Air Accident Investigation Sector

Serious Incident

- Preliminary Report -

AAIS Case No: AIFN/0007/2017

Aircraft Vectored below Minimum Safe Altitude

Operator: Royal New Zealand Air Force
Make and Model: Lockheed C-130
Nationality and Identification: New Zealand, NZ7003
Place of Occurrence: Approximately 10NM west of Al Minhad Airport
State of Occurrence: The United Arab Emirates
Date of Occurrence: 14 June 2017
Occurrence Brief

Occurrence Reference : AIFN/0007/2017
Occurrence Category : Serious Incident
Name of the Operator : New Zealand Air Force
Manufacturer : Lockheed Corporation
Aircraft Model : C-130
Engines : Four Allison T56-A-15 Turboprop
Nationality : New Zealand
Identification : NZ7003
Type of Flight : Military
State of Occurrence : The United Arab Emirates
Place of Occurrence : Approximately 10NM west of Al Minhad Airport
Date and Time : 14 June 2017, 0330 UTC
Injuries to Passengers and Crew : None

Investigation Objective

This Investigation is performed pursuant to the United Arab Emirates (UAE) Federal Act No. 20 of 1991, promulgating the Civil Aviation Law, Chapter VII-Aircraft Accidents, Article 48. It is in compliance with CAR Part VI Chapter 3, and in conformity with Annex 13 to the Convention on International Civil Aviation.

The sole objective of this Investigation is to prevent aircraft accidents and incidents. It is not the purpose of this activity to apportion blame or liability.

This Preliminary Report is adapted from the Final Report format contained in Annex 13 to serve the purpose of this Investigation. The information contained in this Report is derived from the data collected during the ongoing investigation of the Incident.

Later Interim Reports or the Final Report may contain altered information when new evidence becomes available during the investigation.

Investigation Process

The Air Accident Investigation Sector (AAIS) of the United Arab Emirates was notified about the Incident on 14 June 2017. The Occurrence was reported by Dubai air traffic control via the Report of Safety Incident (ROSI) software on the GCAA website.

The occurrence was classified as a Serious Incident and the AAIS assigned an Accident Investigation File Number AIFN/0007/2017 for the case.
The AAIS formed the Investigation team led by the investigator-in-charge (IIC) and members from the AAIS for different investigation areas. The Transport Accident Investigation Commission (TAIC) of New Zealand, being the State of the Registration of the Aircraft were notified of the Incident. The AAIS is leading the Investigation and will issue the Final Report.

This Preliminary Report is publicly available at:

Notes:
1. Whenever the following words are mentioned in this Report with first capital letter, they shall mean the following:
   - (Aircraft)- the aircraft involved in this serious incident
   - (Commander)- the Commander of this incident flight
   - (Copilot)- the Copilot of this incident flight
   - (Investigation)- the investigation into the circumstances of this serious incident
   - (Incident)- this investigated serious incident
   - (Report)- this Preliminary Report.
2. Unless otherwise mentioned, all times in this Report are UTC time. Local time of the United Arab Emirates is UTC plus 4 hours.
# Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>AAIS</td>
<td>The Air Accident Investigation Sector of the UAE</td>
</tr>
<tr>
<td>ATC</td>
<td>Air traffic control</td>
</tr>
<tr>
<td>ATCO</td>
<td>Air traffic control officer</td>
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<tr>
<td>GCAA</td>
<td>The General Civil Aviation Authority of the UAE</td>
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<tr>
<td>ICAO</td>
<td>International Civil Aviation Organization</td>
</tr>
<tr>
<td>IIC</td>
<td>Investigator-in-charge</td>
</tr>
<tr>
<td>ILS</td>
<td>Instrument landing system</td>
</tr>
<tr>
<td>kts</td>
<td>Knots (air/wind speed)</td>
</tr>
<tr>
<td>METAR</td>
<td>Meteorological terminal air report</td>
</tr>
<tr>
<td>MSA</td>
<td>Minimum safe altitude</td>
</tr>
<tr>
<td>NM</td>
<td>Nautical miles</td>
</tr>
<tr>
<td>OMDM</td>
<td>Al Minhad Airport</td>
</tr>
<tr>
<td>RMA</td>
<td>Radar minimum sectoring altitude</td>
</tr>
<tr>
<td>TAIC</td>
<td>The Transport Accident Investigation Commission of New Zealand</td>
</tr>
<tr>
<td>UAE</td>
<td>The United Arab Emirates</td>
</tr>
<tr>
<td>UTC</td>
<td>Coordinated universal time</td>
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1. **Factual Information**

1.1 **History of the Flight**

On 14 June 2017, a Royal New Zealand Air Force Lockheed C-130 military aircraft, identification mark NZ7003, departed Baghdad International Airport (ORBI), Iraq, for Al Minhad Airport (OMDM), the United Arab Emirates.

