



Air Accident Investigation Sector

Incident

- Summary Report -

AAIS Case N° AIFN/0010/2021

Aircraft Proximity (AIRPROX)

Operator:	Abu Dhabi Aviation
Make and Model:	Aircraft 1: Leonardo S.p.a AB139, Helicopter Aircraft 2: Military fixed-wing
Nationality and Registration:	The United Arab Emirates, A6-AWA
Place of Occurrence:	Abu Dhabi International Airport, Abu Dhabi
State of Occurrence:	The United Arab Emirates
Date of Occurrence:	5 August 2021



This Investigation was conducted by the Air Accident Investigation Sector of the United Arab Emirates pursuant to Civil Aviation Law No. 20 of 1991, in compliance with Air Accident and Incident Investigation Regulations, and in conformance with the provisions of Annex 13 to the Convention on International Civil Aviation.

This Investigation was conducted independently and without prejudice. The sole objective of the investigation is to prevent future aircraft accidents and incidents. It is not the purpose of this activity to apportion blame or liability.

The Air Accident Investigation Sector issued this Summary Report in accordance with national and international standards and best practice. Consultation with applicable stakeholders, and consideration of their comments, took place prior to the publication of this Report.

The Summary Report is publicly available at:

<https://www.gcaa.gov.ae/en/departments/airaccidentinvestigation/Pages/InvestigationReports.aspx>

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Investigation Process

The occurrence involved an Agusta AB139 helicopter, registration marks A6-AWA, owned by Abu Dhabi Aviation. The occurrence was reported to the Air Accident Investigation Sector (AAIS) Duty Investigator by phone call to the Hotline Number +971 50 641 4667.

Based on the *Civil Aviation Regulations (CAR)* of the United Arab Emirates, Part VIII, Subpart 4, Attachment A to Appendix 4; ICAO Document 4444; and the analysis of the occurrence sequence of events, the Investigation classified the proximity as 'Safety not assured', accordingly the Investigation classified the occurrence as 'Incident'.

The scope of this Investigation is limited to the events leading up to the occurrence and no in-depth analysis of non-contributing factors was undertaken.

Notes:

1. Whenever the following words are mentioned in this Report with the first capital letter, they shall mean the following:
 - (Commander) – the commander of the incident flight
 - (Copilot) – the copilot of the incident flight
 - (Helicopter) – the helicopter with callsign A6AWA involved in this incident
 - (Incident) – this investigated incident
 - (Investigation) – the investigation into this incident
 - (Operator) – Abu Dhabi Aviation
 - (Report) – this incident investigation Summary Report.
2. Unless otherwise mentioned, all times in this Report are given in 24-hour clock in

Coordinated Universal Time (UTC), (UAE local time minus 4).

3. The structure of this Summary Report is an adaptation of the ICAO Annex 13 Final Report format.

Factual Information

History of the Flight

On 5 August 2021, at 0342 UTC (0742 local time), an Agusta AB139 Helicopter, registration marks A6-AWA, owned by Abu Dhabi Aviation, was ready to depart for visual flight rules (VFR) revenue flight under call sign A6AWA, from Abu Dhabi International Airport (OMAA¹) to NASR offshore oil complex, the United Arab Emirates. There were seven persons on board, comprising five passengers and two flight crewmembers.

The Commander was the pilot flying (PF) and the Copilot was the pilot monitoring (PM).

The Helicopter was instructed by OMAA Tower South Control to line up and wait for take-off clearance on FATO 13². Shortly after the Tower instructions, a military fixed-wing aircraft was given a take-off clearance from runway 13 right (13R).

At 0343:15, the military aircraft lifted off, and almost at the same time, the Helicopter took off from FATO 13 with a parallel track.

At 0343:38, the Helicopter commenced a left turn after take-off and later on crossed in front of the military aircraft that was on upwind runway 13R.

Thereafter, the military aircraft pilot reported the occurrence to Approach (Radar Central) Control, then continued climbing normally and no other traffic was affected.

