

ICAO HELIPORT SEMINAR

Lessons learned from accident investigation

Dubai 9 December 2015

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Chief Air Accident Investigator
GCAA

الهيئة العامة للطيران المدني
GENERAL CIVIL AVIATION AUTHORITY



AIR ACCIDENT INVESTIGATION SECTOR



United Arab Emirates

AIR ACCIDENT INVESTIGATION SECTOR

OVERVIEW

ACCIDENT INVESTIGATION (AAIS)

LESSONS LEARNED FROM OTHERS

LESSONS LEARNED FROM UAE

IMPROVEMENT AREAS



AIR ACCIDENT INVESTIGATION SECTOR

INVESTIGATES ALL ACCIDENTS IN THE UAE

PARTICIPATES IN INVESTIGATIONS ABROAD

ISSUES REPORTS & SAFETY STUDIES

SAFETY RECOMMENDATIONS

الهيئة العامة للطيران المدني
GENERAL CIVIL AVIATION AUTHORITY



UNITED ARAB EMIRATES GENERAL CIVIL AVIATION AUTHORITY



- ABOUT GCAA
- SECTORS / DEPARTMENTS
- E-SERVICES
- E-PARTICIPATION
- OPEN DATA
- DOWNLOADS
- LAWS
- QUICK LINKS
- TOP REQUESTS

SUPPORT SERVICES

FINANCE, PROCUREMENT AND ADMINISTRATION | HUMAN CAPITAL | INFORMATION TECHNOLOGY | LEGAL

AVIATION SECURITY AFFAIRS

POLICY, REGULATION AND PLANNING | OVERSIGHT AND INSPECTIONS | INTELLIGENCE AND THREAT ASSESSMENT

AIR NAVIGATION SERVICES

FIR AIR TRAFFIC MOVEMENT | Air Traffic Management (ATM) | Communication, Navigation & Surveillance Systems (CNSS) | Aeronautical Information Management (AIM) | Training (TRN) | Support Coordination

STRATEGY & INTERNATIONAL AFFAIRS

CORPORATE STRATEGY & PERFORMANCE | AIR TRANSPORT | CORPORATE COMMUNICATION | CORPORATE DEVELOPMENT

AVIATION SAFETY AFFAIRS

FLIGHT OPERATIONS | AIRWORTHINESS | AIR NAVIGATION AND AERODROME | LICENSING | UAE ENTRY POINT | POLICY, REGULATION AND PLANNING | FOREIGN OPERATORS AFFAIRS

AIR ACCIDENT INVESTIGATIONS

Air Accident Investigation Department In The GCAA Is Responsible For The Investigation Of Civil Accidents And Incidents Within And Outside The UAE In Accordance With Annex 13 To The ICAO Convention.

United Arab Emirates

9 November 2015

The Westin Hotel, Dubai
www.aviationinvestmentsummit.ae

The GCAA, which is the sole authority for the control and regulation of civil aviation in the UAE, is responsible for the provision of en-route air navigation services...

» more

E-Publication
GCAA Regulations

- News
- Events
- Achievements
- Multimedia

26 Nov
Investigation Final Summary Report of Boeing 777-200 Incident, Moscow

SERVICES

Aviation Security Reporting System

AAIS WEB SITE

https://www.gcaa.gov.ae/en/departments/airaccidentinvestigation/pages/default.aspx

- GCAA Regulations
- Air Accident Investigation
- UAE AIP
AIM Publication
- Service Fees
- En-route ANS Online Payment
- Vendor Management
- Surveys
- NEW! UAS/RPAS/Drones



Air Accident Investigation

[MENASASI 2015 Seminar and Workshops](#)

The objective of the air accident and incident investigation is to enhance aviation safety by determining the causes and contributing factors related to the occurrence and issuance of safety recommendations to prevent reoccurrence. Investigations are conducted in accordance with UAE Civil Aviation Law No. 20 of 1991, in compliance with the Civil Aviation Regulation (CAR) Part VI Chapter 3, and in conformity with Annex 13 to the Convention on International Civil Aviation. It is not the purpose of the investigation activity to apportion blame or liability.

Reports

- [Accident/Incident Investigation Reports \(AIFN - Air Investigation File Number\)](#)
- [Safety Studies](#)
- [Safety Recommendation Reports](#)
- [Annual AAIS Safety Reports](#)

24 hour Duty Investigator Contact Details:

Immediate reporting of an Accident/Serious Incident:
Hotline: +971 50 6414667

E-mail: aai@gcaa.gov.ae

General Enquiries:

Director GCAA AAIS
P.O.Box: 6558, Abu Dhabi
United Arab Emirates
TEL: +971 2 444 7666
FAX: +971 2 449 1599
Email: accid@gcaa.gov.ae

To Submit a Report of Safety Incident: [ROSI](#)
To Submit a Voluntary Report: [VORSY](#)

Other Information:

[View/Upload Documents](#)

Publication/Activities:

- [Memorandum of Understanding](#)
- [Meetings and Seminars](#)
- [Training and Workshop](#)
- [The 'Investigator' Magazine](#)
- [AAIS Publications](#)
- [International Reports and Studies](#)
- [Related Links](#)

- #### RELATED LINKS
- UAE Airports
 - Abu-Dhabi Airport
 - Dubai Airport
 - Sharjah Airport
 - Ras Al Khaimah Airport
 - Fujairah Airport
 - Al-Ain Airport
 - International Organizations

Latest News: ([View all news](#))



AIMI Publication

- Service Fees
- En-route ANS Online Payment
- Vendor Management
- Surveys
- NEW! UAS/RPAS/Drones

