CIAIAC

COMISIÓN DE
INVESTIGACIÓN
DE **A**CCIDENTES
E **I**NCIDENTES DE
AVIACIÓN **C**IVIL

Report IN–021/2016

Incident involving an Airbus A319-111,
registration G-EZGE,
at the Ibiza Airport (LEIB, Spain)
on 19 June 2016

GOBIERNO DE ESPAÑA
MINISTERIO DE FOMENTO

Report

IN-021/2016

Incident involving an Airbus A319-111, registration G-EZGE, at the Ibiza Airport (LEIB, Spain) on 19 June 2016

GOBIERNO DE ESPAÑA
MINISTERIO DE FOMENTO
SUBSECRETARÍA
COMISIÓN DE INVESTIGACIÓN DE ACCIDENTES E INCIDENTES DE AVIACIÓN CIVIL

NIPO Papel: 161-17-237-2

NIPO Línea: 161-17-238-8

Depósito legal: M-35423-2017

Maquetación: David García Arcos

Impresión: Centro de Publicaciones

COMISIÓN DE INVESTIGACIÓN DE ACCIDENTES E INCIDENTES DE AVIACIÓN CIVIL

Tel.: +34 91 597 89 63
Fax: +34 91 463 55 35

E-mail: ciaiac@fomento.es
http://www.ciaiac.es

C/ Fruela, 6
28011 Madrid (España)

Foreword

This report is a technical document that reflects the point of view of the Civil Aviation Accident and Incident Investigation Commission (CIAIAC) regarding the circumstances of the accident object of the investigation, and its probable causes and consequences.

In accordance with the provisions in Article 5.4.1 of Annex 13 of the International Civil Aviation Convention; and with articles 5.5 of Regulation (UE) nº 996/2010, of the European Parliament and the Council, of 20 October 2010; Article 15 of Law 21/2003 on Air Safety and articles 1., 4. and 21.2 of Regulation 389/1998, this investigation is exclusively of a technical nature, and its objective is the prevention of future civil aviation accidents and incidents by issuing, if necessary, safety recommendations to prevent from their reoccurrence. The investigation is not pointed to establish blame or liability whatsoever, and it's not prejudging the possible decision taken by the judicial authorities. Therefore, and according to above norms and regulations, the investigation was carried out using procedures not necessarily subject to the guarantees and rights usually used for the evidences in a judicial process.

Consequently, any use of this report for purposes other than that of preventing future accidents may lead to erroneous conclusions or interpretations.

This report was originally issued in Spanish. This English translation is provided for information purposes only.

Contents

Abbreviations

º ´ ´´	Sexagesimal degrees, minutes and seconds
AENA	Aeropuertos y Navegación Aérea
APU	Auxiliary Power Unit
ATC	Air Traffic Control
AIP	Aeronautical Information Publication
ATPL(A)	Airline Transport Pilot License (Airplane)
CAA	Civil Aviation Authority
CAVOK	Ceiling and Visibility OK
COAM	Maneuvering Area Coordinator
CCM	Cabin Crew Member
CM	Cabin Manager
DC	Direct Current
DFDR	Digital Flight Data Recorder
EGSS	Stansted Airport, United Kingdom (ICAO code)
ERA	Equipment Restricted Area
F/O	First Officer
ft	Feet
h	Hours
hPa	Hectopascals
ICAO	International Civil Aviation Organization
IR	Instrumental Rating
Kg	Kilograms
Km	Kilometers
Kt	Knots
LEIB	Ibiza Airport (ICAO code)
m	Meters
METAR	Meteorological Terminal Air Report
MOC	Maintenance Operation Control
MTOW	Maximum Takeoff Weight
NOTAM	Notice to Airmen
NPA	No Parking Area
OETD	One Engine Taxi Departure

PED	Portable electronic device
PF	Pilot Flying
PM	Pilot Monitoring
QNH	Atmospheric Pressure(Q) at Nautical Height
UK	United Kingdom
UTC	Coordinated Universal Time
Z	Zulu

Synopsis

Owner and Operator:	Easy Jet
Aircraft:	Airbus A-319-111, registration G-EZGE
Date and time of incident:	19 June 2016 at 23:40 UTC
Site of incident:	Ibiza Airport (LEIB, Spain)
Persons onboard:	6 crew and 159 passengers. None injured.
Type of flight:	Commercial air transport - Scheduled – International – Passenger
Phase of flight:	Taxi – Taxi to runway
Date of approval:	27 September 2017

Summary of the incident:

On Sunday, 19 June 2016, an Airbus A-319 aircraft, registration G-EZGE, was involved in an incident as it was preparing to taxi out of parking stand 29 at the Ibiza Airport (LEIB) under its own power to commence a flight to the Stansted Airport (EGSS), United Kingdom, with 159 passengers and 6 crew onboard.

