Not applicable.

1.9. Communications

Not applicable.

1.10. Flight Recorders

BOEING Model 787 aircraft are equipped with two ENHANCED AIRBORNE FLIGHT RECORDERS (EAFRs), manufactured by General Electric, which are a combination of a cockpit voice recorder (CVR) and a flight data recorder (FDR). The equipment is used to record flight crew audios, flight data parameters and communications data.

After the event, one of the recorders was removed from the aircraft and handed over to the NZ aeronautical authority (TAIC), with the due authorization of the General Directorate of Civil Aeronautics of Chile (DGAC), for safekeeping and subsequent delivery to the Chilean investigative team.

The equipment was then sent to the National Transportation Safety Board (NTSB) of the United States of America (USA), representing the design and manufacturing status, in order to carry out the process of downloading and reading the recorded information.

From the data extracted from the FLIGHT DATA RECORDER (FDR), it was found that the information recorded agrees with what was stated by the crew, in that the involuntary movement of the Captain's seat was due to a failure or malfunction of the system/component (non-engine group), ROCKER SWITCH ASSEMBLY.

In order to complement the above, the operating company delivered a recreation of the flight of the event recreated in an aircraft simulator, in which the data obtained from the FDR were used, as illustrated in images No. 4 and No. 5.

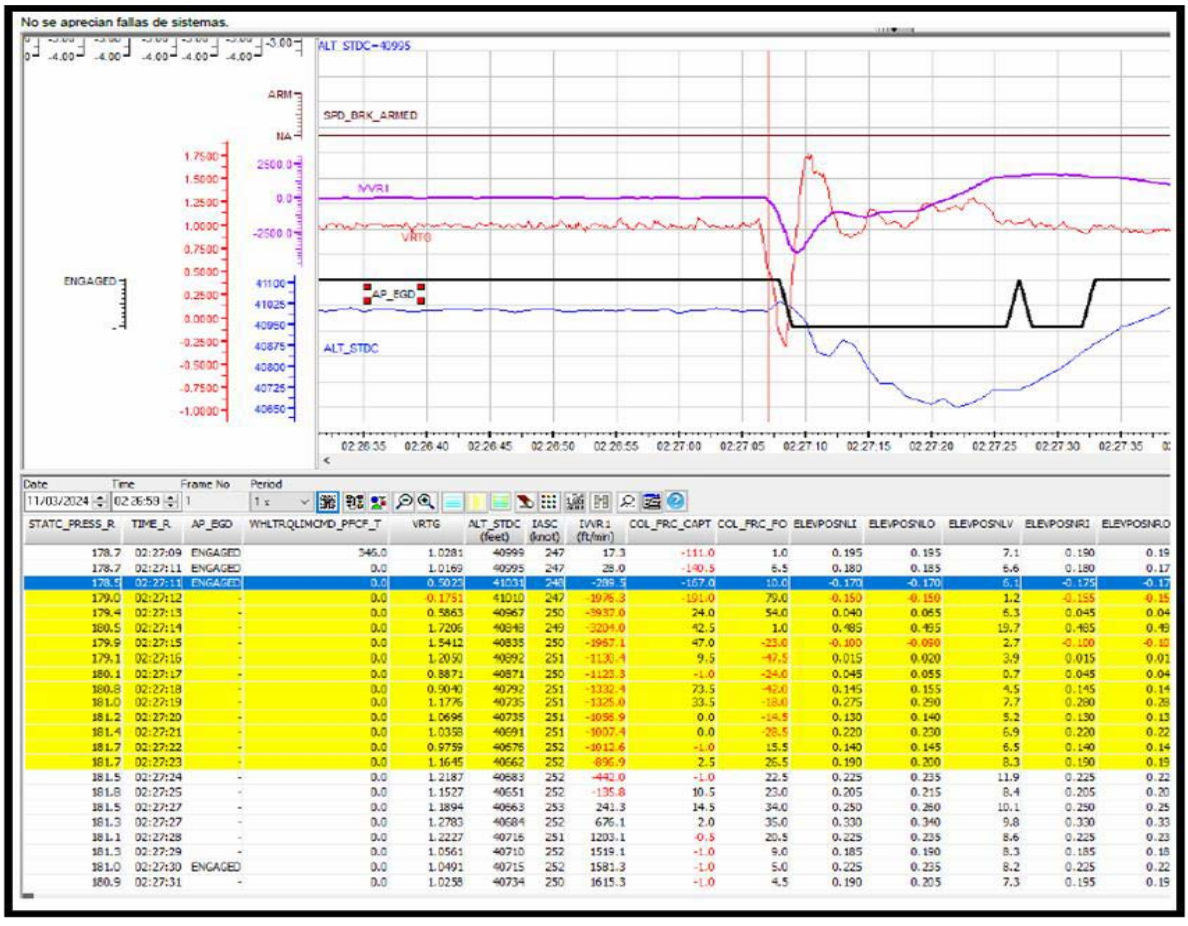


Image N°4

Image N°5

Likewise, the observed data from the COCKPIT VOICE RECORDER (CVR) and the FDR made it possible to establish that, as of 02:27:00 HL CH, the event occurred while the aircraft was in the cruise phase at an altitude of 41,000 feet (ALT ST). At that moment, the Captain's seat was inadvertently shifted forward, due to the unintentional activation of the switch located above the back of the seat. This caused the captain's legs, which at the time of the event were turned and crossed to the right, to be compressed against the aircraft's control column.

From the start of the trip until control was regained, approximately 12 seconds elapsed, during which time the pilot remained pressing against the COLUMN FORCE SENSOR. This registered a progressive increase in the force exerted, which led to the disconnection of the autopilot (AP).

During the event, approximately a RATE OF DESCENT of approximately -3,165 feet per minute was recorded, while the approximate vertical acceleration (VRTG) values fluctuated between a minimum of -0.31 G and a maximum of +1.76 G.

It should be noted that, at the time of the event, the indicator to fasten passengers' seat belts was off.

1.11. Destination airport information

According to the Aeronautical Information Publication (AIP-MAP), the characteristics of the destination aerodrome were as follows:

Number	Auckland International Airport, Nueva Zelanda
ICAO Designator	NZAA
Coordinates	Latitude: 37° 00 29” S Length: 174° 47 30” E
Elevation	23 ft
Clues	05R - 23L
Dimensions	11598 ft x 148 ft
Surface Type	Concrete
Hours of Operation	H24
Application	Public

1.12. Location and aircraft information

The location of the event was recorded approximately at the coordinates: Latitude 37° 14' 19.12'' S / Longitude 171° 41' 06.30'' E, at 16:00 local time NZ, with a flight level of FL410, at a distance of approximately 150 nautical miles from Auckland International Airport (NZAA), New Zealand, according to image N°6.

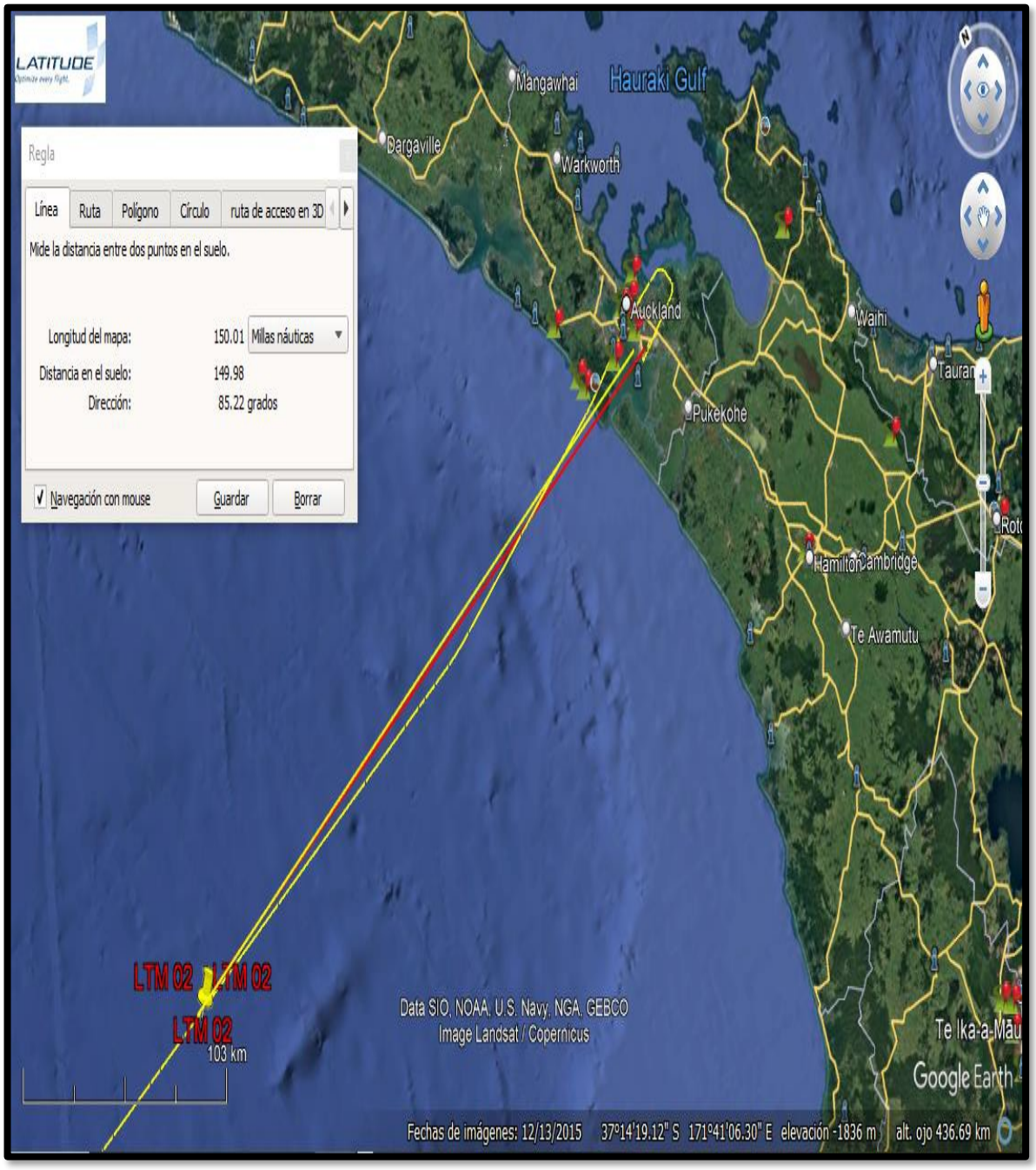


Image N°6

The route that the aircraft maintained, according to the flight plan on the day of the event, was: EVONN/N0492 F390 L521; LEGAN/M084 F390 L521; LUNBI/N0489 F390 L521 AA DCT., according to images N°7 and N°8, which were delivered by the operating company.