The Aircraft was one of three in the hold which were awaiting clearance to commence the approach to runway 09 due to fog and low visibility at OMDM. When the weather improved, the C130 was vectored for an ILS approach to runway 09 as the second aircraft in sequence.

The Aircraft was under the control of Al Maktoum Radar when the Air Traffic Control Officer (ATCO) instructed the Aircraft to descend to 3,000 feet, followed by a clearance to descend to 2,000 feet. When the Aircraft was subsequently vectored to a heading of 030 it had just cleared a sector with a radar minimum sector altitude (RMA) of 2,000 feet.

After turning to heading 030, the Aircraft entered a sector with an RMA of 2,800 feet to capture the ILS for runway 09 as instructed. Entering this sector triggered a brief automatic minimum safe altitude warning on the ATC monitor.

Another brief automatic LOW warning was triggered prior to becoming established on the ILS localizer for runway 09.

The Aircraft landed safely without further incident.

1.2 **Injuries to Persons**

There were no injuries to persons as a result of this occurrence.

1.3 **Damage to Aircraft**

The Aircraft was undamaged.

1.4 **Other Damage**

No other damage was reported.

1.5 **Personnel Information**

Detailed personnel information and competences of the flight crew, air traffic controllers, and other relevant personnel will be included in the Final Report.

1.6 **Aircraft Information**

Aircraft and engine information will be included in the Final Report. Relevant Aircraft systems will be examined during the course of the Investigation.

1.6 **Meteorological Information**

At the time of the Incident, the wind at OMDM was 4 kts from 170 degrees, with fog and a reported cloud base of 200 feet. The visibility at runway 09 had gradually improved from 275 meters at 0230 UTC to 800 meters at 0330 UTC. The temperature and dew point were 27°C.

The National Center of Meteorology & Seismology supplied the following weather information (METAR) for the day of the Incident.

OMDM 140230Z AUTO 15004KT 0050NDV R09/0275N R27/0200N FG VV000
26/26 Q0999=

OMDM 140243Z AUTO 14005KT 0150NDV R09/0400N R27/0300N FG VV000
Aids to Navigation
The aids to navigation will be examined during the Investigation.

Communications
Communications between air traffic control and the flight crew will be considered as part of the Investigation.

Aerodrome Information
OMDM is a military airport with an elevation of 165 ft. It is located approximately 25 kilometers south-east of the city of Dubai, the United Arab Emirates. The airport has one asphalt runway, 09/27, 3953 meters long and 45 meters wide.

The airport coordinates are 25° 01’ 36.55” North and 055° 21’ 58.48” East.

Air traffic control policy and procedures will be discussed in the Final Report.

Flight Recorders
To be discussed in the Final Report.

The Wreckage and Impact Information
As stated in subsection 1.3, the Aircraft was undamaged.

Medical and Pathological Information
Post-incident blood tests were not conducted.

Fire
This section is not relevant for this investigation.

Survival Aspects
This section is not relevant for this investigation.

Tests and Research
To be discussed in the Final Report.

Organizational and Management Information
To be discussed in the Final Report.

Additional Information
At the time of writing the Preliminary Report, there was no other factual information available that was relevant to the circumstances leading up to the Incident.
2. **Ongoing Investigation Activities**

The Investigation is ongoing and will include further examination and analysis of:
- Air traffic control equipment and systems
- Air traffic control policy, procedure, management, and organization
- Any other safety aspects that may arise during the course of this Investigation.

The Investigation will carry out in-depth analysis of:
- Contextual factors
- Human factors
- Organizational factors.

3. **Safety Concerns and Actions**

No safety concerns or actions have been issued at this stage of the Investigation. During the course of the Investigation, any immediate safety concerns that arise will be promulgated as prompt safety recommendations.

This Report is issued by:

**The Air Accident Investigation Sector**  
**General Civil Aviation Authority**  
**The United Arab Emirates**

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