As the aircraft was making a prolonged left turn as instructed by ground personnel, the right wingtip[1] struck the boarding jetway, where it became lodged.

The aircraft's occupants were not injured and the aircraft and airport facilities sustained minor damage.

[1] A section approximately 1.5 m long at the end of the wing's leading edge.

1. FACTUAL INFORMATION

1.1. History of the flight

As the A-319 aircraft, registration G-EZGE, was taxiing out of parking stand 29 under its own power, its right wingtip struck and became lodged in the boarding jetway.

Exiting this parking stand requires the aircraft to make a sharp and constant turn to the left. In this case, the aircraft was turning with only the left engine providing thrust, as a result of which the aircraft's maneuverability was limited. The aircraft was unable to turn left at the required rate, and at one point the nose wheel was approximately 6 m to the right of the guide line marked on the ground, which caused the aircraft to strike the boarding jetway with its right wingtip.

Airport personnel stated that the aircraft was moving in gradual turns and straightening out the wheels, and that from the start it did not follow the exit line painted on the apron for this type of aircraft, and instead widened the turn to the right (see Section 1.18.1 Additional information).

The airplane ended up facing parking stand 28 and encroaching on much of the NPA[2] between the two stands, affecting the departure of an aircraft being pushed back by a tractor. The incident aircraft was subsequently towed to stand 14 to await repairs.

[2] NPA: No parking area.

Figure 1. Condition of aircraft after impact

The passengers were deplaned and one flight attendant was taken to a hospital as a precautionary measure to assess her condition after falling to the floor when the airplane struck the jetway.

Finally no occupants were injured and the aircraft and airport facilities sustained only minor damage.

1.2. Injuries to persons

Injuries	Crew	Passengers	Total in the aircraft	Others
Fatal				
Serious				
Minor				
None	2+4	159	165	
TOTAL	**2+4**	**159**	**165**	

1.3 Damage to aircraft

The aircraft's right wingtip was slightly damaged.

1.4. Other damage

There was minor damage to a telescoping passenger boarding jetway.

1.5. Personnel information

1.5.1. Information on the crew

The 59-year old captain had an airline transport pilot license (ATPL(A)) with an A320 type rating and an instrument rating (IR), all issued by the UK Civil Aviation Authority (CAA) and valid and in force until 31 January 2017. He also had a class-1 medical certificate that was valid and in force until 1 December 2017. On the date of the incident he had a total of 19000 flight hours, 7000 of them on the type, and in the previous 90 days he had flown 131 hours, 40 in the previous 30 days and 10 in the previous 48 hours.

The 32-year old first officer had an airline transport pilot license (ATPL(A)) with an A320 type rating and an instrument rating (IR), all issued by the UK Civil Aviation Authority (CAA) and valid and in force until 31 December 2016. He also had a class-1 medical certificate that was valid and in force until 22 July 2016. He had a total of 3000 flight hours, 2800 of them on the type, and in the previous 90 days he had flown 180 hours, 68 in the previous 30 days and 8 in the previous 24 hours.

1.6. Aircraft information

1.6.1. General information

The aircraft, an Airbus A-319-111, registration G-EZGE and serial number 4624, was manufactured in 2011. It is equipped with two CFM56-5B5/3 engines and has a maximum takeoff weight (MTOW) of 68000 kg.

At the time of the incident, the aircraft had 18,783 flight hours and 10174 cycles.

The aircraft had a Registration Certificate, issued on 9 March 2011, and a Certificate of Airworthiness that was valid until 8 March 2017.

Its last maintenance inspection had been on 3 May 2016, with 18259 hours and 9904 cycles on the aircraft. The inspection included several checks and tests involving the air conditioning packs, DC batteries, the cabin, slides, APU overheating and fire, cargo hold smoke detectors, hydraulic operation of the rudder, DFDR interconnecting system, gear door lubrication, components of the landing gear extension and retraction system, gravity extension of the gear and the cabin doors.