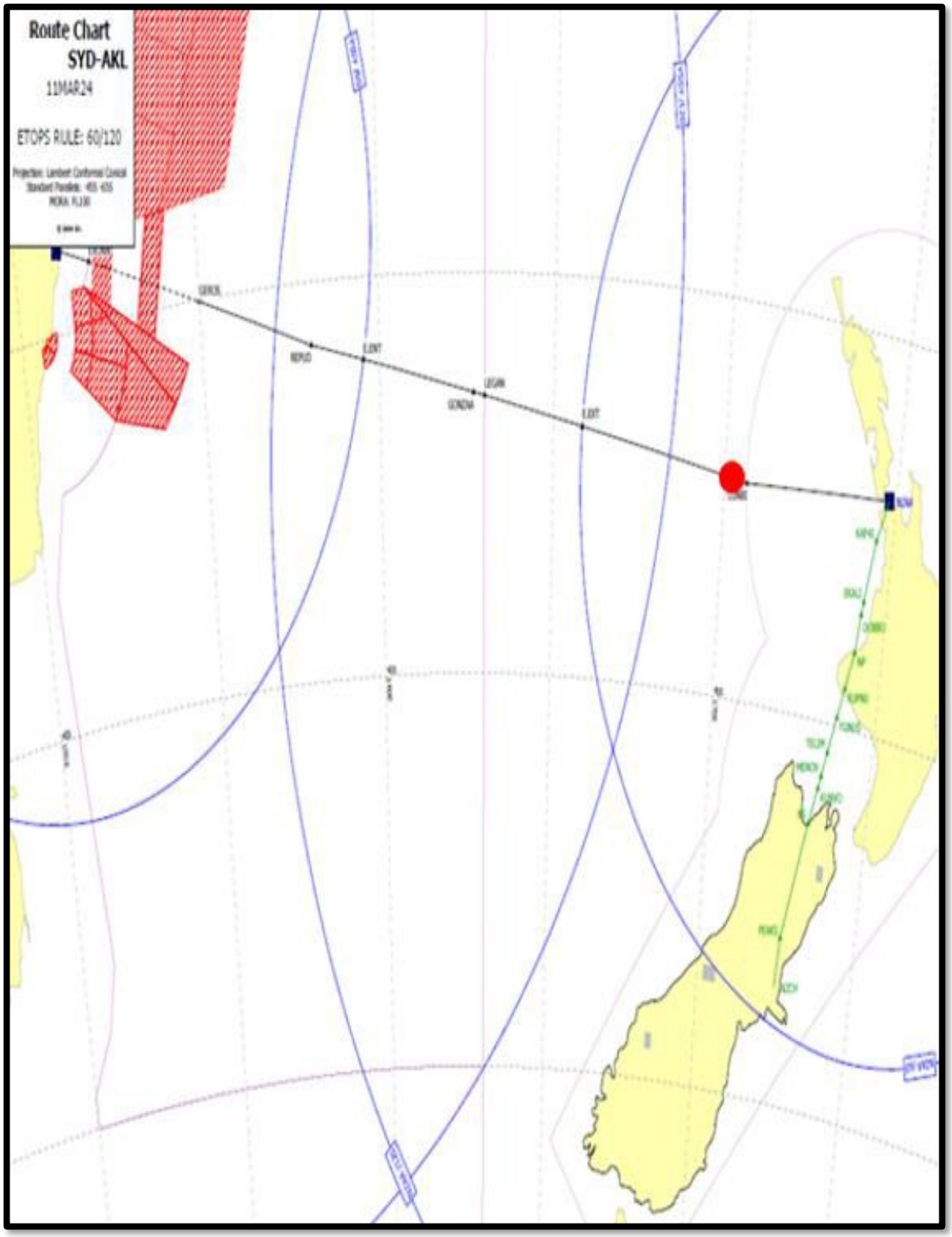


Image N°7

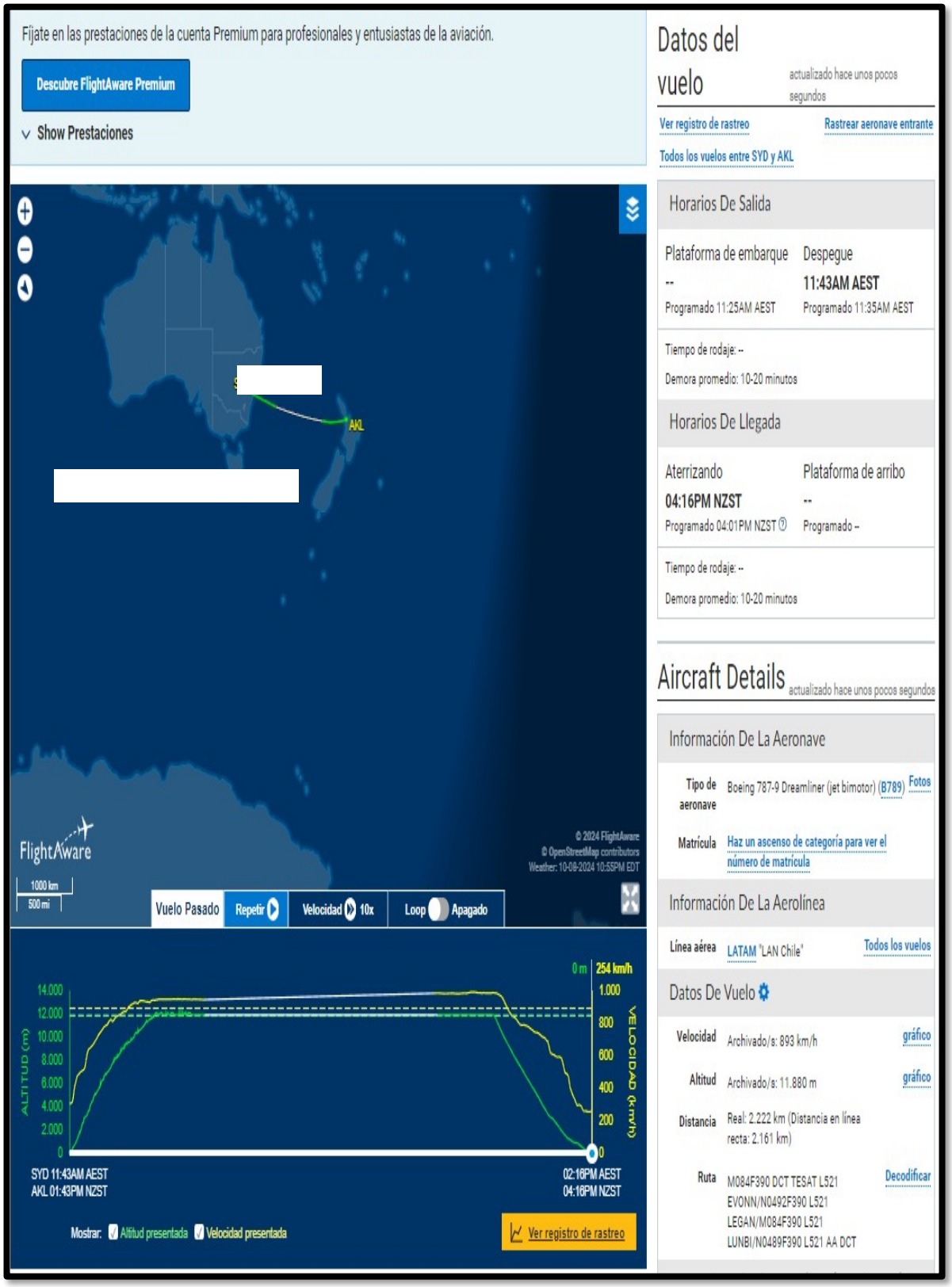

Fíjate en las prestaciones de la cuenta Premium para profesionales y entusiastas de la aviación.
Descubre FlightAware Premium
Show Prestaciones
Datos del vuelo
actualizado hace unos pocos segundos
Ver registro de rastreo
Rastrear aeronave entrante
Todos los vuelos entre SYD y AKL
Horarios De Salida
Plataforma de embarque
--
Programado 11:25AM AEST
Despegue
11:43AM AEST
Programado 11:35AM AEST
Tiempo de rodaje: --
Demora promedio: 10-20 minutos
Horarios De Llegada
Aterrizando
04:16PM NZST
Programado 04:01PM NZST
Plataforma de arribo
--
Programado --
Tiempo de rodaje: --
Demora promedio: 10-20 minutos
AKL
FlightAware
© 2024 FlightAware
© OpenStreetMap contributors
Weather: 10-09-2024 10:55PM EDT
1000 km
500 mi
Vuelo Pasado
Repetir
Velocidad 10x
Loop Apagado
Aircraft Details
actualizado hace unos pocos segundos
Información De La Aeronave
Tipo de aeronave
Boeing 787-9 Dreamliner (jet bimotor) (B789)
Fotos
Matrícula
Haz un ascenso de categoría para ver el número de matrícula
Información De La Aerolínea
Línea aérea
LATAM "LAN Chile"
Todos los vuelos
Datos De Vuelo
Velocidad
Archivado/s: 893 km/h
gráfico
Altitud
Archivado/s: 11.880 m
gráfico
Distancia
Real: 2.222 km (Distancia en línea recta: 2.161 km)
Ruta
M084F390 DCT TESAT L521 EVONN/N0492F390 L521 LEGAN/M084F390 L521 LUNBI/N0489F390 L521 AA DCT
Decodificar
0 m
254 km/h
14.000
12.000
10.000
8.000
6.000
4.000
2.000
0
ALTITUD (m)
1.000
800
600
400
200
0
VELOCIDAD (km/h)
SYD 11:43AM AEST
AKL 01:43PM NZST
02:16PM AEST
04:16PM NZST
Mostrar: Altitud presentada Velocidad presentada
Ver registro de rastreo

Image N°8

. AIRCRAFT INFORMATION

At Auckland International Airport (NZAA), New Zealand, the investigative team, with the support and presence of the Maintenance Line Manager (CMA) and the head of the operating company's office, carried out an internal and external inspection of the aircraft involved, (Boeing model 787-9), which was in a remote parking lot of the Airport. according to photograph N°1.

Photograph Nº1

It was verified that the damage suffered by the aircraft as a result of the event was limited exclusively to the main cabin and the flight deck.

It was found that, in the main cabin, the armrest of a seat was damaged, and in the upper part of it, an impact indentation in a baggage compartment.

It was found that the seat of the Captain, involved in the event, had been replaced by another, duly authorized by the Aeronautical Authority of Chile (DGAC).

AN ENHANCED AIRBORNE FLIGHT RECORDER (EAFR) equipment, which integrates the functions of the CVR (COCKPIT VOICE RECORDER) and FDR (FLIGHT DATA RECORDER), was removed from the aircraft and delivered to the NZ aeronautical authority (TAIC) on March 12, 2024.

CAPTAIN SEAT INFORMATION

The seat involved in the event had previously been replaced by a new component, an operation that had the authorization of the Chilean aeronautical authority (DGAC), in coordination with the NZ authorities (TAIC and CAA).

The removed entry corresponded to PN 3A380-0007-01-7, SN 78592, which was replaced by a new entry with the same part number (PN), but with serial number SN 84967.

During the inspection carried out at Auckland Airport, it was found that the removed seat was already packed and stored in a warehouse and ready for shipment to Chile.

The necessary arrangements were made for its transfer to Chile, ensuring at all times the preservation of the chain of custody of the component.

The Seat was dispatched from Auckland Airport (NZAA) to Arturo Merino Benítez International Airport (SCEL) in Chile on March 15.

Upon arrival, a team from the Accident Investigation Area of the Department of Accident Prevention (AIG-DPA) of the DGAC-Chile proceeded to receive the seat involved, which was taken into custody at DGAC-Chile facilities for possible use in future proceedings.

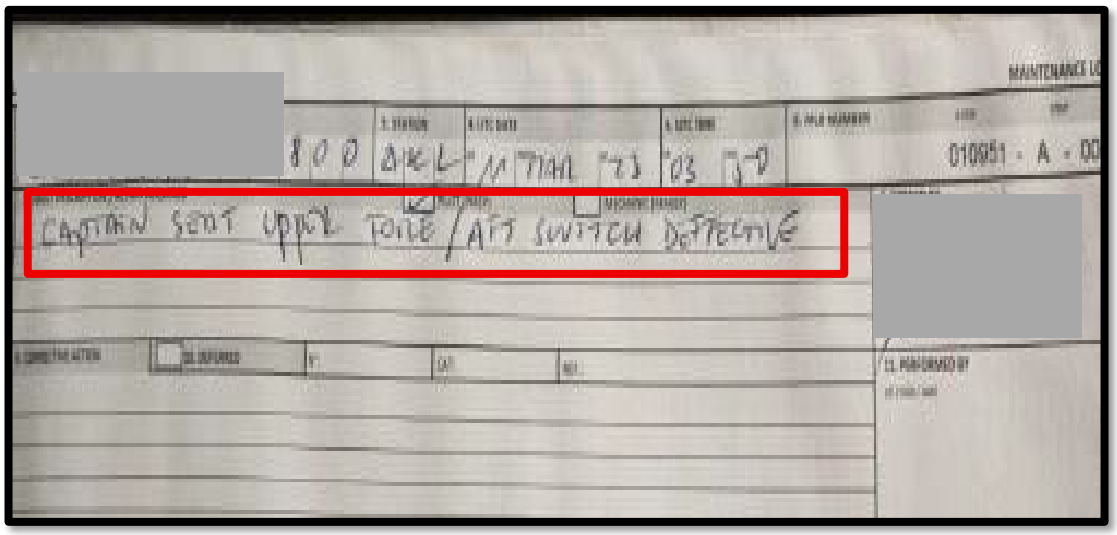
VERIFICATION OF THE INTEGRITY OF THE ENTRY INVOLVED IN DGAC-CHILE DEPENDENCIES

The integrity of the affected component and its data (SEAT ASSY CAPTAIN, SERIAL N°78592) was verified in DGAC facilities. After this verification, the DGAC security seals were installed.

Subsequently, the necessary arrangements were made for its shipment to BOEING's facilities in HUNTINGTON BEACH, CA in order to carry out the corresponding inspection, according to photograph No. 2.

Photograph N°2: Views of the Captain's seat.

The maintenance discrepancy was recorded in the Maintenance Logbook and in the Difficulty in Service Report (IDS), "after the flight of the event". According to photographs N°3 and N°4.



Photographs N°3

FAULT DETAILS	ETOPS
CAPTAIN SEAT UPPER FORE AFT SWITCH DEFECTIVE	

FAULT INFORMATION			
Aircraft or Component		Serial N°	Effective Code
			107
Organization	Work Location	Work Order	W/P Barcode
---	AKL/LINE	WO - 178772943	T005OMSD
Workscope Line	System	Type	Task Priority
1	25	AOG	MANDAT
Found During Task	Logbook Reference	Found By	Required Inspection
---	010951-A-0045	Edison Escobar Quintero	
Panels		Zones	
---		---	

Fault Description
CAPTAIN SEAT UPPER FORE AFT SWITCH DEFECTIVE.

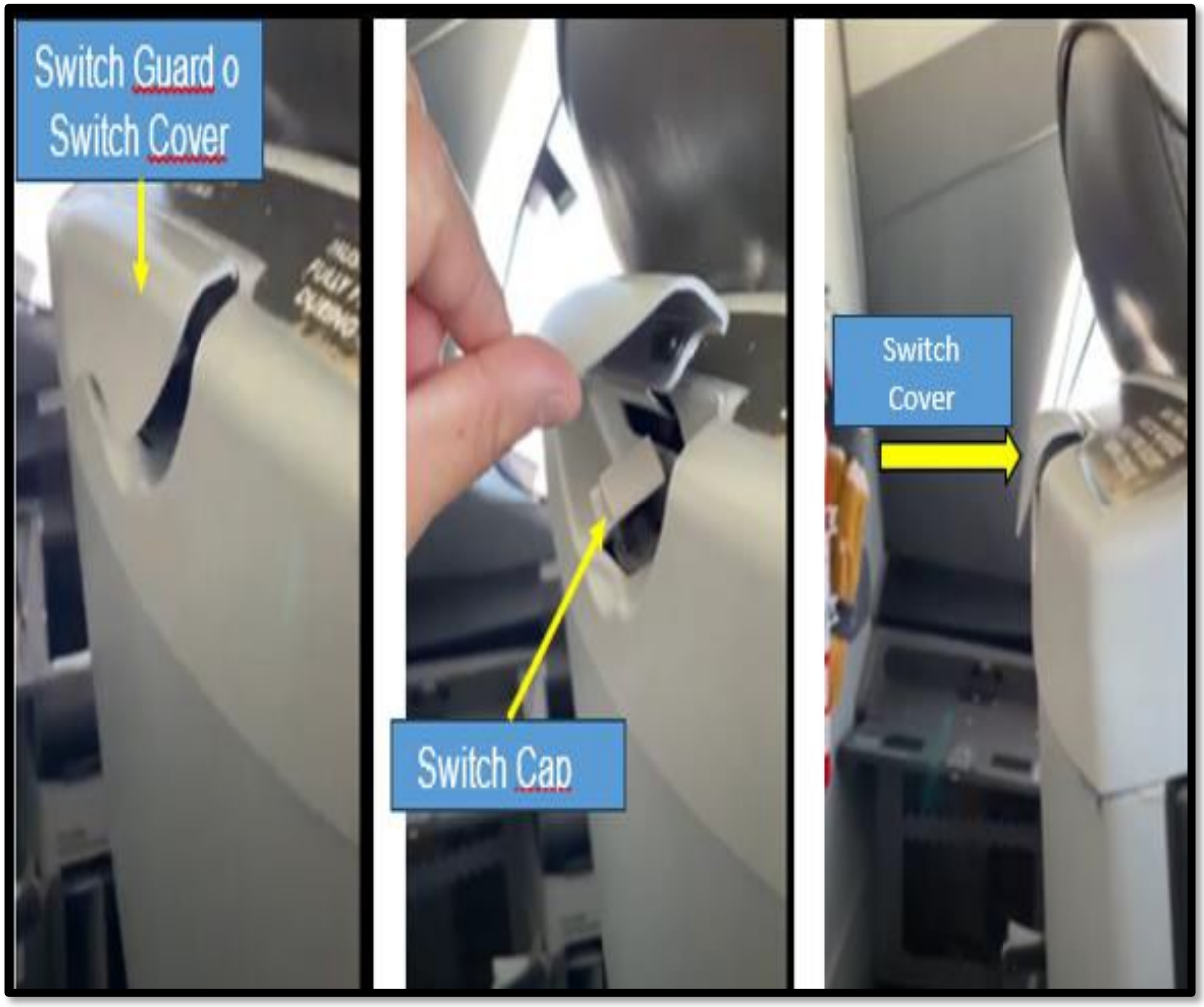
Photograph N°4

INSPECTIONS OF PHOTOGRAPHS AND VIDEOS OF THE SEATS INVOLVED (DELIVERED BY THE OPERATING COMPANY).

The component involved corresponds to the CAPTAIN'S SEAT – left side, located on the flight deck. After the in-flight event, photographs and video recordings were taken that documented the condition of the seat.

In this evidence, it was observed that the SWITCH GUARD, or SWITCH COVER that corresponds to the cover that covers the ROCKER SWITCH ASSEMBLY, did not remain in the closed and adjusted position. On the contrary, it was raised and supported on the SWITCH CAP, which, in turn, was displaced (detached), outside its fixing structure.

Additionally, it was found that when manually pressing the SWITCH COVER, the seat executed a forward movement. This action does not correspond to the normal operating procedure of the switch, according to photograph N°5.