RELATED LINKS

▼ UAE Airports

- ▶ Abu-Dhabi Airport
- ▶ Dubai Airport
- ▶ Sharjah Airport
- ▶ Ras Al Khaimah Airport
- ▶ Fujairah Airport
- ▶ Al-Ain Airport

▶ International Organizations

▶ Technical Group websites

▶ Useful Links



Accident / Incident Investigation Report

Ref. No	<input type="text"/>	Reg. No	<input type="text"/>
Occurrence	<input type="text"/>	Aircraft Type	<input type="text"/>
Damage	All ▼	Occurrence Year	--Year-- ▼
Aircraft	All ▼	Occurrence Category	All ▼
Injury Index	All ▼	Report Status	All ▼

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Reference No	Registration No	Occurrence	Aircraft	Aircraft Type	Location	Damage	Occurrence Date	Occurrence Category	Injury Index	Report Status
AIFN/0003/2011	A6-EMH	Boeing 777-200, A6-EMH, Partia ..	Air plane	Boeing 777-200	Moscow Domodedovo Airport	Minor	05/Mar/2011	Incident	None	Final
AIFN/0003/2014	VQ-BOC	Airbus A321-231, VQ-BOC, Groun ..	Air plane	Airbus A321-231	Dubai International Airport	Minor	17/Feb/2014	Accident	Serious	Final
AIFN/0015/2013	A6-MSM	Agusta 109S, A6-MSM, Helicopte ..	Helicopter	Agusta 109S	Al Ain International Airport	Minor	31/Dec/2013	Incident	None	Final
AIFN/0022/2012	A6-EII	Airbus A320-232, A6-EII, Pilot ..	Air plane	Airbus A320-232	Abu Dhabi	None	16/Nov/2012	Serious Incident	None	Final
AIFN/0005/2013	A6-EHF	Airbus A340-600, A6-EHF, Aerop ..	Air plane	Airbus A340-600	Over International Waters after Passing Colombo FIR and Entering Melbourne FIR	None	03/Feb/2013	Serious Incident	None	Final
AIFN/0016/2012	A6-ADB	DHC-8-315Q, A6-ADB, Aeroplane, ..	Air plane	DHC-8-315Q	Abu Dhabi, United Arab Emirates	None	09/Sep/2012	Incident	None	Final
AIFN/0010/2014	AP-RBA	Hawker Beechcraft 400XP, AP-RB ..	Air plane	Hawker Beechcraft 400XP	Al Maktoum International Airport,	None	23/May/2014	Serious Incident	None	Final

LESSONS LEARNED FROM OTHERS

NTSB (USA)

AAIB (UK)

ATSB (Australia)

AAIASB (Greece)

UNITED STATES OF AMERICA

Helicopter Accident number
decline over the last 10 years
but
no reduction of fatal accidents

UNITED STATES OF AMERICA

Crash fire and blunt force trauma

FAA issued life saving rules in the 1980s & 1990s

US helicopter fleet in the end of 2014

Only 16 % included crash-resistant fuel systems

Only 10 % had energy absorbing seats.

UNITED STATES OF AMERICA

The Rotorcraft Occupant Protection Working Group



UNITED STATES OF AMERICA

Loss of Control Sundance Helicopters, AS350-B2, N37SH

Safety issues identified:

Improper reuse of degraded self-locking nuts.

Maintenance personnel fatigue.

Need for work cards with delineated steps.

Lack of human factors training for maintenance personnel.

UNITED STATES OF AMERICA

Loss of Control Sundance Helicopters, AS350-B2, N37SH

Safety Recommendations:

Establish duty-time regulations for maintenance personnel

Encourage operators and manufacturers to develop and implement best practices for conducting maintenance.

Require that personnel performing maintenance or inspections receive initial and recurrent training on human factors (the causes of human error, including fatigue, ...)

AAIB (UNITED KINGDOM)

North Sea Helicopter Accidents



AAIB (UNITED KINGDOM)

Events over last 10 years

Safety Recommendations/Safety Actions

Impact of these Events

Lessons Learned for Accident Investigation

AAIB (UNITED KINGDOM)

20 Safety Actions

54 Safety Recommendations

AAIB (UNITED KINGDOM)

Impact

CAA Safety Review Feb 14

Airbus helicopters

Helicopter Terrain Awareness and Warning System

Rig landing systems

Survivability

AAIB (UNITED KINGDOM)

Lessons Learned

Inshore water CVFDR recovery

Underwater search and recovery plan

Use of press statements and special bulletins

Technical investigation work –time consuming and expensive

Effect of grounding aircraft; Oil and Gas risks

Understanding the culture of helo ops

Dealing with survivors and bereaved next of kin expectations

ATSB (AUSTRALIA)

Light utility helicopters safety

Equipment improvements

AAIASB (GREECE)

1.1 helicopter accidents per year

Number of accidents in 2002 2003 (same Operator)

CAA Oversight

Heliports oversight, risk assessment , equipment

Operator's training efficiency

Helicopter equipment (ELT, search lights, CVR)

UNITED ARAB EMIRATES

8 Investigation reports involving helicopters

(2008 – 2012)

20 Safety Recommendations

11 to the GCAA, 8 to Operators, 1 to an Airport

22 Safety Actions Taken

UNITED ARAB EMIRATES

20 Safety Recommendations proposed changes to
GCAA Regulations

GCAA Oversight

GCAA SMS acceptance process

UAE ELT interface

Offshore helideck requirements, certification & oversight

Training requirements & processes

THE FUTURE



Thank you for Listening



Together
Everyone
Achieves
More