1.7. Meteorological information

According to information from Spain's National Weather Agency, the weather situation at the Ibiza Airport was good (CAVOK) with practically no wind.

The METAR reports for 23:00 UTC on 19 June and 00:00 UTC on 20 June indicated wind speeds of 0 and 3 kt, respectively, from 340° in the 00:00 report, varying between 320° and 020°. The sky was clear, visibility was good, temperature 17° C and QNH 1023 hPa.

SA19/06/2016 23:30->
METAR LEIB 192330Z 00000KT CAVOK 17/10 Q1023 NOSIG=
SA20/06/2016 00:00->
METAR LEIB 200000Z 34003KT 320V020 CAVOK 17/11 Q1023 NOSIG=

1.8. Aids to navigation

The use of navaids is not applicable to the incident.

1.9. Communications

Recordings of the communications between aircraft and air traffic control services personnel were available to investigators. The recordings describe the actions taken by the various airport services and by the operator itself, but provide no specific information on the circumstances surrounding the impact.

1.10. Aerodrome information

The Ibiza Airport (LEIB) is located 7.5 km southwest of the city at an elevation of 24 ft. It has one 2,800-m long and 45-m wide runway in a 06/24 orientation.

Parallel to the runway and west of it is the taxiway that provides access to the apron where the parking stands and docking points for the aircraft are located (see Annex I).

Parking stand 29 had been refurbished in 2012 after telescoping jetways were installed at the Ibiza Airport to serve a series of stands, including 29.

Stand 29, along with every other stand in the first row, from stand 21 to 31 (inclusive), were completely modified. In all of them, the exit is to the right, except for stand 29, which requires exiting to the left.

Stand 29, like the other stands that are connected by a jetway, can accommodate

aircraft up to B757-200, though this model has to be pushed back. The remaining models, including the A319, can taxi out under their own power, monitoring the clearance throughout the maneuver.

Then, when the A320 model with winglets was introduced, its maneuver was studied and when it was noticed that the wing entered the ERA[3], it was decided to have it pushed back (for stand 29 only). This was indicated in the AIP.

There had been no previous incidents similar to the one considered in this report. Since 2012, over 6800 aircraft have taxied out of stand 29 under their own power, including almost 900 A319's.

When operations first started at this stand under its current configuration, there were several instances in which aircraft turned in the wrong direction (they turned right, which is the correct direction at the other stands served by a jetway). Incidents of this type stopped occurring after a series of corrective measures (having the handling agent inform crews, placing a sign on the docking pole) resulting from a risk assessment were implemented.

After this incident occurred, AENA decided to require all aircraft to be pushed back out of stand 29, a temporary preventive measure that was implemented between 23 June at 14:31 and 20 September at 22:00, and reported via NOTAM. This measure was then made permanent following its publication in the October 2016 AIP.

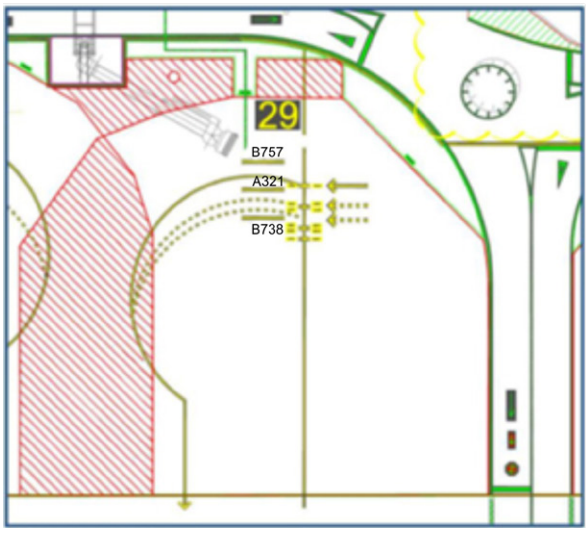
1.10.1. Departure of aircraft from stand 29

The exit is designed such that after advancing 3 meters (as painted), the aircraft starts to make a 180º turn such that the closest part of the aircraft to any object (jetway, docking system, terminal, vehicles, etc.) is at least 4.5 meters away (clearance for type-C aircraft).

The sheet for parking stand 29 shows the theoretical paths taken by the different aircraft that can park there to taxi out of the stand (tightest dashed line for the A319).