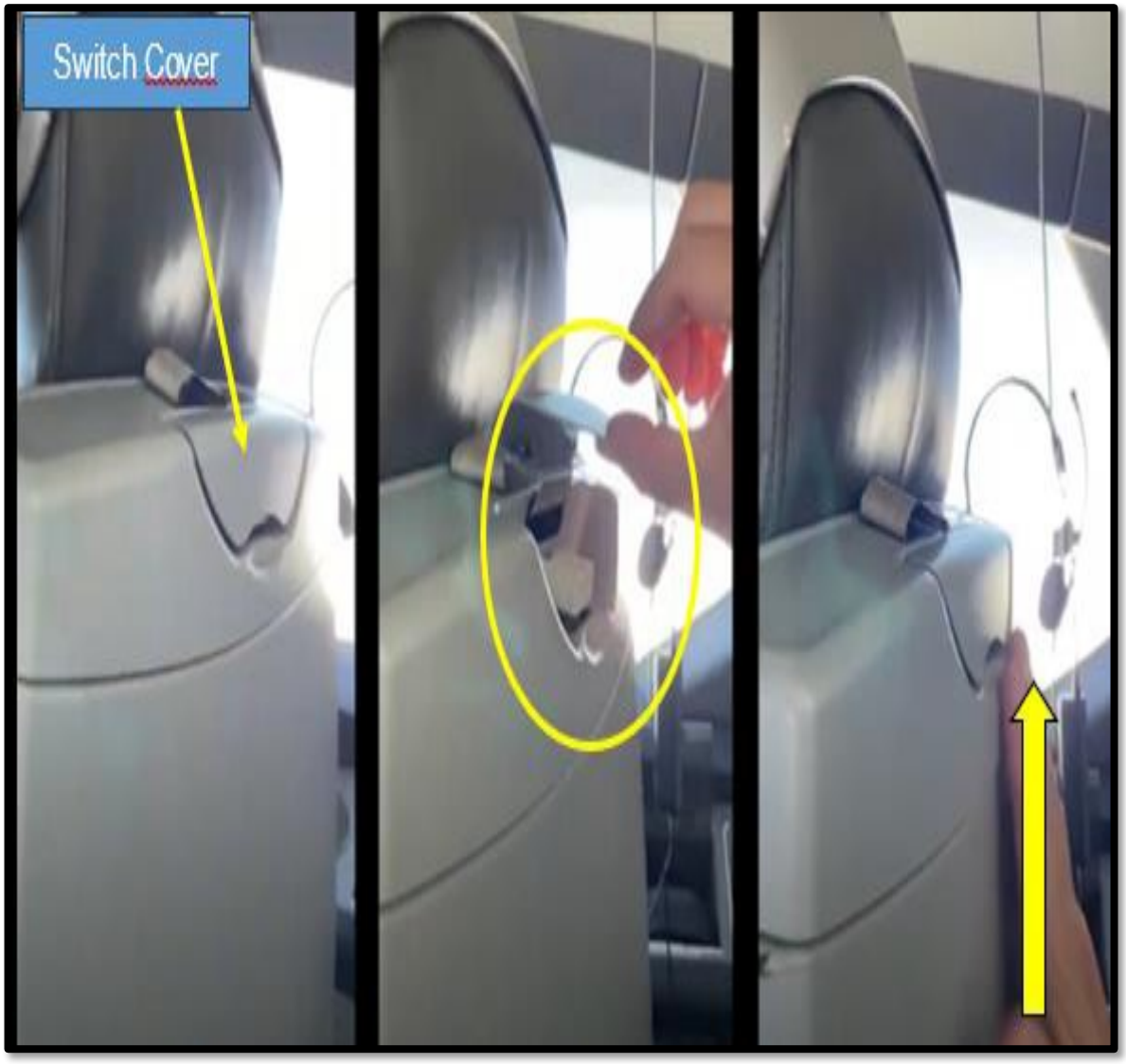
Photograph N°5: Views of the condition of the SWITCH CAP and SWITCH COVER of the Captain's seat after the in-flight event.

Subsequently, as a reference and comparison, photographs and videos were taken of the seat of the FIRST OFFICER'S SEAT (RIGHT), whose seat is located on the right side of the flight deck, where it was observed that the SWITCH COVER was in the closed position, adjusted, and was not resting on the SWITCH CAP.

In addition, it was observed that this SWITCH CAP was fixed to its fixing structure.

In the inspection, it was determined that the only way to make a tour of the seat required a previous movement to lift the SWITCH COVER and then, press the SWITCH CAP, in order

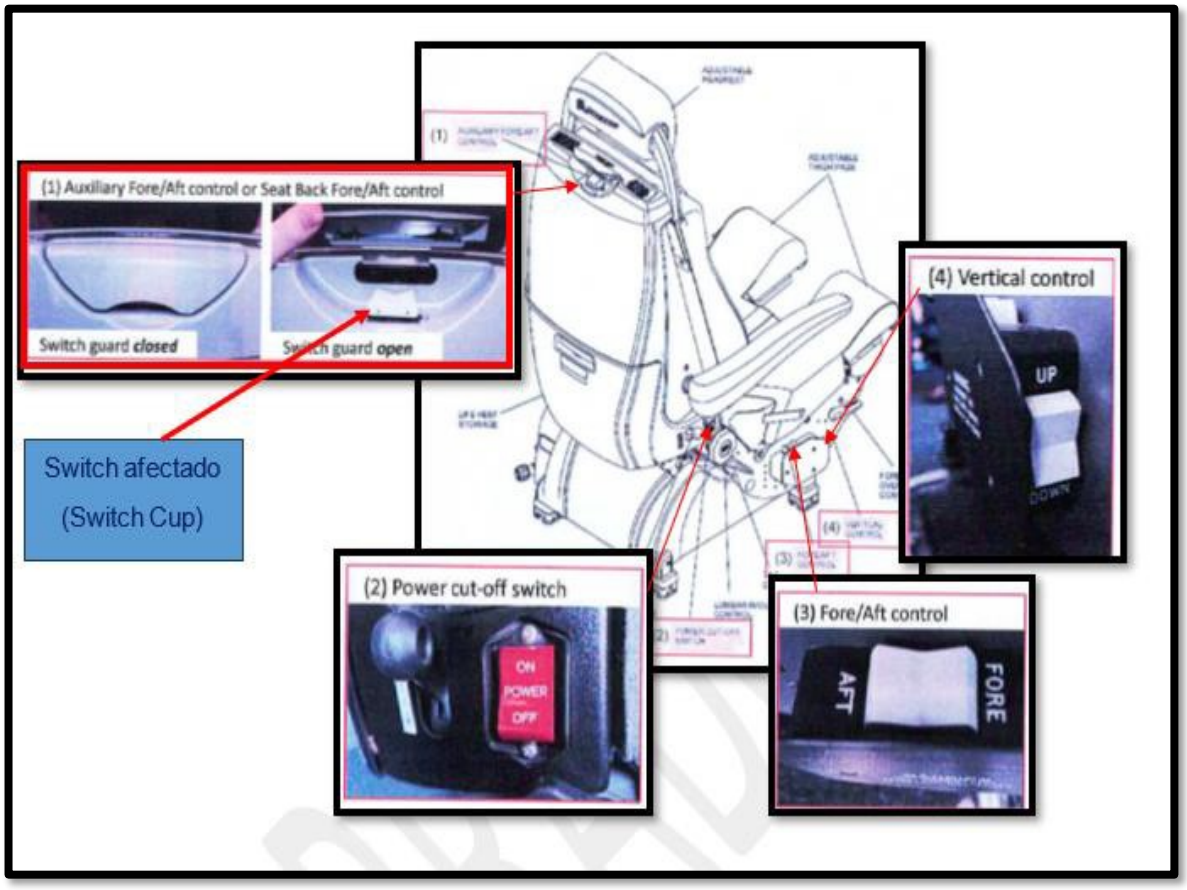
to move the seat backwards or forwards, an action that corresponds to the normal operation of this switch according to photograph N°6.



Photograph N°6: Views of the condition of the ROCKER SWITCH and SWITCH COVER of the First Officer's seat after the in-flight event.

DESCRIPTION AND OPERATION OF THE SWITCHES OF THE SEAT INVOLVED IN THE EVENT.

There are four switches to control the movements of the seat (manufactured by IPECO HOLDINGS LTD.) according to photograph N°7.



Photograph Nº7

It should be noted that the three white switches (the backrest forward/reverse control and the forward/reverse and vertical controls on the side of the seat) are momentary action switches that automatically return to the off state when released. The red switch is an alternating action switch that stays in the on or off position when released.

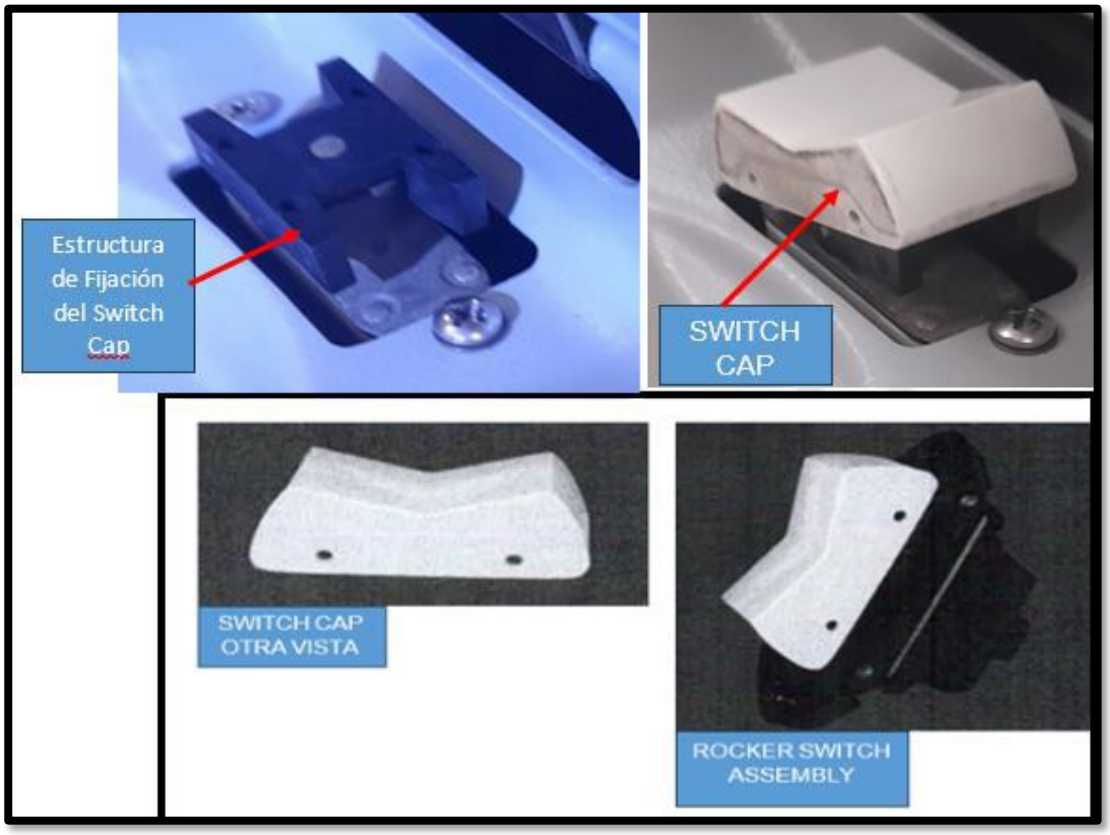
DESCRIPTION OF THE SEAT BACK FORE/AFT CONTROL SWITCH ASSEMBLY (ROCKER SWITCH ASSEMBLY)

The ROCKER SWITCH ASSEMBLY involved in the event is located on top of the backs of the Captain's and First Officer's seats.

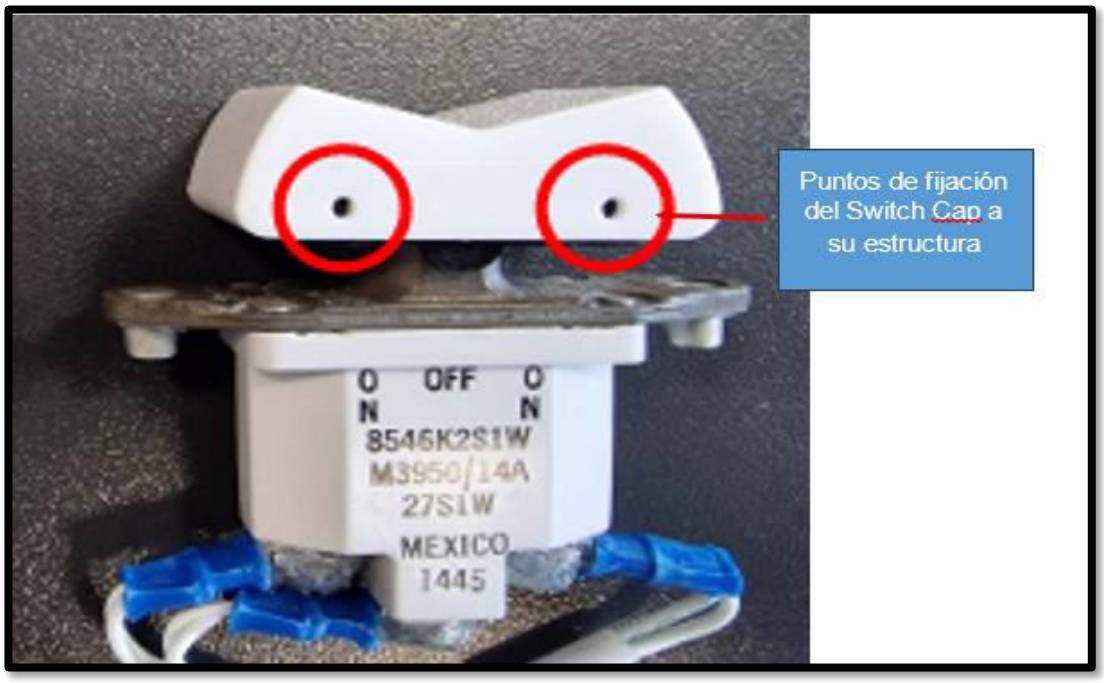
Its function is to electrically move the seat to the positions: forward and backward.

The switch guard (lid) on the seat back is spring-loaded in the closed position to prevent unintentional operation of the switch.

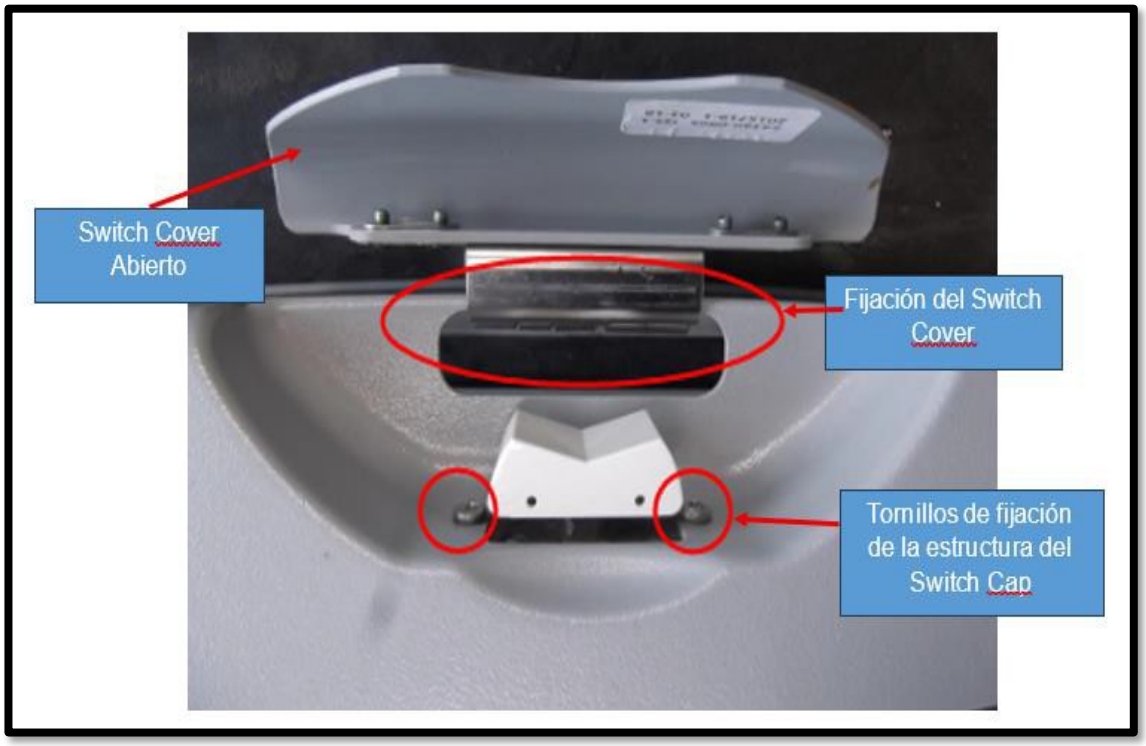
The set of these components is shown and described below, according to photographs N°8, N°9, N°10 and N°11.