Personnel Information

The Commander held an air transport pilot license (ATPL) issued by the General Civil Aviation Authority of the United Arab Emirates (GCAA), which was valid until 3 April 2027. The medical certificate was issued on 10 September 2020 and was valid until 30 September 2021. As a condition of his medical certificate, the

¹ OMAA is the ICAO four letter airport code for Abu Dhabi International Airport, United Arab Emirates

² FATO is the runway used for helicopters operations and is located on taxiway Foxtrot between Echo 15 and 14, also known as taxiway Foxtrot 13/31.

Commander was required to use prescription glasses that correct for defective near vision.

The Copilot held an ATPL issued by the GCAA with validity until 4 February 2028. His medical certificate was issued on 17 December 2020 and was valid until 15 January 2022. As a condition of his medical certificate, the Copilot was required to use prescription glasses that correct for defective distant, intermediate, and near vision.

Based on the training records, both flight crewmembers attended the Operator's required training.

Both flight crewmembers stated that they were well rested and fit for the flight.

The Tower South controller held an air traffic control (ATC) License, issued by the GCAA with validity until 31 October 2021. His medical certificate was valid until 2 November 2022.

Aircraft Information

The Agusta AB139 is a twin-engine helicopter and is fitted with a five-blade main rotor and a four-blade tail rotor. It was designed to be operated by two flight crewmembers and enable single-pilot operations under instrument flight rule (IFR) conditions.

The Incident Helicopter was manufactured in 2006 under manufacturer serial number 31044 and delivered to the Operator on 1 July 2006. It was fitted with two Pratt & Whitney Canada PT6C-67C turbine engines.

The technical logbook provided to the Investigation showed no technical defects prior to the Incident, and there were no pending or fault maintenance messages reported post-completion of the flight.

No technical anomaly was reported by the Commander before and during the flight.

Meteorological Information

The meteorological conditions of OMAA provided to the Investigation around the time of the Incident were as illustrated in table 1.

Table 1. OMAA Meteorological Conditions	
Time	0340 UTC (0740 LT)
Wind	200 degrees / 2 knots
Visibility	7 kilometers
Clouds	CAVOK
Air temperature	33 degrees Celsius

Dew point	26 degrees Celsius
Pressure (altimeter)	999 Hectopascal

Aerodrome Information

OMAA is located 16.5 kilometers east of Abu Dhabi city. The airport elevation is 83 feet.

OMAA is equipped with two asphalt runways: 13R/31L and 13L/31R. The distance between both runways' centerlines is 2,000 meters.

The FATO is the runway used for helicopter operations and is located on taxiway Foxtrot between Echo 15 and 14, also known as taxiway Foxtrot 13/31. It is offset and parallel with runway 13R/31L, by approximately 460 meters (figure 1). It is restricted to daytime operations only.

The length of FATO is 300 meters. Parallel operations from FATO and the south runway (runway 13R/31L) are allowed if traffic information has been passed to both aircraft.

FATO is located about 2,500 meters south-southeast (SSE) of the Tower Control building.

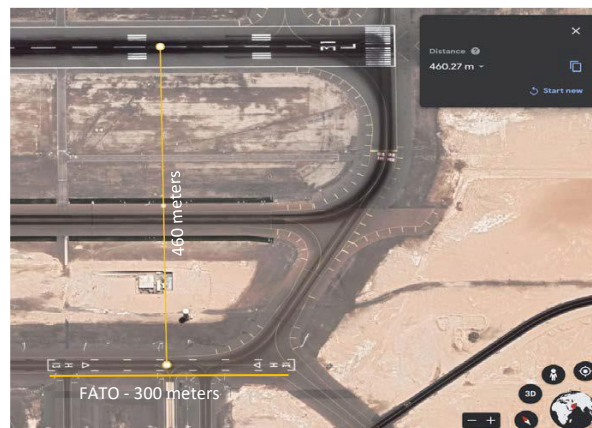


Figure 1. FATO, the runway used for helicopters operations

Flight Recorders Information

The Helicopter was equipped with a multi-purpose flight recorder (MPFR) which was an integrated solid-state digital cockpit voice recorder (CVR) combined with a flight data recorder (FDR), manufactured by Penny & Giles Aerospace Ltd. At the time the Investigation was instituted, the flight and voice data had been overwritten.

