

SAFETY REVIEW OF CIVIL AVIATION FOR 2011

In accordance with EU Regulation 996/2010 of the European Parliament and of the Council of 20th October 2010 on the investigation and prevention of accidents and incidents in Civil Aviation and repealing Directive 94/56/EC which came in force on the 2nd December 2010, article 4, paragraph 5 foresees that: "In order to inform the public of the General Aviation Safety Level, a Safety Review shall be published annually at national level.

In this analysis, the sources of confidential information shall not be revealed".

Also in accordance with Directive 2003/42/EC of the European Parliament and of the Council of 13th June 2003, the Reporting of Incidents is mandatory which occur in Aviation and in accordance with Regulation 334/2005 of the Cyprus Republic, the Aircraft Accident and Incident Investigation Board is hereby appointed as the appropriate official authority for the evaluation and analysis of the incidents which are mentioned in the Regulation and recommending the implementation of any preventive actions that it considers necessary to be taken promptly to enhance Aviation Safety.

The AAIIB as the official investigation body is obliged by the regulation to publish a Safety Review annually in order to inform the Public of the General Aviation Safety Level annually at national level.

DEFINITIONS

Accident:

"Accident means an occurrence associated with the operation of an aircraft which, in the case of a manned aircraft takes place between the time any person boards the aircraft with the intention of flight until such time as all such persons have disembarked, or in the case of an unmanned aircraft, takes place between the time the aircraft is ready to move with the purpose of flight and the primary propulsion system is shut down, in which:



- a) a person is fatally or seriously injured as a result of:
 - being in the aircraft, or,
 - direct contact with any part of the aircraft, including parts which have become detached form the aircraft, or,
 - direct exposure to jet blast except when the injuries are from natural causes, self-inflicted or inflicted by other persons, or when the injuries are to stowaways hiding outside the areas normally available to the passengers and crew; or
- b) the aircraft sustains damage or structural failure which adversely affects the structural strength, performance or flight characteristics of the aircraft, and would affected component, except for engine failure or damage, when the damage is limited to a single engine, (including its cowlings or accessories), to propellers, wing tips, antennas, probes, vanes, tires brakes, wheels, fairings, panels, landing gear doors, windscreens, the aircraft skin (such as small dents or puncture holes) or minor damages to main rotor blades, tail rotor blades, landing gear, and those resulting from hail or bird strike, (including holes in the radome): or
- c) the aircraft is missing or is completely inaccessible;

Serious incident:

"Serious incident means an incident involving circumstances indicating that there was a high probability of an accident and is associated with the operation of an aircraft, which in the case of a manned aircraft, takes place between the time any person boards the aircraft with the intention of flight until such time as all such persons have disembarked, or in the case of an unmanned aircraft, takes place between the time the aircraft is ready to move with the purpose of flight until such time it comes to rest at the end of the flight and the primary propulsion system is shut down.



Incident:

"Incident means an occurrence, other than an accident, associated with the operation of an aircraft which affects or could affect the safety of operation."

ABBREVIATIONS

AAIIB AIRCRAFT ACCIDENT & INCIDENT INVESTIGATION BOARD

AIC AERONAUTICAL INFORMATION CIRCULAR

ATC AIR TRAFFIC CONTROL

ATCC AIR TRAFFIC CONTROL CENTRE

CVR COCKPIT VOICE RECORDER

E.C EUROPEAN COMMISSION

ENCASIA EUROPEAN NETWORK OF CIVIL AVIATION SAFETY INVESTIGATION

AUTHORITES

E.U EUROPEAN UNION



PAPIS PRECISION APPROACH PATH INDICATORY SYSTEM

R/T RADIO TELEPHONY

RWY RUNWAY

TCAS TRAFFIC ALERT AND COLLISSION AVOIDANCE SYSTEM

RA/TA RESOLUTION ADVISORY / TRAFFIC ADVISORY

U.K UNITED KINGDOM

U.T.C COORDINATED UNIVERSAL TIME

U.S UNITED STATES



In Regulation 996/2010 and the Cyprus Civil Aviation Law 2002-2012 all accidents and serious incidents are investigated.