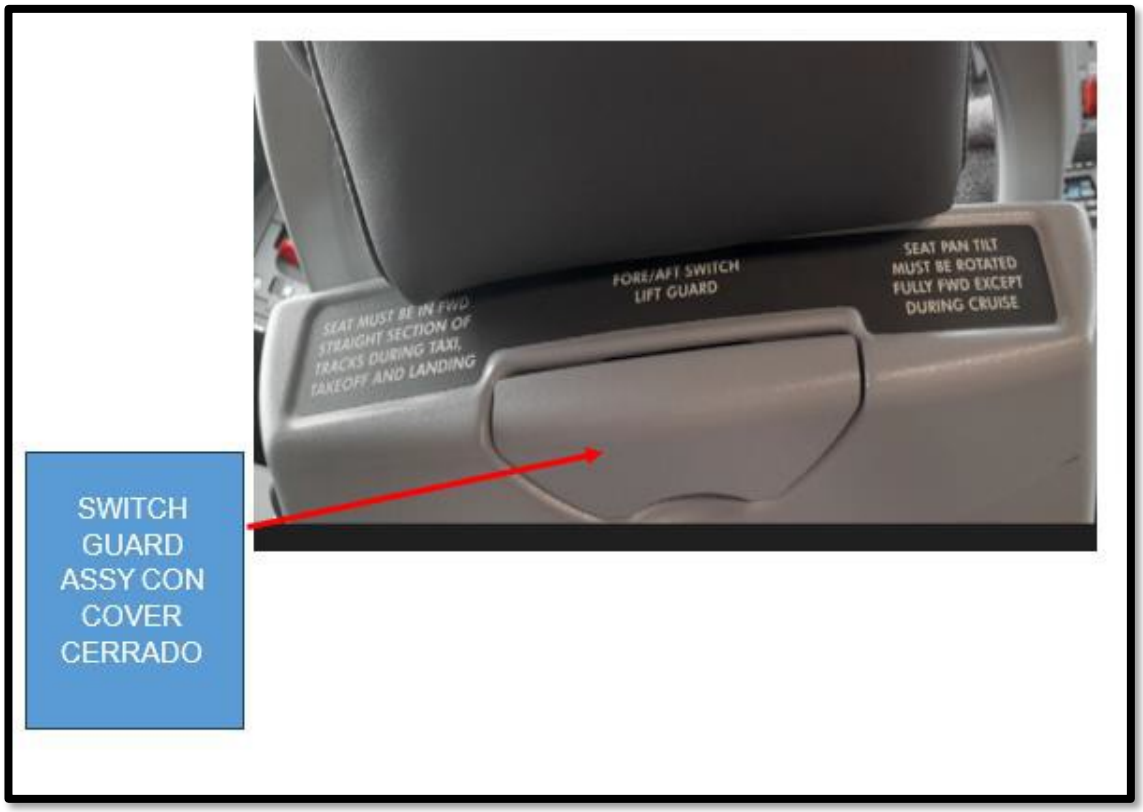
Photograph N°8



Photograph N°9

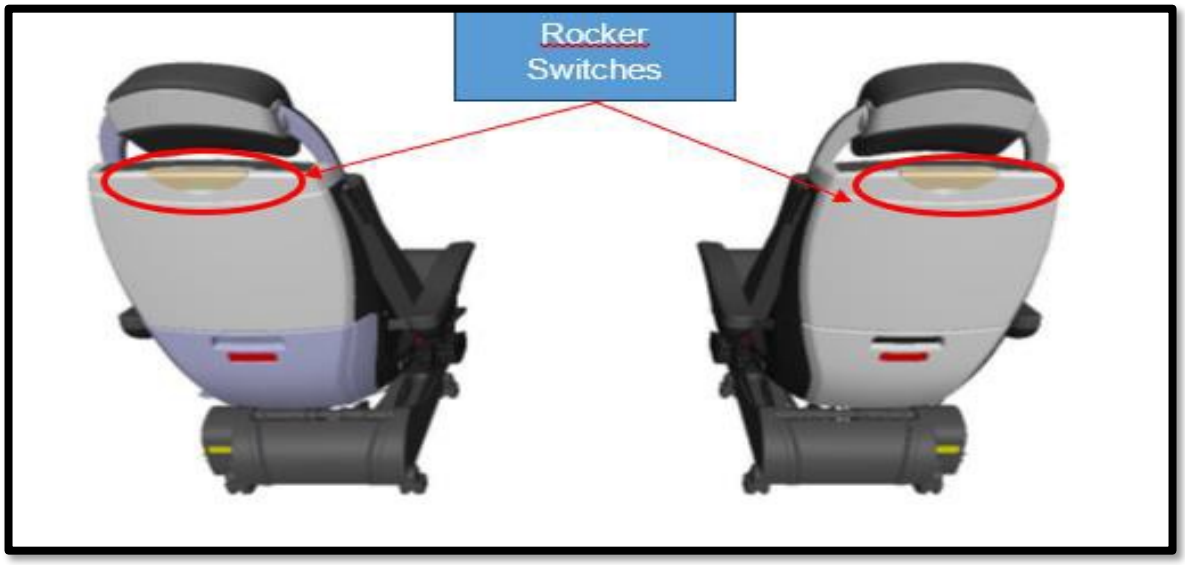


Photograph Nº10



Photograph N°11

For a better description of the location of both SEAT BACK FORE / AFT CONTROL SWITCH (ROCKER SWITCHES), in the Captain's and First Officer's seats, which are located on the flight deck, a view from behind is shown in the following photograph, where you can see the place where they are installed according to photographs No. 12 and No. 13.



Photograph No. 12: View of the Captain's and First Officer's seats.

Photograph No. 13: Referential view of a seat, with the SWITCH CAP loose and the SWITCH COVER Lifted.

CAPTAIN SEAT INSPECTION AT THE AIRCRAFT MANUFACTURER'S PREMISES.

The investigative team carried out an inspection of the seat (Captain Seat Assy), at the facilities of the aircraft manufacturer, in conjunction with specialists from the seat manufacturer.

In this inspection, carried out in the workshop of the aircraft manufacturer, the condition of the component was verified, as follows:

The seat was mounted on a test rail and electrically energized to allow functional operation, according to photograph N°14.

Photograph No. 14: View of the seat on the inspection rail.

It was verified and verified that the SWITCH COVER (cover or cover), was not in the closed and adjusted position, which had already been observed in the videos and photographs that were previously taken of the Captain's seat.

The work team left the SWITCH COVER in the same position in which it would have been during the development of the flight of the event, according to photograph N°15.

Photograph N°15: Views of the SWITCH COVER in the open and closed positions, after the event.

Then, it was verified that the position of the SWITCH COVER (cover or cover), in closed condition, was not possible to achieve, due to the position in which the SWITCH CAP was left as it was loose from its fixing structure, according to photographs N°16 and N°17.

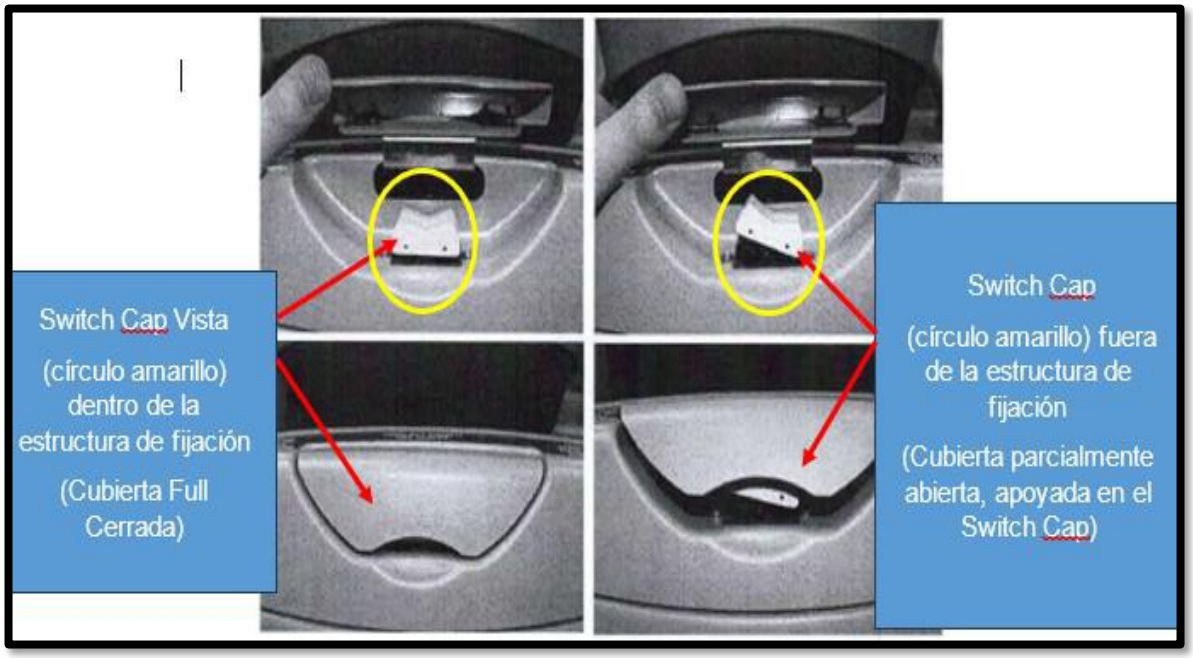
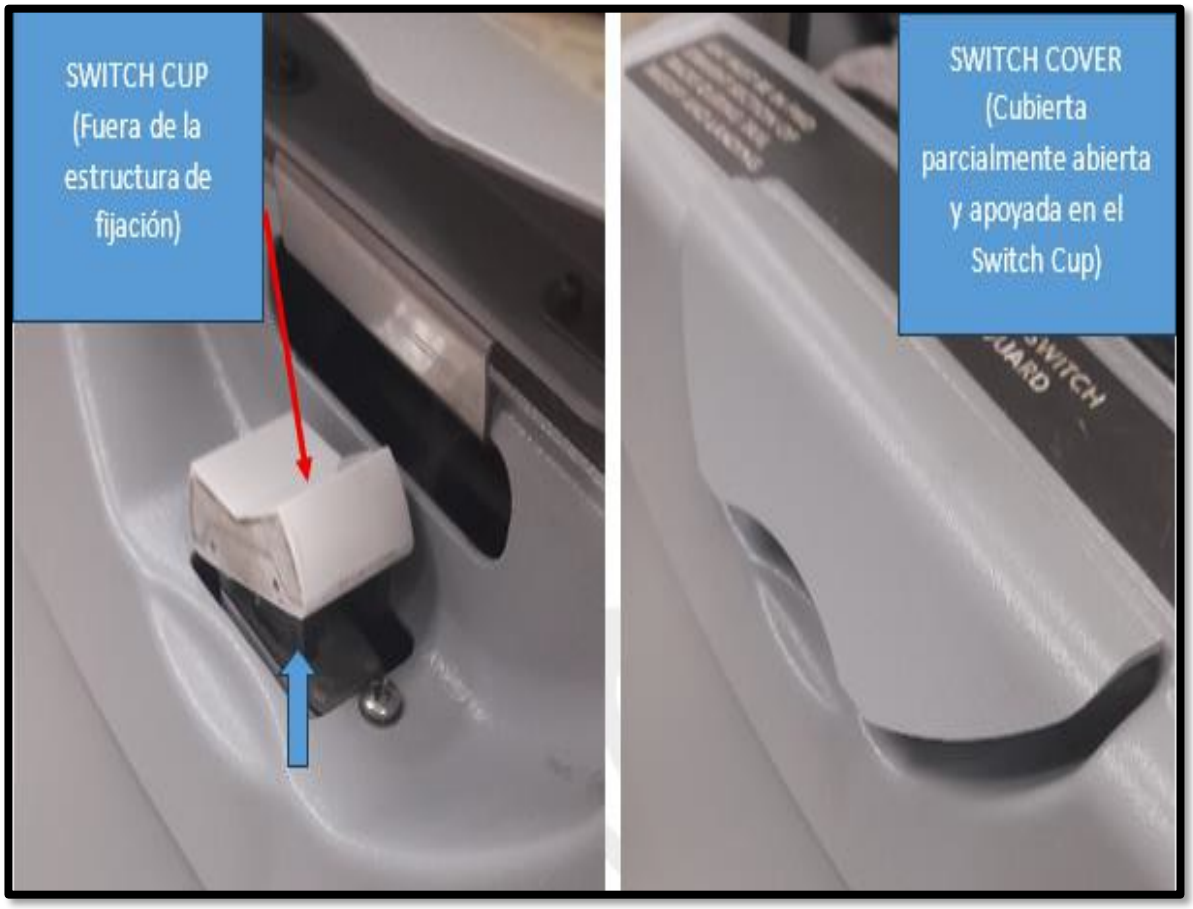


Photo N°16: View of the ROCKER SWITCH Assembly during the inspection.



Photographs N°17: Views of the SWITCH CAP and SWITCH COVER.

To continue with the inspection, the SWITCH CAP was left outside the fixing structure and resting on this switch, the SWITCH COVER (cover or cover).

In accordance with the above, a test was carried out by pressing the raised SWITCH COVER, which immediately caused the seat to move forward. The test was carried out by pressing the SWITCH COVER with the whole hand and also with one finger.

The SWITCH COVER, the switch protector, is spring-loaded to keep the switch in the closed position. When he pressed it momentarily, bringing it to the closed position, he activated the switch of the CAP SWITCH since he pressed the rocker that was dislodged from its normal position, according to photograph No. 18.

Photograph N°18: Views of the pressure on the SWITCH COVER.