[3] ERA: Equipment restricted area. Area where the aircraft parks and is serviced by handling vehicles during a stopover. When the aircraft enters the ERA, the area must be clear of vehicles, equipment and persons, who must be a minimum of 7.5 m away from the aircraft (this distance is reduced to 4.5 m at the wingtips and nose for class-C aircraft).

SHEET FOR PARKING STAND 29



AIRCRAFTS	BOARDING JETWAY	EXIT	EMBARKING/ DISEMBARKING BY FOOT
A 319/320/321 B717 B737 SERIES E190/195 F100	A	OWN POWER	TO BE DEFINED
B757		PUSH BACK	

Figure 2. Sheet for parking stand 29

1.11. Flight recorders

N/A.

1.12. Wreckage and impact information

As a result of the impact, the aircraft's right wingtip, including the outboard slat, was damaged.

Also damaged was the end of the telescoping jetway.

Figure 3. Damage to aircraft and airport facilities

The nose gear wheels were centered.

Figure 4. Nose gear wheels centered

Figure 5. Deviation from the guide line

1.13. Medical and pathological information

N/A.

1.14. Fire

There was no fire during the incident.

1.15. Survival aspects

There was no emergency evacuation. The passengers disembarked without incident.

1.16. Tests and research

1.16.1. Statement from airline coordinator

The statement given by the company's Coordinator is provided below:

"A single engine is started and communications are established via the headset.

The captain starts the number 1 engine, which is on the side of the turn (the left).

I inform them on the headset that stand 29 has taxi out with a left turn. The captain replies he is aware of this and is keeping it in mind.

Once the engine-1 start-up is complete, we sign off on the headset and as per the AENA procedure, the blocks are removed from the airplane, which starts to taxi out with the associated guidance process.

With a thumbs up, I started signaling with the other hand to turn left, as indicated in the procedure. The captain starts to turn left very slowly at low speed. A few meters after starting the turn he stops, straightens out the wheel, moves forward and after approximately 1 meter, he tried to turn left again. As the crew confirmed, they did not have sufficient power to make the turn on a single (left) engine, so they needed to speed up a little to make the turn. Even though the aircraft had moved forward of the lines due to this maneuver to gain speed, the turn was still safe and the wingtips were within the limits.

After turning a few meters within those limits, the aircraft moved very slowly, stopped again, and turned the wheels almost in a straight line (to gain speed, according to the crew). That is when the airplane's acceleration suddenly increased, causing the airplane to leave its line. For 2-4 seconds, the airplane was moving faster than it had been before, and its right wing (no. 2 engine) ended up impacting the jetway.

I was positioned at all times in front of the cockpit, so as to be in clear view of the cockpit. I moved left in sync with the aircraft. This moved me further and further away from the jetway. When the aircraft accelerated suddenly, I looked at the crew in the cockpit, but the first officer was looking toward the wingtip. I could not see the captain as well as during the start of the turn, since I had moved along with the airplane. At that point, the wingtip impacted the jetway, with no time to react.

When I went to see the crew and I asked what had happened, they told me they did not have enough power to make the turn due to having started only one engine (the left). This, combined with the fact that the turn was to the left, meant they had to straighten out the wheels to pick up speed. It was at that point when the airplane accelerated, causing it to leave its line.

After the incident, a marshaller guided the aircraft, we put on the blocks and we started with the protocol for these situations. It was then that we noticed that the jetway had shifted a little from where it should have been, even though the wingtip was inside the red boundary that defines the security area for parking the jetway.

During the entire turn maneuver, the aircraft was inside the limits, but after the incident we noticed that the nose wheel was about 6 meters away from the A319 line, possibly due to the last speed increase."

1.16.2. Statement from the crew

The captain's statement is provided below:

"Self-manoeuvre departure Ibiza stand 29.

Single-engine taxi out procedure under ground staff Marshalling guidance.

Left turn required off stand with ground personnel and crew checking tip clearance, while turning towards live engine.

Aircraft had to be moved forward a little prior to initiating turn a number of times to manoeuvre off stand.

The starboard tip struck the jetbridge as the aircraft was being instructed to turn left under ground staff Marshalling instructions.

The ground personnel did not spot that the tip was moving out towards the jet bridge in time to signal a stop command. The tip struck the jetbridge at 1-2 kt while being instructed to turn left.