However, the recordings of ATC communication and aircraft movement were available to the Investigation.

Based on the data, the Helicopter was at Abu Dhabi Aviation (ADA) parking stand at 0339:51,



while another helicopter with a call sign A6AWV was at F13/F31 about south of taxiway Foxtrot 4.

At 0340:26, the Tower South controller provided instructions, on 119.200 MHz frequency, to A6AWV to continue on the downwind and cleared to cross west of runway 13R threshold, continue outbound for VFR route AA1³, and cross runway 13L. At this time, the Helicopter just commenced taxiing towards FATO 13. The taxi clearance to the Helicopter was provided by ADA Operations, and Ground Movement Control did not provide any additional instruction.

At 0341:26, the controller contacted A6AWV to correct its tracking towards the centerline of runway 13R. The controller then instructed to turn left to continue on the downwind in order to avoid wake turbulence from a previously departed traffic, a Boeing B787 aircraft. The A6AWV flight crew replied that they would continue to the west of the threshold runway 13R. The communication ended at 0341:54

At 0341:55, the Helicopter flight crew contacted Tower South Control for the first time and informed that the Helicopter was approaching FATO 13 to hold. The Helicopter was taxiing out via taxiway Foxtrot 3. The controller then instructed the flight crew to line up and wait on FATO 13, and the flight crew read back the instructions correctly.

At 0342:20, the controller provided take-off clearance to the military aircraft and informed that the wind was calm. The military aircraft pilot read back correctly.

At 0342:27, the controller issued a departure clearance to A6AWV to cross both runway 13R and 13L, and to continue outbound for AA1. At this time, A6AWV was at the north of the military aircraft and approximately abeam with. The flight crew of A6AWV read back correctly and informed the controller that the military aircraft traffic was in sight and they were continuing the outbound for AA1 departure.

When the A6AWV flight crew replied to the clearance for AA1 departure, the communication

was heard over-transmitted and garbled, but still understandable.

At 0342:52, a ground vehicle, with a call sign Leader 5, contacted Tower South Control and the controller replied to standby.

At 0343:12, the Helicopter initiated take-off roll from FATO 13, while the military aircraft was rolling on runway 13R starting from intersection Delta 4.

At 0343:14, the controller contacted Leader 5 to pass the message. Leader 5 requested to proceed to taxiways Charlie and Delta with another vehicle, which was then approved by the controller. The communications went along until 0343:34. Within this period, the controller simultaneously initiated the creation of a strip for Leader 5 on his electronic flight strips (EFS).

At 0343:15, both the Helicopter (from FATO) and the military aircraft (from runway 13R) became airborne on parallel tracks.

At 0343:33, the Helicopter was outside the coverage area of the surface movement guidance and control system as provided by the controller's Tower Pad (T-PAD). The secondary window in the T-PAD, covering a wider area, was cluttered with the target of A6AWV indicating runway incursion ("RWY INCURSION") alarm generated as a result of overflying the north runway (runway 13L/31R) while there was a presence of the vehicle on runway 13L.

At 0343:38, while about to level off on a 130-degree heading, the Helicopter started a left turn from upwind in a direction of AA1, which means that it would intersect the flight path of the military aircraft. At this point, based on the radar data, the altitude indicated 800 feet for both aircraft while the military aircraft was climbing and the horizontal distance between both aircraft was about 1.2 nautical miles.⁴

At 0343:42, the Helicopter was continuing the left turn and crossed in front of the military aircraft. At this point, the altitude of the military aircraft was indicated as 900 feet while 800 feet for the Helicopter. The military aircraft was climbing, while

³ AA1 is a route identification for VFR enroute within Abu Dhabi control area (CTA). AA1 has four visual reporting points (VRP), which are REN, SHE, WRA, and AFN.