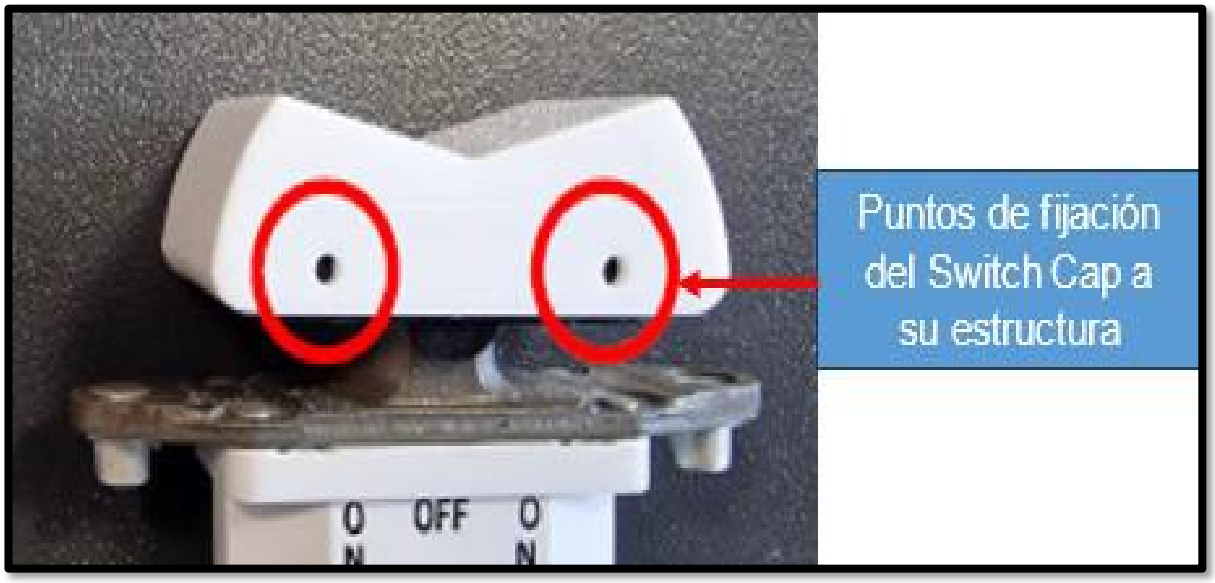
DESCRIPTION AND INSPECTION OF THE SWITCH CAP.

The SEAT BACK FWD /AFT ROCKER SWITCH, installed on top of the back of the Captain's seat and which serves to control the forward and backward sliding of the seat, is a three-position rocker switch (ON, OFF, ON).

It is built under the MIL-M3950/14 (MIL-DTL-3950) standard. In its construction, thermoset plastic molding materials (thermoplastic polycarbonate), with flame retardation, are used. The operating temperature range is between -55° C and + 71° C (-67° F and +160° F).

This component is a part of the seat structure (Base Switch), whose mounting feature is in the shape of an "H" or the material of the "SUB-BUTTON" which is a resin thermoplastic filled with glass.

The other detachable part in white, identified as a rocker button or ROCKER SWITCH CAP, according to photographs N°19 and N°20.



Photograph N°19: Views of the SWITCH CUP and its attachment points.

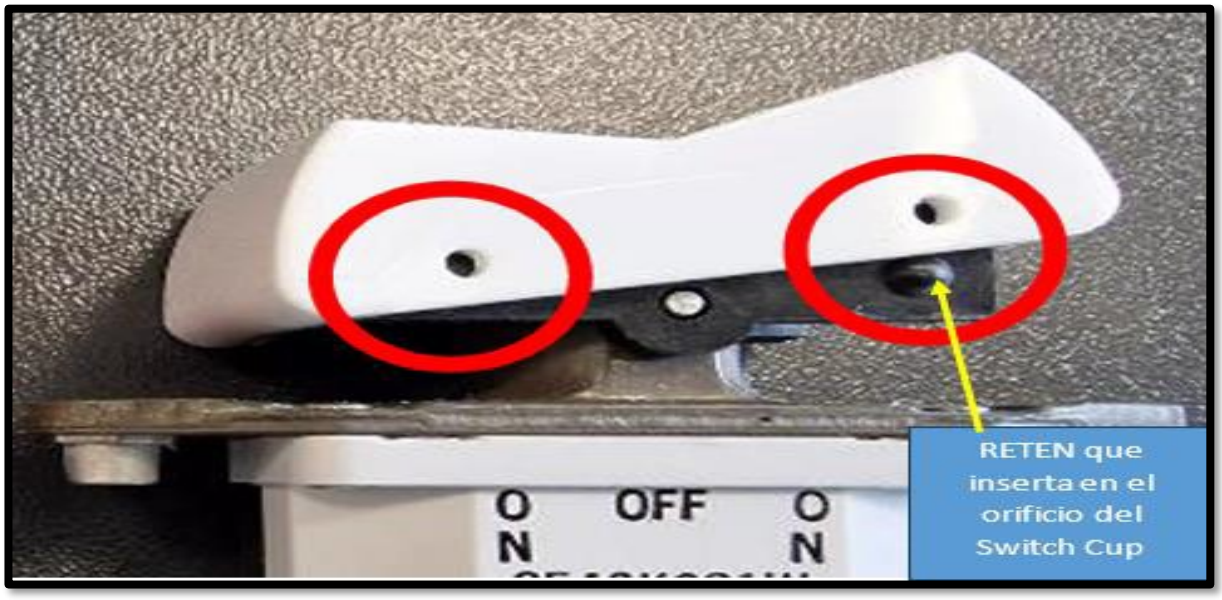


Photo No. 20: Views of the SWITCH CUP and its attachment points.

The SWITCH CAP was disassembled from the SEAT BACK FWD/AFT ROCKER SWITCH and inspected by Boeing specialists, evidencing the presence of multiple external surface fractures, which was sent to a laboratory of the aircraft construction company, for inspection, according to photograph No. 21.

Photograph N°21: Views of the affected SWITCH CUP.

It should be noted that previously and in order to prevent the detachment of the SWITCH CAP from its attachment structure, on March 8, 2017, the seat manufacturer, Ipeco Holdings Ltd., issued Service Bulletin (SB), 380-25-06 Rev. No. 1, entitled "ROCKER SWITCH CUP Improvement". Subsequently, on April 11, 2017, the same SB, 380-25-06 Rev. No. 2, was published, where the effectiveness of the SB was updated.

This bulletin aimed to reinforce the fixation of the SWITCH CAP by applying a special adhesive, to prevent its detachment during operation.

It is important to note that the aforementioned SB corresponds to a reliability improvement and is not mandatory, as is the case with other bulletins or directives in the aeronautical industry, such as Mandatory SBs, Alert SBs, AOTs (Alert Operator Transmissions) or Airworthiness Directives (ADs).

Boeing also issued Service Letter SL-787-25-013 dated October 10, 2017, recommending operators incorporate the SB issued by IPECO.

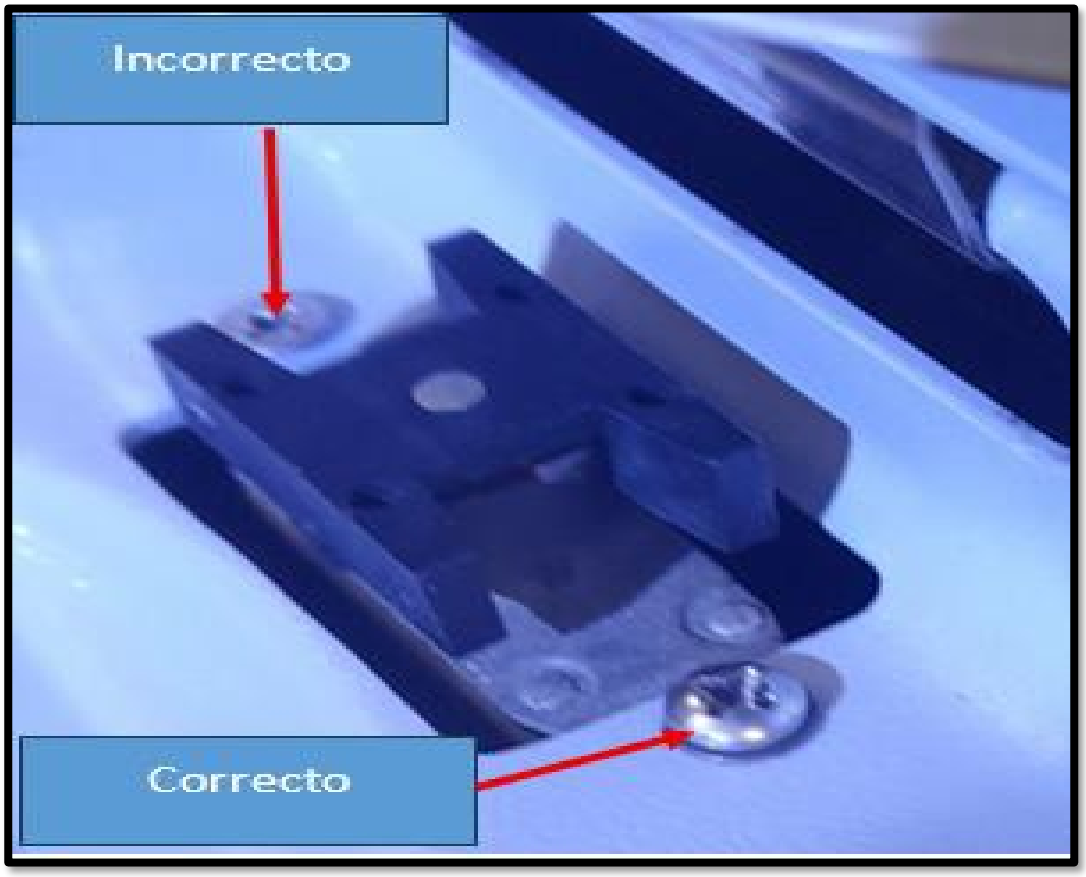
Boeing's Service Letter stated that "*An operator informed Boeing that, during the flight, the first officer's seat was moved without an activation command.*

The investigation revealed that the cover of the longitudinal auxiliary rocker switch, located on the back of the seat, had become loose.

A loose rocker switch cover can jam the switch or cause the backrest switch guard to press the switch, which can cause seat movement."

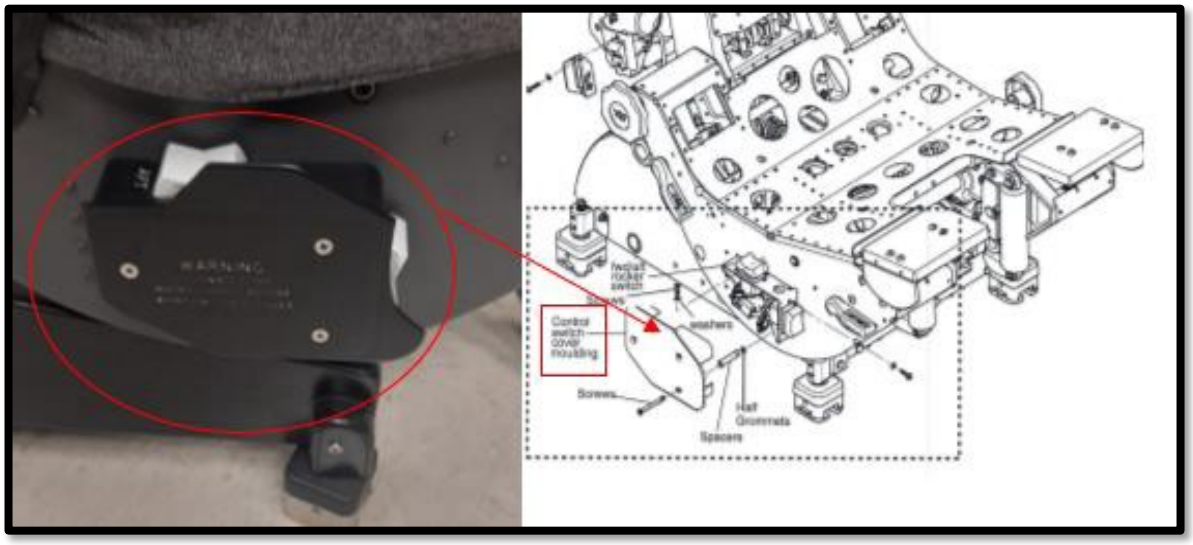
With respect to the foregoing and according to what was reported by the aircraft operator, at the time of the event this SB had not been applied to the seat involved.

On the other hand, during the inspection in conjunction with the seat manufacturer, it was also found that the fastening structure of the SWITCH CAP, belonging to the Rocker Switch assembly, had a fastening element that did not correspond to the specification established in the corresponding parts catalog, Component Maintenance Manual (a different screw was installed), according to photograph No. 22.



Photograph N°22: Views of the support with different screws.

It was also observed that in the SWITCH COVER MOULDING Control, there was a cut that did not correspond to the original contour designed by the manufacturer, according to photograph No. 23.



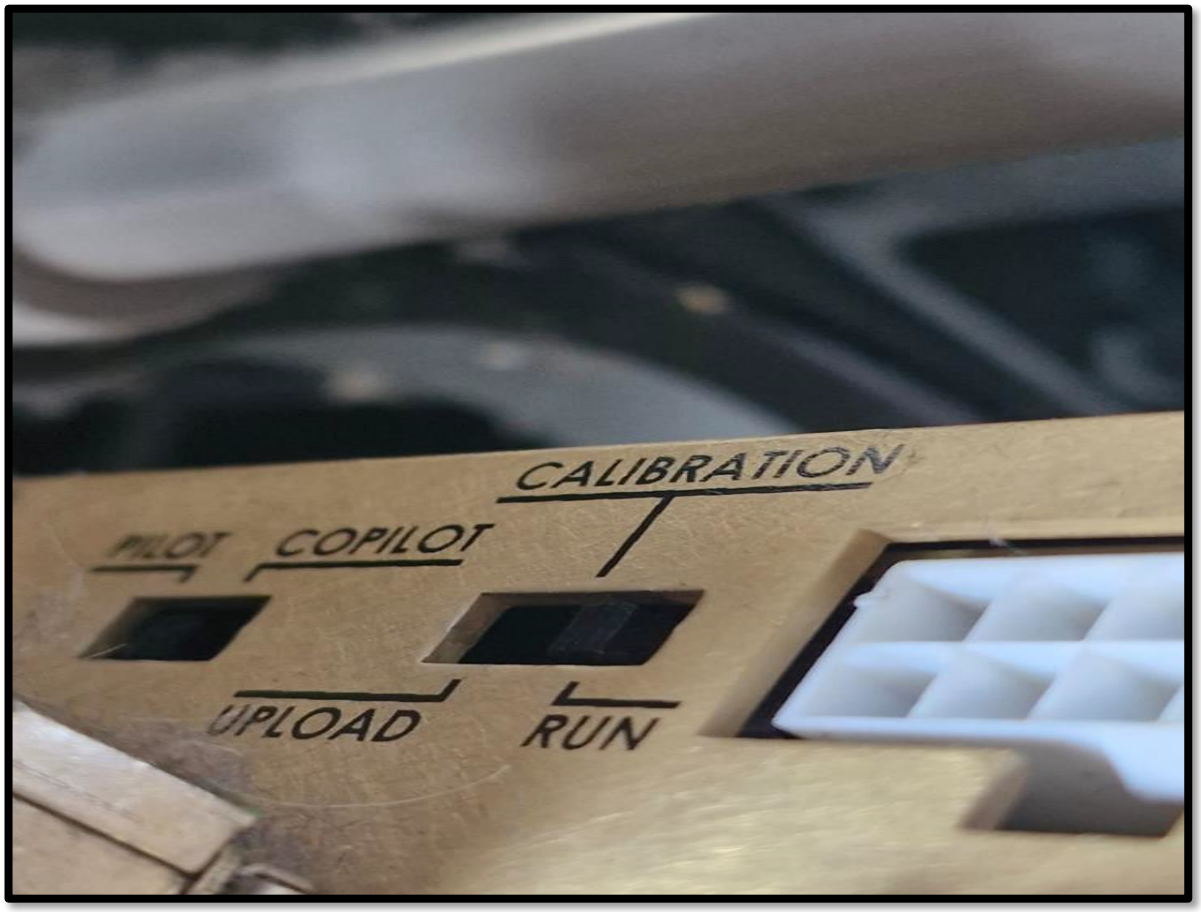
Photograph N°23: Views of the SWITCH COVER MOULDING with a different cut to the manufacturer's design.