The F/O checking tip clearance during the turn stated that the tip was very close to the guidance stand just prior to impact.

The wing struck the jetbridge about 3 feet in from the tip, the jetbridge being approximately 3-4 feet beyond the red manoeuvre warning box as was confirmed later.

The aircraft engine was shutdown, ATC informed and a PA was made alerting the cabin crew to be at stations.

A PA was made to the pax requesting that they follow cabin crew instructions.

The situation was appraised and the Cabin Manager was called to the flightdeck to confirm pax and/or crew injuries and to check for damage.

The CM reported no pax injuries but did state that CCM2[4] had lost balance and fallen bruising her back but was otherwise OK.

The situation was now judged safe to stand cabin crew down to normal operations and a further PA was made to the pax stating that we would have to disembark them to buses and that alternative transport arrangements would have to be made for technical reasons.

ATC was kept informed of our situation and handlers requested to provide buses for the pax.

The flap configuration was kept at F1 in view of possible damage to the wing and slat mechanism.

Buses arrived after some time, the pax were disembarked and company contacted to advise them of the situation. Operations, Crewing and MOC[5] were all kept informed of the aircraft and crew status.

CM was consulted to check on the wellbeing of the crew and CCM2 reported that she was in some pain having bruised her back.

Paramedic assistance was requested from ATC/Handling Agents but was not available, so an ambulance was requested to take her to the local Hospital and have her checked out in case of more serious injury.

A male member of cabin crew (CCM3) accompanied her to the hospital and later on to the hotel. Subsequent X-Ray and examination revealed no serious injury.

Operations were kept informed and crewing asked to make arrangements for Hotac for the crew.

Company liaison officer also kept informed of the pax reaction which was mixed, some of the pax having taken photos on their PED's[6] .

The aircraft was inspected when crew were able to access the apron and it was found that there was damage to the tip and to the outboard slat of the starboard wing.

---

4 CCM2- Cabin Crew Member 2.

5 MOC- Maintenance Operation Control.

6 PED- Portable Electronic Device.

MOC were contacted throughout this time and kept informed having requested that Iberia engineering personnel attend to assess the damage.

Iberia were initially reluctant to 'ride the brakes' but after further phone calls with MOC the matter was resolved.

The Airport Manager was briefed on what had happened and the crew were finally able to leave the airport at about 0300z having shut off the aircraft down leaving it on ground power.

Observations

According to ground personnel the manoeuvre margins on this stand are very tight with an upslope.

Second late after extended duty for the Captain and third late duty for the F/O.

With the benefit of hindsight pushback if available would have avoided any manoeuvre problems, or if not available a 2 engine taxi out procedure would have maximised turn capability, with Marshalling personnel at the tip as well as the front of the aircraft to give good warning of any obstacles."

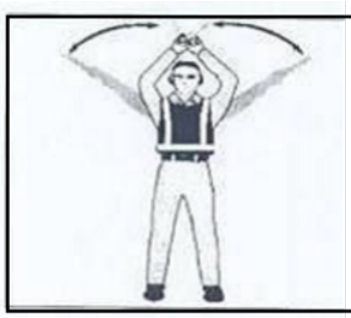
1.16.3. Statement from the COAM

The report from the COAM[7] states:

The duty COAM witnessed the maneuver from some distance away. She saw from the start that the aircraft was not taking the correct line, but rather that it was moving by making small turns and then straightening out the wheels. From the start the aircraft's turn did not follow the departure line marked on the apron for this airplane model; instead, it opened up to the right. He could also see the company's coordinator making quick gestures with her hand instructing the pilot to turn, but without giving a thumbs up. As the company coordinator later told her, the pilots were not looking at her (they were looking at the wing) and were not paying attention to her signals. The airplane ended up facing stand 28, encroaching on much of the NPA between the two stands.

According to the COAM, the signals being made by the company's coordinator may have been confusing, since they could have been interpreted to mean speed up or tighten the turn. In this situation, the emergency stop signal should have been given.

[7] COAM- Coordinador del Área de Maniobras



6 b).Emergency Stop

Extend arms abruptly with bats over head, crossing bats.

Replace signal 6

1.17. Organizational and management information

The airline's operations manuals describe various aspects involving the operation of the incident aircraft.