⁴ There were two radar screenshots available, namely Raw Radar system and Eurocat-X system. However, Raw Radar

system was used for determining aircraft altitude and the distance between two aircrafts, since Eurocat-X system was not able to provide distance measurement due to the Eurocat-X range bearing line (RBL) was not connected.



the Helicopter was levelling off. The horizontal distance between both aircraft was 1.07 nautical miles.

At 0343:45, the military aircraft contacted Radar Central Control on frequency 124.400 MHz, and the controller instructed the pilot to climb to 3,000 feet. The military aircraft pilot did not read back the instruction.

At 0343:49, the Helicopter crossed the extended centreline of runway 13R in front of the military aircraft while continuing the left turn. At this point, the altitude of the military aircraft was 1,000 feet, and 800 feet of the Helicopter. The horizontal distance between both aircraft was 0.74 nautical miles.

About six seconds later, the Helicopter was continuing the left turn and had crossed in front of the military aircraft proceeding in a northerly direction left of the military aircraft's flight path. At this point, the altitude of the military aircraft was 1,100 feet, and 900 feet for the Helicopter. The horizontal distance between both aircraft was 0.59 nautical miles.

At 0343:58, the Radar Central controller repeated the instruction to the military aircraft to climb to 3,000 feet, and the pilot read back correctly and informed that the Helicopter had just crossed in front of them. This surprised the Radar controller as he asked "In front of you?" to the military aircraft flight crew.

At 0344:05, the Helicopter crossed the left of the military aircraft proceeding direction north routing to AA1. At this point, the altitude of the military aircraft was 1,300 feet in a climb, and 900 feet of the Helicopter while maintaining level. The horizontal distance between both aircraft was 0.62 nautical miles.

At 0344:24, the Radar Central controller contacted Tower South controller through the landline and asked whether Tower was aware that the military aircraft pilot had advised Radar that he witnessed the Helicopter had crossed in front of him. Tower South controller informed the Radar Central controller that the Helicopter had not yet been given a take-off clearance. The Radar Central controller then informed the military aircraft pilot that the Helicopter was not supposed to take off.

At 0344:50, the Tower South controller asked the Helicopter flight crew for confirmation whether he had provided a take-off clearance to them or not, and the flight crew replied affirmatively. Thereafter, the controller instructed the flight crew

to contact INFO on 127.5 MHz, which was then read back by the flight crew correctly.

Organizational and Management Information

The Operator

The Operator was granted air operator certificate (AOC) issued by the GCAA and commenced operations in March 1976.

The Operator provides aviation offshore oil support and other services worldwide and in particular for the oil and gas production companies in Abu Dhabi. The Operator's fleet comprised 58 aircraft, including 51 helicopters and 7 fixed-wing aircraft.

The Operator's *Operations Manual - Part A*, provides information on the specific commander's responsibilities, and one of them is the following:

"The Commander must ensure that a continuous listening watch is maintained on the appropriate radio communication frequencies at all times whenever the flight crew is manning the aircraft for the purpose of commencing and/or conducting a flight and when taxiing."

The air navigation service provider

Global Air Navigation Services (GANS) was contracted by Abu Dhabi Airports Company (ADAC) to provide air navigation services (ANS) for Abu Dhabi Airports and operates under the ADAC ANS Certificate as a service provider.

GANS also holds on its own certificate as an approved ANS provider. The ANS certificate was issued by the GCAA for the provision of approach and tower air traffic services in the UAE.

Analysis

General

Both Helicopter flight crewmembers were qualified and current for the flight, as well as the involved controller for managing the Tower South Control, as per the regulatory requirements.

There were no defects reported by the flight crew related to the serviceability of the Helicopter's onboard navigation system. In addition, the Helicopter records indicated that it was airworthy when dispatched for the flight.

The environmental conditions were also normal and not contributory to the Incident.



Take-off without Clearance

At 0341:55, the Helicopter flight crew contacted OMAA Tower South Control for the first time informing the Helicopter was approaching FATO 13 to hold.