Similarly, it was verified that the spacers of the seat belts were not assembled according to the manual. The spacer must be installed on the inner side of the belt fastening and not as it was found and can be seen in photograph N°24.

Photograph N°24: View of the belt spacer, where it is installed on the external side, and must be installed on the internal side.

Regarding the seat synchronizer, it was verified that it was in the "calibrated" position, instead of being in the normal position (RUN), as stipulated by the manufacturer. The procedimiento

established for this component indicates that after performing the calibration for the adjustment of the automatic stop of the end of travel of the seat movements, (from the different Switches), the synchronizer must remain in the RUN position, according to photograph N°25.



Photograph N°25.

QUALITY ANALYSIS OF THE EQUIPMENT AND INSPECTION OF THE SWITCH CAP IN A LABORATORY OF THE AIRCRAFT CONSTRUCTION COMPANY.

The two switches in question were visually examined under the supervision of the U.S. NTSB to assess their overall condition, focusing on the exterior, electrical connectors, wiring, rocker switch cover, and electrical terminals. Computed tomography (CT) scan was performed on both switches to examine the internal subcomponents and mechanical connection for apparent damage, excessive material wear, foreign object debris (FOD), or other anomalous features, as per photographs No. 26 and No. 27.

Photograph N°26

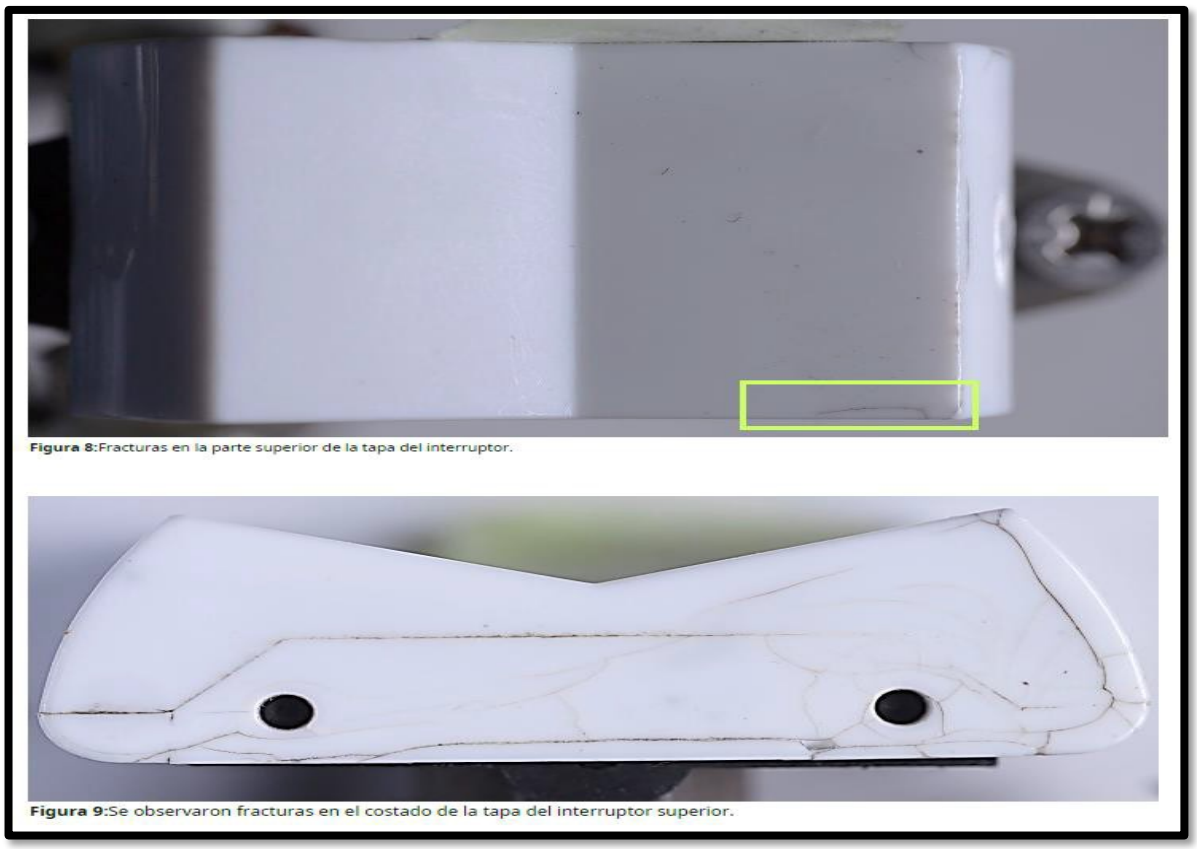


Figura 8:Fracturas en la parte superior de la tapa del interruptor.

Figura 9:Se observaron fracturas en el costado de la tapa del interruptor superior.

Photograph N°27

No notable findings were observed in the electrical terminals, connector, wiring, or switch body.

Both switch covers were sampled and a chemical analysis was performed. The deposits on both lids contained a mixture of skin flakes, cellulose, surfactants with trace amounts of environmental minerals and possible mold/fungi. Permethrin, an insecticide, was detected in the switch cap.

The material of the switch housing is polycarbonate.

The internal substances of the rear switch cover are a mixture of switch cover material and wear products from the dark housing mounting material

The dark mounting material for the rocker is butylene polyterephthalate.

Representative elemental spectra of switch covers are present in environmental minerals and potential surfactants/cleaners. Aluminum, silicon, calcium, potassium with traces of sodium, sulfur and magnesium.

1.13. Medical and Pathological Information

One (01) cabin crew, one (01) passenger of Chilean nationality and one (01) passenger of Australian nationality were hospitalized in a medical center in Auckland NZ, as a result of their injuries.

1.14. Fire

Not applicable.

1.15. Survival aspects

The aircraft landed normally at Auckland International Airport (NZAA), and after coordinating with the airport's emergency services, it made its way under its own power to the assigned parking site.

According to the information provided by the New Zealand aeronautical authority, an initial evaluation was carried out on the passengers who manifested ailments, while the rest of the passengers and crew disembarked without difficulties.

1.16. Trials and research

The background information obtained after the tests, inspections and tests carried out correspond to the actions carried out before, during and after the event investigated, which were compiled by the AIG-CHILE research team, came from the manufacturer, the aircraft operator, the seat manufacturer, AIG entities such as the NTSB (USA), (TAIC) New Zealand,

(AAIB), U.K. and aeronautical authorities such as, (FAA) of the U.S. and the DGAC-CHILE (Subdepartment of Public Transportation).

PRIOR TO THE EVENT

On March 8, 2017, the seat manufacturer issued a Servicie-Bulletin (SB) 380-25-06 Rev. No. 1, "ROCKER SWITCH IMPROVEMENT", which aims to improve, due to reports from operators, the conditions of the "FORE / AFT ROCKER SWITCH CAP" that had been found to be loose. The improvement measure that was pointed out through this SB is the addition of an adhesive to the "ROCKER SWITCH CAP" to prevent it from coming loose.

Subsequently, on April 11, 2017, the same SB, 380-25-06 Rev. No. 2, was published, where the effectiveness of the SB was updated.

Compliance with the actions indicated in the SB is indicated to be carried out "AT THE EARLIEST OPPORTUNITY, WHEN THE MANPOWER AND FACILITIES ARE AVAILABLE".

It should be noted that the SB mentioned above corresponds to a reliability SB and is not classified as a priority, such as those that exist in the aeronautical industry, for example: Mandatory, Alert, AOT, Compliance with Airworthiness Directives, among others.

In connection with the same SERVICE BULLETIN (SB), Boeing also issued a Service Letter (SL) Service Letter, 787-25-013 dated October 10, 2017, recommending operators incorporate the IPECO (SB) ROCKER SWITCH IMPROVEMENT.

In accordance with the foregoing, this SB had not yet been applied to the entry involved in the event.

On May 20, 2022, the operator's reliability area generated an Engineering Order (O.I.). The objective of this I.O. was, "CAPTAIN AND FIRST OFFICER SEAT – CALIBRATING."

On February 21, 2024, this task was applied to the aircraft of the event, without observations, by the CMA "ATT AVIATION TECHNICAL SUPPORT SPA", certified in the task.

DURING THE EVENT

On March 11, 2024, in Auckland, inspections, tasks and coordination were carried out for the return to service of the aircraft and its subsequent return to Chile. Within this, the inspection "PERFORM INSPECTION FOR SEVERE OR UNUSUAL TURBULENCE EXCESSIVE MANEUVER STALL, OR SPEEDS MORE THAN THE DESIGN LIMITS CONDITIONS" was carried out, which was duly certified in the task.

On March 11, 2024, the Captain's seat was replaced, removing the "OFF" PN 3A380-0007-01-7 SN 78592, installing the "ON" PN 3A380-0007-01-7 SN 84967.
On March 13, 2024, the other works that were detected in the inspection carried out at AKL NZL were reported to the airworthiness area of the DGAC Public Transport Sub-Department (SDTP). All the items were reviewed and after confirming that they were duly carried out and certified, the airworthiness manager of the DGAC Public Transport Sub-Department (SDTP), through email, authorized the return of the aircraft to Chile.

AFTER THE EVENT

After the event, the operating company inspected all the seats of the B-787 fleet, included or not in the applicability of the SB of the seat manufacturer. In addition, the decision was made by the company to temporarily deactivate all those seats that were included in the applicability of the SB.

On 14.Mar.2024, the operating company sent a message to the aircraft manufacturer, noting the lack of materials for the incorporation of the SB from the seat manufacturer and requesting some alternative material for its incorporation, since the materials offered by the seat manufacturer were not available and they considered a delivery time of more than 40 days.

Subsequently, and since the materials necessary for the application of the SB were obtained, it was applied to all seats of the aircraft in which the SB is applicable.

In addition, the operating company maintains an active maintenance task that orders the inspection, at intervals of one month, of the "ROCKER SWITCHES" of the seats of the entire fleet.
On 15.Mar.2024, the OEM of the aircraft "BOEING" issues the document (MOM = MULTI OPERATOR MESSAGE) "ACTION - 787-8/-9/-10 FLIGHT DECK SEATS - ROCKER SWITCH INSPECTION", the description of which states:
"Boeing and the flight deck seat supplier, Seat Manufacturer, are informing the 787 fleet of a known condition related to a loose/separate ROCKER SWITCH lid from the front/aft auxiliary ROCKER SWITCH."
This ROCKER SWITCH is located on the back of the Captain's and First Mate's seats.
In accordance with the above, BOEING and the operator maintain different communications related to problems with the ROCKER SWITCH ASSEMBLY.

Within these communications, BOEING recommends that the Operating Company incorporate the seat manufacturer's standard, which instructs operators to add adhesive to the ROCKER SWITCH cover.

From June 26 to 28, 2024, at the laboratory facilities of HUNTINGTON BEACH, Los Angeles, CA, the inspection of the assembly of (SEAT ASSY CAPTAIN) was carried out.

This inspection was attended by specialists representing the following aeronautical entities, all of which were involved in the investigation:

1. AIG-DPA Team of the DGAC-CHILE.
2. NTSB-USA.
3. FAA-USA.
4. AAIB-UK.
5. BOEING Company – USA.
6. Seat manufacturer - IPECO.

On July 5, 2024, additionally and following the tenor of the message sent to Boeing, the operating company communicated with the manufacturer of the seat raising the same situation, that is, the deactivation of the "AUXILIARY FORE / AFTER ROCKET SWITCH", based on the same arguments pointed out to BOEING.

On July 17, 2024, as a result of the meeting requested by the AIG-Chile research team, held in Los Angeles USA (between June 26 and 28, 2024), the seat manufacturer issues SB N°3 "ROCKER SWITCH CAP IMPROVEMENT", in which it indicates that it has received reports that the rocker switch cover, "FORE / AFT ROCKER SWITCH CAP" of the seat backrest comes loose, adding that a loose or detached rocker switch cover can result in an unwanted seat.

This service bulletin provides for inspection of all ROCKER SWITCH CAPS (FWD/AFT, UP/DOWN and main power) and, if necessary, provides instructions for using an adhesive to the ROCKER SWITCH CAP to improve the attachment of the SWITCH CAP.

Compliance recommendation: Mandatory.

Approval: This service bulletin has been reviewed and approved by BOEING.

This was the solution issued by the seat factory, reviewed and approved by BOEING.

On July 30, 2024, POST-MOD seats have revealed discrepancies with the switches and recently, the FO seat (PN: 3A380-0008-01-7, SN: 74957) of the aircraft had to be replaced, due to discrepancies with the side switch forward/backward; during the aircraft's flight.
The First Officer on a flight on the aircraft in which the seat had to be replaced, reported that when moving the forward/backward switch to the rear position, the seat moved correctly to the back, but when he stopped pressing the switch, the seat continued to move backward.

On August 21, 2024, regarding the above and also related to what was requested by the AIG-CHILE team, the Federal Aviation Administration Agency (FAA), issues (AD-2024-00204-T; Amendment 3922820; AD 2024-16-14).

Airworthiness Directives (AD), para The Boeing Company Airplanes.
SUMMARY: The FAA is adopting a new airworthiness directive (AD) for certain The Boeing Company Model 787-8, 787-9, and 787-10 airplanes. This AD was prompted by a report of uncommanded movement of the captain's seat in the forward direction that caused a rapid descent. This AD requires inspections of affected Captain's and First Officer's seats for missing or cracked ROCKER SWITCH CAP s and for cracked or nonfunctional SWITCH COVER assemblies, a ROCKER SWITCH CAP pull test, marking of the seats, and applicable on-condition actions. This AD also limits the installation of affected seats. The FAA is issuing this AD to address the unsafe condition on these products.

(COURTESY TRANSLATION).
SUMMARY: The FAA is adopting a new airworthiness (AD) directive for certain BOEING COMPANY Model 787-8, 787-9, and 787-10 aircraft. This AD was prompted by a report of uncommanded movement of the Captain's seat in a forward direction that caused a rapid descent. This AD requires inspections of the Captain's and First Officer's seats, to detect missing or cracked ROCKER SWITCH covers and cracked or non-functional ROCKER SWITCH CUP, SWITCH COVER ASSEMBLY, perform a test of removal of the ROCKER SWITCH CAP cover, seat marking, and applicable actions based on condition. This AD also limits the installation of the affected seats**.** The FAA is issuing this AD to address the unsafe condition of these products.