The sole objective of the investigation is the improvement of the safety level and the prevention in the future and not to apportion blame or liability.

During the year 2011 no accident has taken place neither in the Airspace of the Cyprus Republic, nor in the flight information region (FIR).

The AAIIB was informed of 7 Serious Incidents which occurred in ATC, on airports or airlines.

The 7 serious incidents have been investigated by the AAIIB and the Final Reports were sent to all concerned.

From the above mentioned investigations of these serious incidents, the AAIIB has issued 33 Recommendations. These recommendations were sent to the Minister of Communication and Works and then to the Civil Aviation Department. When these recommendations are adopted the Civil Aviation Controls their implementation.

All the above recommendations have been adopted by the Minister of Communication and Works.

The recommendations do not create a presumption of blame or liability for any accident or serious incident.



AIRCRAFT ACCIDENT & INCIDENT INVESTIGATION BOARD CYPRUS

In accordance with Regulation 996/2010, the present regulation is not valid for investigations concerning accidents or serious incidents where the aircraft involved is used for military, customs, police or similar services, except if this is defined by the interested member state.

Concerning the incidents occurred during the year 2011, the AAIIB received from Cyprus Airways 153 reports which were evaluated, elaborated, categorized and proceeded with suggestions for taking measures where it was considered necessary.

From the Air Traffic Control Services we received 143 reports during 2011. The Air Traffic Control Services consists of the Air Traffic Control Centre (ATCC) Nicosia, which controls all the flights within the Nicosia FIR (overflying of flights in and out of the recognized airports of the Cyprus Republic). It includes also the Towers of Larnaca and Paphos Airports.

Hermes Airports as the administrators of the two International Airports have submitted 86 incident reports.

The Control Towers of Larnaca and Paphos also submitted separately 55 reports concerning incidents with laser beams directed towards aircraft in the Air.

From the total reports received from Cyprus Airways and Hermes Airports, 36 reports concern bird strikes on aircraft.

In total the AAIIB received during 2011, 437 incident reports in comparison with 657 incidents occurred in 2010. During 2011 AAIIB issued Final Reports for 6 Serious Incidents and for 1 accident. We have issued 33 Recommendations in comparison with 2 Serious Incidents and 1 accident in 2010 and totally 24 Safety Recommendations.



AIRCRAFT ACCIDENT & INCIDENT INVESTIGATION BOARD CYPRUS

ANALYSIS

Analyzing the General Safety Aviation Level in Cyprus, we can suggest that the levels of Aviation Safety during 2011 are considered satisfactory when compared with previous years.

The Regulation 996/2010 and also the formation of ENCASIA (Network) have contributed immensely in upgrading the Safety Levels in Pan European Level, something for which the European Committee considers very important. The forthcoming voting of regulation by the European Council for the compulsory reporting of incidents will further contribute in increasing even more the levels of Aviation Safety, because this is the most important part for the prevention of accidents.

All implicated parties involved they have to realize that submitting reports even for small incidents, the evaluation and elaboration and suggestions for the implementation of correct safety measures is very important not to allow a small incident to develop in a serious incident or accident.

The AAIIB except of issuing 33 Safety Recommendations in their Final reports of Serious Incidents in 2011, from 2006 until 2011 has also sent 55 letters on different subjects to different organizations for implementation of corrective actions.



Many of them have been adopted and solved, some they are in the process of being resolved and some must be solved the soonest possible.

Finally concerning the Safety Recommendations, Regulation 996/2010, in articles 17 and 18 foresee strict procedure for these recommendations and the observation of progress of the action taken for the implementation of these Safety Recommendations.