Prior to this time, Tower South controller had already cleared another helicopter with a callsign A6AWV to depart with a right turn from FATO (F13/F31) to position on the downwind, cross west of the threshold runway 13R, continue outbound for AA1, and cross runway 13L. Thereafter, the controller provided clearance to line up and wait on runway 13R for a military aircraft. The Helicopter flight crew had not yet switched the frequency of their VHF communication to Tower South Control (119.200 MHz). Hence, when the flight crew changed their frequency to Tower South Control, they had no clue that the other helicopter with callsign A6AWV was commencing departure from the west of runway 13R and the military aircraft was lining up on runway 13R as cleared by the controller.

After the Helicopter flight crew first contacted Tower South Control, the controller instructed them to line up and wait on FATO 13, which was then correctly read back.

Shortly thereafter, the controller provided take-off clearance to the military aircraft, which was correctly read back by the pilot. However, both Helicopter flight crew stated that they did not know that the military aircraft took off from runway 13R. This revealed that the Helicopter flight crew missed or did not observe the take-off clearance given to the military aircraft. Since the CVR data was not available, the Investigation could not determine why the Helicopter flight crew overlooked the take-off clearance for the military aircraft.

Tower South controller then issued a clearance to A6AWV to cross both runway 13R and 13L, and to continue outbound for AA1, which was correctly read back. This departure clearance was a repetition since the A6AWV flight crew did not adhere to ATCO's previous instruction to cross west of threshold runway 13R prior to crossing runway 13L for AA1 departure (incorrect tracking).

Based on ATC recordings, when the A6AWV flight crew replied to the controller's clearance for AA1 departure, the communication was heard over-transmitted and garbled, but still understandable.

There was more than one recorder available that recorded the air traffic control communication. At the time of the Incident, the A6AWV flight crew

read-back was heard on Tower South frequency (119.200 MHz) that was recorded on a recorder, called REC1.

Another recorder, called REC2, also recorded transmissions on 119.200 MHz. When replaying REC2 at various replay speeds, the Investigation could identify the occurrence of the double transmission. This revealed the garbled transmission, which also contained noise indicating double transmission.

On REC1, it was very hard to distinguish (difficult to confirm) the double transmission. Due to the fact that only the providing A6AWV flight crew' read-back was heard, as recorded on REC1, the Tower South controller was not in a position to discern the double transmission.

The Helicopter Commander stated that he read back the controller's clearance for AA1 departure. However, as revealed, the take-off clearance was given for A6AWV and not for A6AWA (the Incident Helicopter).

The double transmission identified on REC2 did not allow the capture of the complete read-back of the Helicopter Commander. Despite his statement, the lack of CVR recordings did not enable the Investigation to confirm whether the Helicopter Commander read back the clearance or not. However, based on the Commander's statement, the Investigation believes that the Helicopter flight crew may have mistakenly read back the clearance that was originally given to another helicopter. Accordingly, they perceived it as a clearance to depart, cross both runways and join route AA1.

After Tower South controller was contacted by Radar Central controller to inform about the Helicopter crossing in front of the military aircraft, Tower South controller queried the Helicopter flight crew for confirmation whether they had been issued a take-off clearance by him or not, and the flight crew replied affirmatively. This surprised the Tower South controller, however, he did not continue questioning the flight crew of the Helicopter.

The registration marks of most Operator's helicopters are identical for the first five characters (alphabets, numerical, and dash) and the only character that differentiates an aircraft from another is the last alphabetical character. The Operator designated the registration marks (without the dash) as a callsign for operations in OMAA. Based on that policy, the Helicopter which has registration marks A6-AWA uses alpha six alpha whisky alpha (A6AWA) as a callsign.



The Investigation believes that the Helicopter flight crew were in expectation bias⁵ condition since they were waiting and expecting to receive their departure clearance.