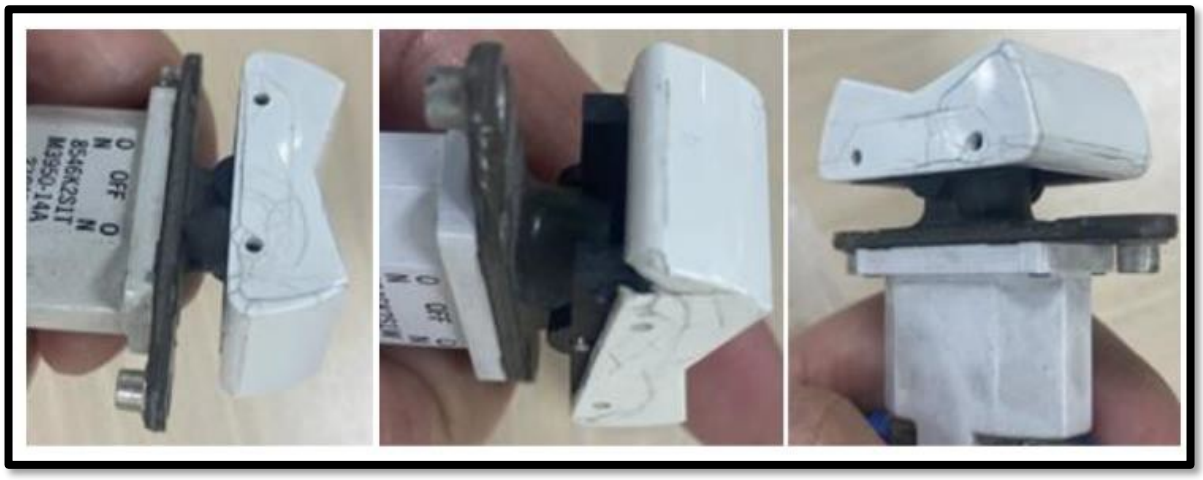
On August 22, 2025 , the operating company informs that they contacted the manufacturer of the aircraft, to inform them that the following novelties have been found in the ROCKER SWITCH in the seats of its fleet of 787 aircraft, as follows and according to photograph N°28:

1. Compliance with FAA Airworthiness Directive (AD) 2024-16-14:
2. Operating company implemented FAA AD 2024-16-14 within applicable timelines for the entire fleet and spare seats.
3. Post-modification follow-up:
4. After modifying all installed and replacement seats according to Service Bulletin (SB) IPECO 380-25-06 REV 3, and in response to reports of new discrepancies, LATAM implemented periodic inspections to ensure the correct operation and condition of the switches.
5. Inspection results:

   Inspections have shown that even after modification, the switches continue to exhibit the same type of damage that prompted the issuance of FAA AD 2024-16-14.

   It should be noted that, even when the installed spare parts are in accordance with parts and pieces of the manufacturer, they have continued to present the same damage.
6. Components sent for analysis:

   22 out-of-service switches were sent for analysis to the address provided by Boeing.



Photography N°28

1.17. Organizational and Governance Information

The FLIGHT CREW OPERATIONS MANUAL B787-8 / B787-9 / REVISION NUMBER: 27 revision Date: NOVEMBER 20, 2023/ BASED ON BOEING FCOM / DOCUMENT NUMBER: D615Z003 / REVISION NUMBER: 27 / REVISION DATE: SEPTEMBER 1, 2023/, was used

as a reference to verify that: the crew was incorporated as crew of the airline, had the training and certifications in force and were fit to perform the flight of the event.

The aircraft was in accordance with current regulations, registered and authorized to carry out the transport of passengers at the time of the event.

1.18. Additional information

1.18.1. Stories

Excerpt from the Captain's account.

The Captain reported that in the section between AKL (New Zealand) - SYD (Australia), he was in command of the Boeing aircraft, model 787-9 and that, according to the itinerary, he had no observations both in the preparation of the flight and in the operation of the aircraft. Once arrived at SYD, he began preparing for the return flight to AKL.

During the preparation and verification of the aircraft cabin at SYD, he had the sensation that his seat moved forward, at which he checked the switches located on the lower right side of the seat, pressing one of them forward and backward, and then checked the other switch, also located on the right side. pressing up and down, he checked that everything worked according to his operation. Due to the above and seeing that the condition observed in the seat had been fixed, there was no need to leave a record in the aircraft's logbook. In addition, he pointed out that it was the first time that a situation related to the movement of the seat had happened to him and in turn, that he had no knowledge of whether something similar could have happened to other pilots.

Subsequently, he continued with the normal operating procedures, initiating the flight back to AKL and as agreed, the First Officer would be in charge of the leg between SYD-AKL, as "PILOT FLYING" (PF). With an hour to go before the arrival at AKL, the First Officer who was still in charge of this section. After a few minutes, the Cockpit Manager requested authorization to enter the COCKPIT, entering and sitting in the seat of observer No. 1, initiating a conversation with the pilots. The Cabin Manager then picked up and held the lunch service trays in her hands, as the conversation continued. Moments later, the announcement sounded again in the cabin and a cabin crew member requested authorization to enter and remove the trays corresponding to the lunch service. He was immediately authorized to enter and the door opened, entering the COCKPIT, at which time and surprisingly, the Captain's seat began to move forward.

To clarify what the Captain's position was in the seat, at the time of the involuntary movement, he pointed out that he was sitting at the same height he uses for the takeoff of the plane, but a little further away from the flight controls.

Then, when the seat began to involuntarily move forward, he thought there was someone pressing the switch to move the seat forward. Until this moment, he was unaware that the cabin crew member had involuntarily leaned or rubbed against the switch cover, which is at the upper rear of the seat.

He said that when he began to move the seat forward, he turned to look back, leaving his left leg trapped between the seat and the column of the flight controls. This pressure caused the plane's autopilot to be disconnected, causing the plane to begin a sharp descent for a few seconds, at which time, the First Officer reacted quickly by taking manual control of the plane, recovering flight condition. Once the aircraft had stabilized and the autopilot had been reconnected, the Captain called the cabin crew by intercom to find out the status of the crew and passengers. He was informed that there were several injured passengers, as well as three cabin crew. In view of this, the call of doctors on board was managed on the aircraft, MEDAIR was called by SELCALL, a message was sent by ACARS to CCV, indicating what happened and the AKL ATC was informed of the situation, requesting medical assistance upon arrival. In parallel to the coordination, the Captain requested the presence of a maintenance mechanic who came on board and who fulfilled the functions of maintenance technician of the company in SYD. Once the maintenance mechanic entered the COCKPIT, the Captain told him what had happened and the maintenance mechanic made an inspection and evaluation of the problem, pointing out that the guard protecting the switch on his seat was raised, in a position that was not normal, compared to the guard on the switch on the First Officer's seat.

In addition, within the verification carried out by the maintenance mechanic, he pressed the guard (cover that covers the switch) again, beginning to move the Captain's seat forward, without stopping.

The Captain pointed out to the maintenance mechanic that on the previous flight (AKL-SYD) and while they were preparing the flight back to AKL, he had a similar situation with his seat, in which he had the sensation that his seat moved slightly forward, which was verified by him using the switches on the lower right side side and that this condition did not occur again. He never used the switch located at the top of the seat back.

The maintenance mechanic suggested to the Captain that he electrically disconnect his seat and leave it operating manually, which he did. After this action, the seat had no more problems of involuntary movement.

Then, they were given priority for landing and with the aircraft stopped, emergency personnel were admitted to attend to the injured passengers and crew members.

At the same time, the maintenance personnel at AKL reviewed the condition of the aircraft and realized that there was a defect with the Captain's seat, recording a video, where it was observed that the seat activated by itself. Every time the switch guard, which is located at the back of the Captain's seat, was pressed.

Once all the passengers had disembarked, what happened was discussed with the crew who were on the plane and later they got off the plane.

NOTE: This account was based on interviews conducted by the DGAC JIA.

Excerpt from the First Officer's account

The First Officer reported that, during the cruise phase, approximately one hour after arrival at AKL, a cabin crew member entered the COCKPIT to remove the trays of the previously served lunch service. At that moment, suddenly, the electrical system of the Captain's seat was involuntarily activated, causing him to move forward and exerting pressure against the flight commands, leaving the Captain trapped in the seat. The pressure exerted caused the autopilot (AP) to disconnect, which generated an unintentional abrupt descent of the aircraft. At that moment, he was reviewing the flight charts that would be used for approach and landing, since he was serving as the pilot in charge of that flight leg "PILOT FLYING" (PF). Everything happened very quickly. He heard the Captain shout that he was trapped and almost immediately, the AP was disconnected. Faced with this, he reacted instinctively by taking control of the plane, along with disconnecting the power supply to the captain's seat, executing maneuvers to recover a safe and level flight attitude, trying at all times not to exceed critical parameters (high stall, excess G-forces, etc.).

Once the aircraft was stabilized and the autopilot was reconnected, the cabin crew toured the aircraft to assess the situation on board. The Captain contacted them to find out the condition of the passengers, being preliminarily informed that several passengers and three cabin crew members were injured. In view of this, the Captain coordinated with the operational crew the call to doctors on board and contacted MEDAIR. For its part, it took over external communications: it sent an ACARS message to the control centre (CCV) indicating what had happened and informing AKL's air traffic control (ATC), requesting medical

assistance upon arrival. They were given priority for landing, which was carried out without further developments. After the arrival and detention of the aircraft, emergency personnel were authorized to enter to provide care to the affected passengers and crew members. Simultaneously, maintenance personnel carried out a review of the condition of the aircraft and detected a defect in the Captain's seat. A video was recorded that showed that the seat activated on its own towards the front position, without direct intervention from the user.

Once the disembarkation of all the passengers was finished, they had a conversation with the rest of the crew about what happened, before leaving the aircraft.

NOTE: This account was based on interviews conducted by the DGAC JIA.

Extract of the Cabin Manager's story

The cabin manager reported that while she was sitting in the observer's seat, which was having a conversation with the Captain, another flight attendant entered the COCKPIT, with the purpose of removing the trays from the lunch service. At that moment, the crew accidentally brushed against the Captain's seat, which caused him to suddenly move forward, causing the Captain to be trapped between the handle and the command column. Simultaneously, the aircraft began a nose-down descent for approximately five seconds, until control was regained by the First Officer. During the situation, the cabin manager made sure to put on her seat belt and tried to assist the other crew member so that she could also sit down and belay herself, until the plane was stabilized.

NOTE: This account was based on interviews conducted by the DGAC JIA.

Excerpt from flight crew report

The crew member said that, at the end of the lunch service in the main cabin, she went to the cockpit, with the purpose of removing the lunch trays. Upon entering, he observed that the cabin manager was sitting in observation seat number one, holding the trays. At the moment she took the trays, she felt a sudden ascent, being lifted towards the roof of the aircraft and briefly suspended, as a result of the sudden movement of the plane. As he descended, he managed to hold on tightly to the Captain's seat. At that moment, the Captain was already trapped between his seat and the control column, while the First Officer assumed manual control of the aircraft and disconnected the power to the Captain's seat. Once the situation was stabilized, the crew member managed to reach the other observation seat, where she put on the harness and seat belt, remaining secured in her position and waiting for instructions in the COCKPIT.

NOTE: This account was based on interviews conducted by the DGAC JIA.

Excerpt from the report of the N°1 maintenance technician in NZ

Technician No. 1 reported that when the aircraft arrived at Auckland Airport (AKL), he carried out an exterior visual inspection around the plane, without detecting apparent structural damage. Subsequently, he entered the flight deck and held a conversation with the crew, in order to obtain references about what happened. During the conversation, he was informed that the switch on the Captain's seat had unintentionally engaged forward, causing the Captain to become trapped between the seat and the control column. Once the disembarkation of passengers and crew was completed, he entered the cockpit again to carry out a more detailed inspection. In it, it found that the Captain's seat had damage in the area of the left thigh and that the upper rear switch of the seat (SWITCH CAP) was in an abnormal position, out of its usual alignment.

Report of NZ Maintenance Technician No. 2

Technician No. 2 said that he was informed that the flight of the event sends the following information: "DEAR WE HAD PROBLEMS WITH THE CP SEAT. PRODUCED BY DESCONEX AUTOPILOT. WE HAVE 10 INJURED PAX AND 3 DISABLED CREW MEMBERS" This message was sent by the CAP via ACARS. The investigator is informed that the flight arrived in condition 2, according to what was reported by the Captain, "failure of the Captain's seat", endorsed by the technician on duty. After receiving the flight, he proceeded to perform the normal aircraft inspection upon arrival. After all the passengers got off, he was only able to have access to the cabin of the plane since the emergency teams of the Airport were there, giving assistance to passengers and crew. MOC[1] requested to Deactivate the 2 EAFRs, taking out the C/B (CIRCUIT BREAKER), it was done in accordance with the AMM at the request of the MOC. Upon having access the work requested by the Operator began and report more details. The Operator was informed of the Note reported by the Captain, in MLB 010951-A-0045 "CAPTAIN SEAT UPPER FORE / AFT SWITCH DEFECTIVE". During the inspection of the SWITCH, it was detected that the white protector on the east was out of position, plus damage to the left side of the seat (broken piece), the Operator was informed of what was found in the seat and MOC SCL decided to replace it in accordance with the AMM.

[1] Maintenance Operations Center (aircraft operator).

MOC requested to carry out an inspection of the aircraft, according to him, nothing abnormal was found in the structure and the Operator's MOC was informed.

The CAP seat was replaced on March 13, 2024. The damaged Seat was packed on the 13th, to be sent to SCL as requested by the Operator, as soon as possible. The investigator was informed to keep him in custody as soon as possible. MOC requested that the EAFR be removed to be handed over to the local authority TAIC NZ.

EAFR was delivered to the representative of TAIC.

He was informed that damage was found in the Captain's seat and 2 panels of the roof of row 38, loose.

Excerpt from the account of the person in charge of the support at the landing airport (NZAA)

The manager said that she received a message through a company system, that the flight of the event required the assistance of paramedics upon arrival. At 16:03 PM local time in NZ, he requested information from the company's operations center, about the condition of the injured, since at the beginning he had 3 paramedics and an ambulance. At approximately 16:30 PM, the door of the plane opened and he found a doctor on board, who had assisted the passengers during the event, performing a TRIAGE on the injured. Assistance was coordinated in the first place and once it is done, an evaluation is made. The passengers were disembarked. The people were calm and collaborated in making an orderly process. Around 01:00 HL they were given the information that the slightly injured were discharged and at 3:00 HL, only one person of the crew and 2 passengers were hospitalized.

1.18.2. Human Factors

Based on the information collected, human errors can have multiple causes, but their proper identification and analysis allows the design and implementation of strategies aimed at preventing their occurrence or mitigating their effects. The case described in this report can be explained as the result of a combination of factors, where available defenses or mitigating actions were sufficient to interrupt the course of the event.

Some of the relevant factors identified are detailed below:

STARTLE EFFECT

The unexpected movement of the Captain's seat, his bewilderment at not immediately understanding what was happening, the trapping of his legs against the column of the flight controls, together with the screams, blows, alarms and warnings that were activated in the

cockpit as a result of the abrupt descent of the aircraft, generated a startled reaction in the commander.

This effect is an immediate physiological and psychological response to sudden and unexpected stimuli that can negatively affect the ability to process information, make quick decisions and execute appropriate responses.

CREW RESOURCE MANAGEMENT (CRM)

Faced with the Captain's momentary bewilderment, the First Officer, who was at the controls in this phase of the flight, effectively applied the principles of CREW RESOURCE MANAGEMENT (CRM), which was characterized by clear and timely communication, appropriate decision-making and the efficient use of all available resources. including automatic systems, cabin crew support and information available in the cockpit.

The Captain and the First Officer assumed operational control of the situation, executing the established procedures to recover straight and level flight, maintaining at all times the coordination and focus of the team on the safe management of the contingency.

In this scenario, the CRM operated as a critical defensive barrier, providing a structured framework to deal with unforeseen events, allowing the initial effects of the shock to be contained and preventing an escalation of the event.

1.19. Useful or effective research techniques

Not applicable.

2. Analysis

CREW AND ORGANIC INFORMATION OF THE OPERATING COMPANY

With respect to the verification of the licenses, ratings of the Captain and the First Officer, it was established that they had the requirements required by regulations to operate the aircraft on an international passenger transport flight, and there were no observations.

With respect to the verification of the licenses and ratings of the cabin crew, it was established that they had the regulatory requirements to carry out this activity in the aircraft, and there were no observations.

With respect to the crews and the aircraft, it was established that they were registered in the respective Operations Manuals of the operating company, which allowed them to carry out this activity, and there were no observations.