(Costas Orphanos)

Chairman of Cyprus Aircraft Accident and Incident Investigation Board





RV-6A 5B-HAY LIGHT AIRCRAFT ACCIDENT DURING LANDING

RUNWAY 22 AT LARNACA AIRPORT – 5 JUNE 2010

FILE NO.: 16.15.01.4/10

SYNOPSIS

The Department of Civil Aviation of Cyprus advised the Aircraft Accident and Incident Investigation Board of an accident involving a light aircraft landing on runway 22 at Larnaca Airport. The aircraft took off from the island of Rhodes with destination Larnaca Airport.

The RV-6A, 5B-HAY aircraft took off from Rhodes Airport (LGRP) to Larnaca (LCLK), the aircraft climbed to FL095 and the flight was uneventful until the landing phase. The aircraft was cleared to descent eventually down to 2500′ and approaching the airfield from the Salt Lake of Larnaca. Over Larnaca Salt Lake the aircraft experienced some moderate turbulence. Aircraft was cleared to fly overhead the airfield in order to join left hand downwind over the sea for runway 22. The final approach phase was flown at an indicated airspeed of 80 KT and 40° of flap.

The wind at that time was a strong southwesterly wind with occasional gusts.

The aircraft landed heavily and having bounced twice landed with the nose wheel collapsing and the engine propeller bending, coming to rest on the left hand side of runway 22.

SAFETY RECOMMENDATIONS

- **1.** X-wind technique should be reviewed and practiced by the crew
- **2.** In cases of heavy landing and bouncing a Go-around should be executed in order to perform another approach.





CYP412 AIRBUS A320 REGISTRATION 5B-DBC

OCCURRED NEAR TITUS WAY POINT WITHIN GREEK AIRSPACE ON THE 26
SEPTEMBER 2010 FOLLOWING A DUAL BLEED VALVE FAULT LEADING TO EMERGENCY
DESCENT

FILE NO.: 16.15.01.9/10

SYNOPSIS

The AAIIB was informed by the Department of Civil Aviation of a serious incident which occurred in the Greek FIR following a dual bleed valve fault. This was followed by emergency descent to FL100 and the subsequent decision by the crew to return to Larnaca.

On the 26th September 2010 CY412 departed Larnaca with destination the International Airport of Milan. The aircraft was airborne at 04:47 U.T.C. Before the departure the aircraft was released in accordance with the M.E.L. with a defect logged on the 23rd September 2010 stating that no.2 engine bleed system was abnormal during climb. The operating crew reviewed the MEL Manual (revision 146) located in the briefing room in the operations department of Cyprus Airways, APPENDIX 1. The crew was not aware that the MEL was out of date. The current updated MEL was revision 149, APPENDIX 2.

The operating crew requested a change of route on the proposed flight plan due to adverse weather conditions.

The crew donned their oxygen masks and immediately carried out an emergency descent. ECAM actions were carried. Passenger oxygen masks were deployed and the cabin crew in liaison with the cockpit crew carried out their own drills following CRM principles. On leveling off at FLIGHT LEVEL 100 the crew managed to restore **ENGINE no.1 BLEED SYSTEM FAULT**.



While at FL100 no.2 rear port door warning appeared on ECAM indicating that the door was open. Inspection carried out by the cabin crew confirmed that door was closed with no abnormalities observed.

During the emergency descend no one was injured. The crew decided instead of following the ECAM command to <u>LAND ASAP</u> to the nearest suitable airport to return to Larnaca.

During the return flight to Larnaca, the aircraft climbed and descended several times up to maximum Flight Level 190 to avoid weather conditions according to the crew.

The aircraft landed at Larnaca eventually at 08:22 U.T.C. and at 08:30 on stand, with fuel remaining 3420KG.

SAFETY RECOMMENDATIONS

- 1. Following the ECAM command TO LAND ASAP crew must land to the nearest suitable airport, ignoring possible commercial pressures to do otherwise.
- 2. Engineering should make every effort to expedite the maintenance of such defects leading to very serious incidents. Also aircraft with such defects to be allocated to operate only on short sectors.
- 3. Special attention of the library personnel to amend all revisions required either on the aircraft or on the ground promptly.
- 4. Crews should be informed to be aware that O.E.B.s related to defects allowable under M.E.L. might be applicable before the flight.