1.17.1. Airline Operations Manual

Section 2.3.8 Normal procedures/standard operating procedures/engine start:

ENG 1 is normally started first, the decision as to whether OETD is to be conducted can still be made after ENG 1 start. If OETD is not to be performed ENG 2 will be started immediately after ENG 1.

Section 2.4.90 Supplementary techniques/One Engine Taxi Out:

One Engine Taxi Departure Operations are a significant fuel saving method and can be exercised at the Commander's discretion, subject to the limitations (taxi surface, visibility conditions, engine conditions) and considerations:

- slope and composition of taxiway,
- taxi thrust requirements and jet blast effects,
- direction and degree of turn away after pushback and during taxi,
- any conditions that may lead to an unacceptable workload.

One Engine Taxi Out Standard Operating procedures:

... When crew are carrying out a one engine taxi departure, they should pay

particular attention to the following

... Whilst taxiing, both pilots are responsible for maintaining clearance from obstacles and other ground traffic… The PF is primarily responsible for maintaining a safe separation from obstacles, other traffic, and ensuring the correct position and routing… The PF should focus on taxiing the aircraft and the PM on monitoring the engine start.

Pilots should prioritise and adjust workloads to maximize situational awareness in high-risk areas such as terminal areas and between active runways.

1.18. Additional information

1.18.1. Aircraft's path

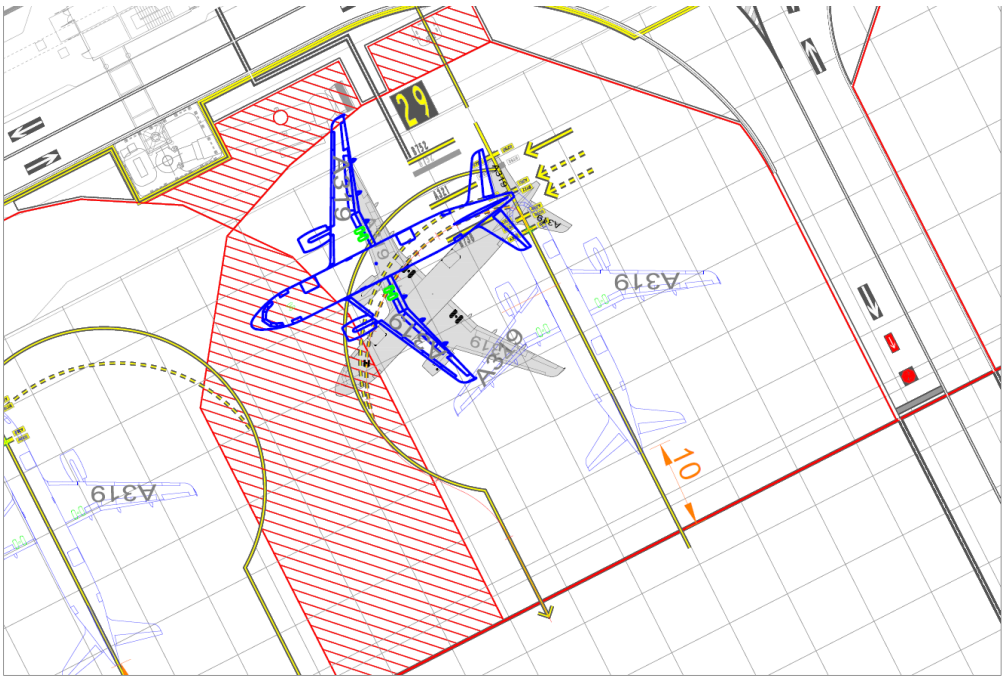


Figure 6. Comparison between theoretical and actual paths

The figure overlays the outlines of an aircraft following the theoretical path (gray) and the one actually taken by the incident aircraft (blue).

Note that in the actual departure maneuver, when the aircraft impacted the jetway, the aircraft had turned 90°, when it should have turned about 130° by that point.

Note also that the nose wheel is about 6 meters away from the path marked on the pavement for the aircraft to follow.

The aircraft departed the stand following a different path from that indicated, more to the right, which reduced the margins separating the right wingtip from the obstacles in the area.

1.18.2. AIP. Aeronautical Information Publication

The information in the AIP for the Ibiza Airport, specifically in Section 20 Local regulations / 2 Ground movements / 2.2 Apron taxi procedure / Point 2, states:

Avoiding collisions with other aircraft or obstacles is the responsibility of:

- Pilots taxiing on the apron
- Handling companies during the procedure to push back or depart the stand.