AIRCRAFT BACKGROUND

With respect to the review of the airworthiness records, which were kept in view during the investigation, it was established that, on the date of the event, the operator was carrying out maintenance at an Aeronautical Maintenance Center (AMC), duly authorized and authorized in the type and model of aircraft, in accordance with the frequency established in the maintenance program. which was approved by the aeronautical authority.

With respect to the condition of maintenance and airworthiness of the aircraft involved in the event, no records of discrepancies were observed, nor were there any reports in the maintenance area, as recorded in the FLIGHT LOG BOOK (FLIGHT LOG BOOK) and in the MAINTENANCE LOG BOOK.

From another point of view, in the result of the inspections carried out on the seat involved in the event, at the premises of the aircraft manufacturing company, in conjunction with the seat manufacturer, where other new findings were observed, such as non-standardized modifications, the poor assembly of parts and pieces of the seat, use of hardware other than that of the manufacturers, among others, these findings were not causal or contributing factors to the event investigated.

HISTORY OF INSPECTIONS AND PROCEEDINGS

With respect to the inspections carried out by the investigating team, together with the maintenance technicians of the operating company, at the premises of Auckland NZ Airport, it was possible to establish that the aircraft's systems did not have faults of previous origin, which had been present or were a contributing factor in the event investigated.

With respect to SERVICE BULLETIN (SB) N[2] **°380-25-06 ISSUE 2,** which corresponds to a reliability improvement and does not have mandatory priority, it was issued by the seat manufacturer for the operators of the B787, which was aimed at improving the attachment of the CAP SWITCH to the ROCKER SWITCH by using a glue applied to the structure, which would not have been applied to the seat involved in the event, by the aircraft operator

[2] This SERVICE BULLETIN (SB) 380.25-06 ISSUE 2 9 MAY 2017, corresponds to an improvement in reliability and does not have mandatory priority".

With respect to the application of the **mandatory SERVICE BULLETIN (SB), 380-25-06 ISSUE 3**, which was issued by the manufacturer of the seat for the operators of the B787, which was aimed at improving the attachment of the CAP SWITCH to the ROCKER SWITCH through the use of glue and the implementation of periodic inspections, these were complied with by the operating company.

Likewise, the operating company implemented AD 2024-16-14 of the Federal Aviation Administration Agency (FAA), which issued an airworthiness directive, which is mandatory and addresses the unsafe condition of the affected product and provides for periodic inspections of the Captain's and First Officer's seats of the B787, in order to detect in the covers of the ROCKER SWITCH, missing or cracked parts and in the ROCKER SWITCH CUP, cracked or non-functional parts.

The results of these inspections have shown that even after the modifications made to the seat switches, they continue to present the same type of damage, which forced the operating company to send 22 switches out of service, for analysis, to the address provided by the aircraft manufacturer.

BACKGROUND TO THE DAY OF THE EVENT

With respect to the background information collected on the day of the event, it can be confirmed that the aircraft made the first flight of the day, according to schedule, from Auckland International Airport (NZAA), New Zealand, to Kingsford Smith International Airport in Sydney (YSSY), Australia, for the transfer of passengers and cargo, which took place without observations and without leaving any record of any anomaly[3].

Upon arrival at Kingsford Smith International in Sydney (YSSY), Australia, the Captain of the aircraft reported that while sitting in his seat, preparing and checking the aircraft's systems with the intention of making the flight back to Auckland (NZAA), he had the feeling that his seat made an involuntary forward movement. before which he verified that the switches that are located on the right side of his seat, were working according to their function and operation, so he did not leave a record of what happened.

It is necessary to point out that on the day of the event and at the time of testing the functionality of the switches described in the previous paragraph, the Captain did not check his seat, the operation or the operation of the rocker switch (SWITCH CAP) of the ROCKER SWITCH.

[3] The Captain did not alert any discrepancy or observation, regarding any anomaly or malfunction of anything, that affects the safety of the flight, thus ruling out that the SWITCH CAP of his seat had come loose from its structure in that flight segment

Moments before the accident, the aircraft was fulfilling its flight itinerary to Auckland International Airport, New Zealand Auckland (NZAA). On the flight deck, the First Officer served as the pilot in charge of this flight leg "PILOT FLYING" (PF), using the autopilot (AP) for control of the aircraft and maintaining a flight level FL 410, with no observations.

Subsequently, the Cabin Manager entered the COCKPIT (flight deck) to coordinate with the Captain, to finally enter the COCKPIT a crew member, whose objective was to remove the trays from the food service, it was at that moment that the crew member involuntarily began to wear the cover of the SWITCH COVER (cover that protects ROCKER SWITCH). initiating an uncontrolled forward displacement of the Captain's seat.

It is necessary to emphasize that the cover of the SWITCH COVER of the Captain's seat, at the time of the accident, was in an abnormal position (superimposed) because the rocker switch (SWITCH CAP) had detached from its structure (ROCKER SWITCH), losing its functionality. The consequence of this was that any pressure exerted on the deck (SWITCH COVER) would trigger the uncontrolled movement of the Captain's seat forward.

At the moment the seat was moved, the Captain was seated and turned to the right, talking to the cabin manager; It is at this moment that he was bewildered, not immediately understanding what was happening and being trapped, exerting a pressure of his left leg (crossed over his right leg), against the flight control column of the aircraft.

The progressive increase in this pressure, against the COLUMN FORCE SENSOR, exceeded the permissible limits of the autopilot, resulting in the inadvertent disengagement of the autopilot (AP).

The disconnection of the autopilot (AP) resulted in the aircraft initiating a sudden and involuntary descent, where the flight crew lost control of the flight momentarily.

Faced with this situation, the First Officer managed clear and timely communication with the Captain, making the appropriate decisions and making efficient use of all available resources, including automatic systems to regain control of the aircraft and control of the pitch.

He simultaneously disconnected the power to the Captain's seat electrically, so that he could pull out his trapped legs and not continue to put pressure on the aircraft's control column.

Finally, when the First Officer, together with the Captain, managed to regain control of the flight, they reconnected the autopilot (AP) of the aircraft, recovering the altitude lost during the abrupt and involuntary descent and maintaining navigation, as planned.

BACKGROUND OF THE ROCKER SWITCH, AFTER THE ACCIDENT

A maintenance technician on board the aircraft verified the defective condition of the ROCKER SWITCH in the Captain's seat by comparing the functional condition of the rocker switch on the First Officer's seat, which was operating according to design.

All of the above was confirmed by the maintenance personnel of the operating company at Auckland International Airport (NZAA), New Zealand NZ, who received the aircraft, where it was determined that the Captain's seat, and specifically in the cover of the SWITCH COVER that protects the ROCKER WITCH, was raised, in an abnormal position, compared to the SWITCH COVER that protects the ROCKER SWITCH from the First Officer's seat, which was seen to be in a normal position.

The condition of the rocker switch[4], identified as the CAP SWITCH, which is part of the ROCKER SWITCH assembly, in which it was observed during inspections, that it was detached and did not comply with the functionality and operation for which it was designed.

A factor that influenced the detachment of the rocker switch (CAP SWITCH) could have been the fact that the ROCKER SWITCH assembly of the affected seat would not have been serviced as recommended in **SERVICE BULLETIN (SB) N°380.25-06 ISSUE 2.**

In contrast to the above, the operating company carried out everything provided by the manufacturers of the aircraft and the seat, to prevent the detachment of the rocker switch of the ROCKER SWITCH, however, they continued to find different failures of the components of the switches, requesting a pronouncement from the manufacturers on the above.

DAMAGE INFORMATION

The damage observed inside the aircraft was consistent with the dynamics of the event and no additional structural failures were detected after the event under investigation.

WEATHER

The weather conditions en route were unobserved, so they were not a causal or contributing factor to the event.

[4] This rocker switch (SWITCH CAP) in normal operation, when pressed, emits an electrical signal to an electric motor, to move the seat through two rails fixed to the floor of the aircraft, with a forward or backward trajectory. The cycle is interrupted when the switch is allowed to be pressed.

3. Conclusion

With respect to the licenses, qualifications of the Captain and the First Officer, there were no observations.

With respect to the verification of the licenses and ratings of cabin crew, there were no observations.

With respect to the crews and the aircraft, they were recorded in the respective Operations Manuals, and there were no observations.

With respect to airworthiness, the operator carried out maintenance at an Aeronautical Maintenance Centre (AMC), duly authorised and authorised in the type and model of aircraft, and there were no observations.

With respect to the condition of maintenance and airworthiness of the aircraft involved in the event, no records of discrepancies that were consistent with the event under investigation were observed.

Some details related to a lack of diligence in the assembly of parts and pieces of the rocker switch (SWITCH CAP) of the ROCKER SWITCH were observed, which were not contributing factors in the investigated event.

With respect to the inspections carried out, the aircraft had no faults of previous origin, which were a contributing factor in the event investigated.

With respect to SERVICE BULLETIN (SB) N°380.25-06 ISSUE 2, which is recommended, it would not have been applied by the aircraft operator.

With respect to the application of SERVICE BULLETIN (SB), 380-25-06 ISSUE 3, (published after the fact investigated), which is mandatory, it was carried out by the operating company to all the indicated seats of its fleet.

Associated with the above, the operating company implemented AD 2024-16-14 of the Federal Aviation Administration Agency (FAA), to the Captain and First Officer seats of the B787s.

The results obtained by the operating company, after these modifications to the seat switches, indicate that the problem persists and the same type of failure continues to occur, having to leave 22 switches out of service, sending them for analysis to the aircraft manufacturer.

Regarding the background information collected on the day of the event, it can be confirmed that the aircraft upon arrival at Kingsford Smith International Airport in Sydney (YSSY), Australia, did not leave a record of any anomaly on that flight.

With respect to the Captain's account that when he was preparing for the return flight, at Sydney airport (YSSY), he had the feeling that his seat made an involuntary forward movement, in the face of which, he left no record of what happened.

It is necessary to point out that the Captain did not check his seat, at the beginning of the flight where the event occurred, with respect to the operation and operation of the rocker switch (SWITCH CAP) of the ROCKER SWITCH.

Moments before the accident, the First Officer was serving as the pilot in charge of this flight leg "PILOT FLYING" (PF).

The forward and uncontrolled movement of the captain's seat was the result of a flight crew member entering the flight deck and involuntarily taking the cover of the SWITCH COVER, activating the rocker switch (SWITCH CAP)

The cover of the SWITCH COVER of the Captain's seat, at the time of the accident, was in an abnormal position (superimposed) because the rocker switch (SWITCH CAP) had detached from its structure (ROCKER SWITCH), losing its functionality and operation for what it was designed for.

At the moment the seat was displaced, the Captain was seated and turned to the right, with his left leg crossed over his right leg, trapping the Captain's body against the flight control column of the aircraft, a fact that caused his bewilderment, as he did not immediately understand what was happening.

When the captain was trapped, he exerted pressure against the aircraft's flight control column, which exceeded the permitted limits of the autopilot (AP) and inadvertently disconnected it.

The disconnection of the autopilot (AP) resulted in the aircraft initiating a sudden and involuntary descent, where the flight crew lost control of the flight momentarily.

The First Officer managed clear and timely communication with the Captain, regarding making appropriate decisions and the efficient use of all available resources, including automatic systems, in order to regain control of the aircraft.

Finally, when the First Officer, together with the Captain, managed to regain control of the flight, they reconnected the autopilot (AP) of the aircraft and continued with the planned flight.

A maintenance technician on board the aircraft and maintenance personnel in Auckland (NZAA) found the defective condition of the ROCKER SWITCH in the Captain's seat by comparing the functionality of the Rocker Switch on the First Officer's seat, which operated according to design.

The rocker switch (SWITCH CAP), involved in the event, during the inspections it was observed that it was detached from the ROCKER SWITCH, which did not comply with the functionality and operation for which it was designed.

When the rocker switch was unintentionally activated, it caused the Captain's seat to move forward uncontrollably.

Even though after the occurrence of the event, both the manufacturer of the seat and the aircraft have established corrective measures to avoid the repetition of the detected failure, it has continued to occur.

In other words, corrective actions have not delivered the expected results, a situation that merits the adoption of more radical measures to prevent future repetitions.

Weather conditions were not a contributing factor to the event.

4. Cause/Contributing Factors

4.1. Cause

During a public transport flight, the aircraft made a sudden and involuntary descent, as a result of pressure exerted by the Captain's body, against the COLUMN FORCE SENSOR, as a result of an uncontrolled movement of his seat forward. This pressure exceeded the permitted limits of the autopilot, which resulted in its inadvertent disconnection, causing a momentary loss of control of the flight.

4.2. Contributing Factors

A cabin crew inadvertently activated the rocker switch, which had detached from the structure of the "ROCKER SWITCH" of the Captain's seat.

During the uncontrolled displacement of the seat, the Captain was seated and turned to the right with his left leg on his right leg, leaving both legs trapped against the aircraft's control column, which caused an overpressure to the autopilot sensor, exceeding its limits and causing it to disconnect.

The absence of previous experiences, with respect to the effects that can be generated by an uncontrolled movement of a seat, would have influenced the captain not to leave a note in the logbook, and with it, that the failure had been detected previously.

Failures in the design, operation, functionality and manufacturing material of the components of the "ROCKER SWITCH".

5. Safety and Human Factors Recommendations

THE ACCIDENT PREVENTION DEPARTMENT SHALL:

1. To send the results of the investigation to the interested parties, for prevention purposes.
2. Disseminate the event under investigation through the website and other institutional media.
3. To formalize the authority of the National Transportation Safety Board (NTSB), to negotiate with the manufacturers of the aircraft and the seat, a technological solution in accordance with the facts described in this investigation, regarding a new design of the mechanisms of the "ROCKER SWITCH" and a change of the materials used in its manufacture at present.

THE OPERATIONAL SAFETY DEPARTMENT SHALL SUPERVISE AND CONTROL:

1. That the aircraft operating company comply with the mandatory and suggested bulletins (SB) to improve the problem of the "ROCKER SWITCH", and report the result of these measures.
2. That the operating company reinforces the quality control of its maintenance, supplies and repairs carried out in relation to the seats involved in the event.
3. That the operating company has updated and included the rocker switch inspection in the Aeronautical Maintenance Manual (AMM).
4. That in the internal operational safety campaigns carried out by the operating company, the reporting of discrepancies detected in the cabins and maintenance lines is encouraged.

THE AIRCRAFT OPERATING COMPANY SHALL:

1. To officially inform the aircraft manufacturer and seat manufacturer of the results and measures adopted, to comply with the respective SERVICE BULLETIN, referring to the fixing of the "ROCKER SWITCH" and what their results were.
2. Implement a thorough technical review on all aircraft with seats similar to those involved in this event, in order to verify the condition and functionality of the "ROCKER SWITCH" and its associated components.
3. Carry out controls on its quality control units in the area of maintenance, supply, change of parts and pieces, among others

4. In the field of Human Factors, reinforce the understanding of the limitations inherent to human performance, especially the concept of "STARTLE EFFECT".
5. In the workshops for crews in "Crew Resource Management (CRM)", reinforce this type of behavior, referring to the concept of the previous paragraph, highlighting the positive result achieved when acting in a coordinated manner in an emergency.
6. Develop workshops for maintenance groups in "Maintenance Resource Management (MRM)", to reinforce the quality of work in this essential action for operational safety in maintenance lines.

THE MANUFACTURER OF THE AIRCRAFT AND THE SEAT EVALUATE:

Redesign the "ROCKER SWITCH" and the materials that will be used to manufacture the new parts of the "ROCKER SWITCH", and report through the National Transportation Safety Board (NTSB) of the United States of America (USA) to the DGAC (DPA) CHILE, the result of said recommendation.