FLIGHT CYP342, AIRCRAFT TYPE A319-200, REGISTRATION 5B-DBO

WRONG ALIGNMENT – RUNWAY 04 OF LARNACA AIRPORT – 27 OCTOBER 2010

FILE NO.: 16.15.01.10/10

SYNOPSIS

On the 27th October 2010 the Aircraft Accident and Incident Investigation Board was informed of the above incident by the Department of Civil Aviation Cyprus. The aircraft was departing Larnaca taking off from runway 04 with destination Beirut International Airport. During the take-off run due to the misalignment the aircraft run over the left 3 edge lights narrowingly avoiding the fourth and abandoning the takeoff. The aircraft returned back to the stand where engineering assessment revealed damage to the outer port main landing gear tyre. Also note that three left edge runway lights were also destroyed.

RECOMMENDATIONS

In view of all the above the Aircraft Accident and Incident Investigation Board recommended the following actions to be implemented immediately after this incident.

Recommendations

- **1.** To increase the time of the green illumination of the leading lights to more than 35 seconds.
- **2.** To issue a Notam to all operators to familiarize themselves with the existing lighting system, markings and also with the possible performance penalty if they elect to follow the green leading lights and align on the centerline of runway 04.

Abeam taxiway "G" a correct runway length sign to be installed indicating the correct Take Off Distance Available (TODA).



3. In the near future displacement of the threshold of runway 04 inwards is necessary by approximately 100 metres with the proper runway and taxy markings. Ideally should have green leading lights to the new threshold of runway 04.

OTHER RECOMMENDATIONS FOLLOWING THE INVESTIGATION COMPLETION

- **1.** Cockpit voice recorder (CVR) Circuit Breaker (C/B) must be pulled in all cases following a serious incident or accident immediately so that the last 30 or 120 minutes of communication is preserved. This should be also included in the company's Standard Operating Procedures (S.O.Ps).
- **2.** Material derived from this incident must be addressed in the next CRM training programme of Cyprus Airways.
- **3.** Alternatively to recommendation number three above a taxiway can be constructed in order to enable aircraft to line up on runway 04 threshold with green leading lights when entering from taxiway HOTEL "H". This can be achieved by filling up the space existing between taxiway HOTEL (H) and the actual threshold of runway 04 with the addition of the appropriate fillet.
- **4.** A NOTAM to be issued indicating that there is no line up guidance **at present** for full length of runway 04 when entering the runway from taxiway HOTEL "H"





AIRBUS A320 - CYP504 5B-DCG & CRUZADER ZERO ZERO (ØØ) H60 UNITED STATES MILITARY HELICOPTER

TCAS RA - APPROACHING LARNACA (OVER THE SEA) - 14 FEBRUARY 2011

SERIOUS INCIDENT

FILE NO.: 16.15.01.1/11

SYNOPSIS

The Department of Civil Aviation of Cyprus advised the Aircraft Accident and Incident Investigation Board of an air miss involving CY504 an A320 aircraft airborne from Larnaca and U.S military helicopter approaching Larnaca with the intention of landing. The helicopter took off from a U.S. Air Carrier.

During the departure of CYP504 from Larnaca runway 22 on a Paphos 1A departure, TCAS RA was triggered due to opposite direction traffic a United States military helicopter descended through the altitude of Cyprus 504 without A.T.C. clearance.

SAFETY RECOMMENDATIONS

Concluding on this serious incident we want to stress the importance of strict adherence to A.T.C. instructions to avoid such dangerous actions by the military crew when visiting Cyprus Airports.