The helicopters with callsigns A6AWV and A6AWA were in sequence for departure with other Operator's helicopters with slightly-differentiated callsigns, and all were in line for departure clearances starting from FATO13 before departure clearance was given to A6AWV. When A6AWV was given the departure (last) clearance at its turn in the line, the order of clearance did not yet reach the Helicopter. The Investigation believes that the Helicopter's crew mistakenly perceived departure clearance due to the call sign similarity. This contributed to the crew's expectation bias.

Controllers

The Tower Control building is located in the middle of the airfield. Air traffic controllers were able to scan visually the airfield (both runways) including FATO. In this case, the Tower South controller was able to visually scan the traffic movements mainly on the south runway (runway 13R/31L).

Tower South controller stated that there were several tasks taking place at the time of the occurrence. After providing take-off clearance to the military aircraft and issuing the departure clearance to A6AWV, which were as per *OMAA Air Traffic Services Operating Manual (ATSOM)* for helicopter operations, he then contacted his supervisor reporting issues he experienced with A6AWV of non-adherence with his instructions. The conversation lasted for about 20 seconds. Around the same time, A6AWV correctly read back the given take-off clearance while the controller sighted that the military aircraft was rolling for take-off.

When he was talking to his supervisor, a ground vehicle with a callsign Leader 5 contacted Tower South Control, and the controller gave instructions to standby. At the same time, he was visually following the movement of the A6AWV to ensure it is crossing the runways safely. His visual scanning was focused from the west moving to the north simultaneous with the conversation with his

supervisor. His pattern of visual scan and the conversation with the supervisor prevented him from observing that the Helicopter had taken off from the other side of his scanning direction.

The Investigation believes that the Tower South controller did not expect the departure of the Helicopter since take-off clearance had not yet been given by him. The workload of the controller at this time was relatively high, bearing in mind that he had to manage the priorities of the tasks and activities in which he was involved. Additionally, the non-adherence of A6AWV with the controller's instructions distracted his attention in the vicinity by focusing on preventing this helicopter from crossing runway 13R while involved in a conversation with his supervisor concerning the helicopter's incorrect tracking.

During this time, the Tower South controller moved to the next tasks: Generating a strip for the Leader 5 ground operations vehicle; and attending to the runway incursion alarm that was triggered as a result of A6AWV flying the north runway (runway 13L/31R) while the vehicle was on the same runway. Collectively, the multi-tasks degraded the situation awareness of the controller preventing him from addressing the Helicopter take-off without clearance.

When the military aircraft pilot made his first contact with Radar Central Control after the communication with Tower South Control, both pilots probably had not yet realized that the Helicopter was flying in a direction that would have later crossed in front of the military aircraft.

Radar Central controller instructed the military aircraft flight crew to climb to 3,000 feet, but the pilot did not read back the instruction. It is most probable that the pilot did not read back because he was fixated on watching the out-of-order crossing of the helicopter.

The lack of military aircraft read back required the Radar Central controller to repeat the instruction to climb to 3,000 which was read back correctly. At this time of call, the pilot informed the Radar Central controller about his sight of the helicopter crossing in front of him. The Radar Central controller conveyed this concern to the Tower South controller who confirmed the

⁵ Expectation bias: A psychological concept associated with perception and decision making that can allow a

mistaken assessment to persist." (Bhattacharjee 2001). [Source Skybrary]



Helicopter was not supposed to take off since it was not given a departure clearance.

Aircraft Proximity (AIRPROX)

As per the data of the Raw Radar system, at the point when the Helicopter started to turn left while taking off, it reached the same altitude of (800 feet) as the military aircraft. However, the Helicopter was about to level off at 800 feet altitude and almost remained level until its position was on the left of the military aircraft after crossing in front of the military aircraft. The military aircraft was climbing at that time at a rate between 860 and 1,500 feet per minute.

Based on the data of the Raw Radar system and a simulation conducted by GANS and the Investigation, the closest point of approach (CPA) between both aircraft was about 1.07 nautical miles horizontally and 100 feet vertically.

Conclusions

From the evidence available, the following findings, causes, and contributing factors were made with respect to this Incident. These shall not be read as apportioning blame or liability to any particular organization or individual.