1.19. Useful or effective investigation techniques

N/A.

2. ANALYSIS

2.1. Prior maneuvers

There had been no incidents at stand 29 similar to the one described in this report, with over 6800 taxi out maneuvers from this stand since 2012, including almost 900 A319 aircraft.

2.2. Theoretical maneuver

According to the information on the data sheet for stand 29, the theoretical path that A319 aircraft should take when taxiing out of this stand is painted on the ground, and corresponds to the dashed line with the smallest turn radius.

It requires moving forward 3 meters before starting a 180° turn to the left such that no part of the airplane is within 4.5 meters (clearance for type-C aircraft) of any object (jetway, docking system, terminal, vehicles, etc.).

2.3. Actual maneuver

According to the statement from the company's coordinator, corroborated by the captain and by the COAM, the aircraft moved alternately forward and left in order to maneuver out of the stand.

According to the pilot's statement, this was done to increase speed and be able to make the continuous turn to the left that was required to taxi out of the stand, since they did not have enough thrust to continue the turn.

The coordinator also stated that once the aircraft started moving, and when she realized that the airplane was deviating from the line, she looked at the crew in the cockpit, but since the second officer was looking at the wingtip and she did not have a clear line of sight to the captain, they did not respond to her signals.

They later noted that the nose wheel was approximately 6 m away from the line for the A319.

According to the COAM's account, however, the aircraft deviated from the line painted on the apron for this aircraft model from the start, moving to the right of it. She also stated that the company's coordinator was moving her hand quickly to instruct the pilot to turn, but without giving the thumbs up signal.

The crew stated that the reason they did not have sufficient power to make the turn is that they were doing the maneuver with only one engine, which was the engine on the inside of the turn. They stated that pushing back would have avoided any problems with the maneuver and that if a tractor had been unavailable, that taxiing out with both engines would have increased their ability to turn.

The photographs sent by the company and by airport personnel show that the aircraft had diverged from the indicated path and encroached on part of the NPA between stands 28 and 29. These photographs allowed investigators to do a graphical comparison between the actual path and the theoretical path that the aircraft should have followed, which allowed them to determine that the aircraft had deviated from the theoretical path practically from the start.

2.4. Decision making

The AIP states that the responsibility for avoiding collisions with other aircraft or obstacles belongs to the pilots when taxiing on the apron and to ground handling companies during pushback or taxi-out maneuvers.

According to the company's Operations Manual, maneuvering out on a single engine can be done at the captain's discretion, subject to a series of limitations and considerations, which expressly include an assessment of the direction and magnitude of the turns after pushback while taxiing.

It also states that when a crew is taxiing out on a single engine, they must pay particular attention during taxi, and that both pilots are responsible for remaining clear of obstacles and other traffic.

2.5. Actions taken

According to information provided by AENA, and to avoid any future reoccurrence of this type of incident, AENA has taken the permanent step of requiring pushback from parking stand 29 for all aircraft.

Even though this is not regarded as the primary cause of this incident, this decision is viewed favorably.

3. CONCLUSIONS

3.1. Findings

In light of the information available and its analysis, the following conclusions are drawn:

- The aircraft's documentation was valid and in force.
- The crewmembers had valid and in force licenses, ratings and medical certificates.
- The crew were experienced on the aircraft type.
- After evaluating the operational conditions, the crew decided to taxi out on a single engine on the same side as the turn.
- The crew were unable to follow the path painted on the ground at the stand for their aircraft type.
- The aircraft stopped outside the theoretical line painted on the ground, having taken a path more to the right, such that the nose wheel was approximately 6 m away from the line.
- The crew and ground coordinator were not in constant visual contact.

3.2. Causes/Contributing factors

The incident was caused by the failure of the aircraft to follow the guide line for this aircraft to taxi out of the parking stand.

Contributing to the incident was the decision to use only one engine for the maneuver, and furthermore to use the engine on the inside of the turn. Another factor was the lack of coordination between the company's handling personnel and the crew.

4. SAFETY RECOMMENDATIONS

Since AENA has made the obligation for all aircraft to be pushed back out of stand 29 a permanent requirement, it is not deemed necessary to issue any recommendations.

5. ANNEXES

ANEXX I. Aircraft parking and docking map