5BCLC CESSNA 150 & 4XCZD C551

ALMOST SIMULTANEOUS TAKE OFF OF C150 & C551. C551 TOOK-OFF WITHOUT CLEARANCE

LARNACA AIRPORT – 17 MAY 2011
SERIOUS INCIDENT

FILE NO.: 16.15.01.3/11

SYNOPSIS

The AAIIB has been advised by the Department of Civil Aviation of Cyprus of an incident involving an ISRAELI citation 551 aircraft and a Cessna 150 taking off from runway 04 Larnaca Airport. This was an almost simultaneous take off of both aircraft with the light aircraft Cessna 150 taking off from intersection "D" having being cleared for takeoff and the citation 551 taking off from runway 04 using the whole length without A.T.C. clearance.

RECOMMENDATIONS

- 1. Headset wearing is a must in such an environment in order to minimize the noise level and avoid missing important R/T calls.
- 2. Revision of the interface procedures between Tower and Ground Control to safeguard correct exchange of information to enhance safety.
- 3. Introducing electronic supply of strips to both Ground and Tower Controllers to have a clear picture of the movements of aircraft either taking off or approaching to land.



- 4. The role of training newly qualified Controllers should be undertaken by suitable experienced Controllers, an action which also raises the required level of experience in both Control Towers of Larnaca and Paphos.
- 5. Every effort should be made to reduce unnecessary visits in to the Control Tower room to avoid unnecessary increased noise level and also distracting the on duty personnel.





THOMSON BOEING 737-804 G-CDZH

AIRCRAFT LANDED ON TWY BRAVO (B) INSTEAD OF RWY 29 PAPHOS AIRPORT - 21 SEPTEMBER 2011 SERIOUS INCIDENT

FILE NO.: 16.15.01.6/11

SYNOPSIS

The AAIIB was notified by the Department of Civil Aviation (DCA) Cyprus at 1400 U.T.C. that an incident occurred at Paphos involving a 737-804 type of aircraft call-sign TOM 5XT. This aircraft landed on taxiway BRAVO ("B") instead of runway 29 at 1331 U.T.C.

Taxiway BRAVO ("B") was not occupied at the time. The aircraft was subsequently taxied to the parking area where the passengers and crew disembarked normally.

U.K AAIB provided assistance to the Cyprus AAIIB with all requested documents, pilots interviews and CVR transcripts through their appointed accredited representative.

SAFETY RECOMMENDATIONS

- 1. The Director of Civil Aviation Department to issue a Notam advising crews that taxiway BRAVO "B" at Paphos Airport lies to the north of runway 29/11 with different markings. This Notam must be later converted to an AIC (circular with the same contents).
- 2. Independently of the type of approach performed (visual) on runway 29/11 it is recommended to use all available navaids and MAP display to confirm correct alignment with the landing runway.



- 3. In addition to the PAPIS operation, approach lights to be switched on also, during daylight operation to assist landing aircraft.
- 4. A study to be carried out for any additional markings of taxiway "B" required in such a way that is more clearly visible that it is a taxiway and not a landing runway.
- 5. In the case of an early landing clearance issued, ATC should repeat the landing clearance when aircraft is on finals and confirmed that is aligned with the runway when visual approaches are carried out.



<u>GRIFFON AVIATION AIRCRAFT</u> <u>PA28-140 5B-CFZ</u>

LANDED ON RWY 20 AND JUST AFTER TWY GOLF LEFT THE RWY AND ROLLED THROUGH THE ADJACENT FIELD ON TO THE APRON PAPHOS AIRPORT 28 OCTOBER 2011

FILE NO.: 16.15.01.8/11

SYNOPSIS

The AAIIB was notified by the Department of Civil Aviation of Cyprus of a serious incident occurred at Paphos Airport on the 28th October 2011. This involved a light aircraft which after landing on runway 29 abeam of taxiway "GOLF" left the runway into the adjacent field.

SAFETY RECOMMENDATIONS

1. It is very important flying schools pay particular attention during training of pilots to ensure that pilots receive satisfactory practice on correct crosswind technique landings.