Findings

- (a) The Helicopter was certificated, equipped, and maintained in accordance with the requirements of the *Civil Aviation Regulations* of the United Arab Emirates.
- (b) The Helicopter was airworthy when dispatched for the flight, and there was no defect or malfunction detected that could have contributed to the Incident.
- (c) Both Helicopter flight crewmembers were licensed and qualified for the flight in accordance with the requirements of the *Civil Aviation Regulations* of the United Arab Emirates.
- (d) The involved Tower South controller was licensed and qualified for managing the Tower Control in accordance with the requirements of the *Civil Aviation Regulations* of the United Arab Emirates.
- (e) Both flight crewmembers were well-rested and fit for the flight.
- (f) The Commander was the pilot flying (PF) and the Copilot was the pilot monitoring (PM).

- (g) The weather condition was not a contributing factor to the Incident, and the flight was day-flight.
- (h) The Helicopter took off without Tower Control take-off clearance.
- (i) The flight crew mistakenly perceived that a take-off clearance was given to them whereas it was issued for another helicopter operated by the same Operator. The similarity of callsigns between both helicopters was most probably the reason for that confusion.
- (j) When the Helicopter commenced the take-off, the Tower South controller was exercising multi-tasks which degraded his situation awareness regarding the Helicopter since he did not expect its take-off, and this resulted in preventing him from addressing the Helicopter take-off without clearance.

Causes

The Air Accident Investigation Sector determines the following causes to the aircraft proximity (airprox) Incident:

- (a) The take-off of the Helicopter without clearance led to interference with the climb path of a military aircraft.
- (b) The Helicopter's flight crew's expectation bias led them to perceive that the take-off clearance that was issued to another helicopter was theirs.

Contributing Factors

The Air Accident Investigation Sector identifies the following contributing factors:

- (a) The Helicopter flight crew were unaware of the other helicopter commencing its departure through the west of runway 13R and the military aircraft line-up on runway 13R as instructed by Tower South controller since the Helicopter was not yet on Tower South Control frequency when the clearances were provided.
- (b) The similarity of callsigns used for the Operator's helicopter fleet has most probably caused confusion and added to the flight crew expectation bias.
- (c) The Helicopter flight crew were unaware that the military aircraft took off from runway 13R, which revealed that they missed or did not observe the take-off clearance given to the military aircraft while the Helicopter was already on Tower South Control frequency.



Actions Taken

GANS in collaboration with ADA undertook the following measures following the Incident:

- (a) GANS Operations Management participated in the meetings organized by a project team where the FATO relocation project was discussed.
- (b) GANS Operations Management, in cooperation with Safety Department, organized two meetings with the ADA Operations Management. During these meetings, options were discussed on how to reduce the likelihood of a similar occurrence. The ADA Operations Management agreed to study options on implementing specific callsigns for each helicopter instead of using the registration marks as a callsign, which would reduce the risk of callsign confusion.

Safety Recommendations

The Air Accident Investigation Sector recommends that:

Abu Dhabi Aviation

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The Helicopter flight crewmembers missed the communications between the Tower and the other helicopter and military aircraft due to the radio frequency had not yet been switched to the frequency of Tower South Control. After switching to Tower South Control, the take-off clearance issued to the military aircraft went unnoticed by the Helicopter flight crew.

In addition, the flight crew mistakenly perceived the departure clearance given to the other helicopter as theirs and commenced the take-off based on that wrong expectation bias. Attention to detail is important, especially in the critical phases of the flight.

The Investigation recommends that Abu Dhabi Aviation reinforces among the pilots a policy concerning their vigilance to ATC communication, especially for instructions and clearances.

SR04/2022

The similarity of the callsigns among the operational helicopter was a factor that added to the confusion and the flight crew's expectation bias. The only key differentiating factor remains with the last character of the callsign. That makes errors in callsigns communications more probable.

The Investigation recommends that Abu Dhabi Aviation carry out risk assessment of using the registration marks as a callsign and take the necessary mitigation measures.

**This Summary Report is issued by the:
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