



Havarikommisjonen
Accident Investigation Board Denmark

BULLETIN

Serious incident

13-6-2015

involving

AIRBUS A321

LN-RKK



Certain report data are generated via the EC common aviation database

FOREWORD

This bulletin reflects the opinion of the Danish Accident Investigation Board regarding the circumstances of the occurrence and its causes and consequences.

In accordance with the provisions of the Danish Air Navigation Act and pursuant to Annex 13 of the International Civil Aviation Convention, the investigation is of an exclusively technical and operational nature, and its objective is not the assignment of blame or liability.

The investigation was carried out without having necessarily used legal evidence procedures and with no other basic aim than preventing future accidents and serious incidents.

Consequently, any use of this bulletin for purposes other than preventing future accidents and serious incidents may lead to erroneous or misleading interpretations.

A reprint with source reference may be published without separate permit.

TABLE OF CONTENTS

SYNOPSIS	4
FACTUAL INFORMATION	5
History of the flight.....	5
Injuries to persons.....	6
Personnel information.....	6
Aircraft information.....	8
Meteorological information.....	8
Medical information.....	9
Additional information.....	10
ANALYSIS.....	11
CONCLUSIONS.....	11

BULLETIN

General

File number: HCLJ510-2015-292
UTC date: 13-6-2015
UTC time: 15:57
Occurrence class: Serious incident
Location: North-western part of Poland
Injury level: None

Aircraft

Aircraft registration: LN-RKK
Aircraft make/model: AIRBUS A321-232
Current flight rules: Instrument Flight Rules (IFR)
Operation type: Commercial Air Transport Revenue operations Passenger
Flight phase: En route
Aircraft category: Fixed wing Airplane
Last departure point: Denmark EKYT (AAL): Aalborg
Planned destination: Greece LGSA (CHQ): Chania/Souda (Mil)
Aircraft damage: None
Engine make/model: INTERNATIONAL AERO ENGINES (IAE) V2500

SYNOPSIS

Notification

All times in this report are UTC.

The Aviation Unit of the Danish Accident Investigation Board (AIB) was notified of the serious incident by the operator on 15-6-2015 at 08:22 hours.

The Danish Transport Authority (DTA), the Swedish Accident Investigation Authority (SHK), the Accident Investigation Board Norway (SHT), the Polish State Commission on Aircraft Accidents Investigation (SCAAI), the European Aviation Safety Agency (EASA), the Directorate-General for Mobility and Transport (DG MOVE) and the International Civil Aviation Organization (ICAO) were notified on 15-6-2015.

The French Bureau d'Enquêtes et d'Analyses pour la sécurité de l'aviation civile (BEA) was notified on 22-6-2015.

The serious incident occurred in the north-western part of Poland. However, the flight crew decided to divert to Copenhagen Airport, Kastrup, (EKCH).

The AIB was in charge of the safety investigation.

Summary

A vasovagal episode most likely led to incapacitation of the commander resulting in a diversion of the flight.

FACTUAL INFORMATION

History of the flight

The serious incident occurred during a commercial IFR flight from Aalborg (EKYT) in the Northern part of Denmark to Chania (LGSA) in Greece.

At 15:08 hours, the aircraft departed EKYT.

At cruise level, the commander started feeling unwell and complained about a feeling of vertigo.

The first officer took control of the aircraft and made use of the autopilot.

The first officer turned down the temperature in the cockpit, and the commander put on his oxygen mask. After approximately 1 minute, the commander felt better and took off his oxygen mask.

The flight crew agreed on continuing the flight.

After a while, the commander started feeling unwell again. The first officer instructed the commander to put on his oxygen mask and keep it on.

The flight crew agreed on diverting to Copenhagen Airport, Kastrup (EKCH).

The first officer informed Air Traffic Control (ATC) of the commander feeling unwell and initiated the diversion to EKCH. Furthermore, the first officer called a cabin crew member into the cockpit to check on the condition of the commander. The first officer briefed the passengers about the reason for the diversion to EKCH.

Since the commander started feeling worse and complained about a feeling of vertigo, the first officer declared a medical emergency (incapacitated commander) to ATC and requested medical assistance upon landing.

The aircraft got ATC priority.

From then on, the first officer took over all non-flying tasks as well (checklist reading and radio communication). The commander partly monitored the flight.

The aircraft landed at EKCH at 16:27 hours.

Arriving at the gate, the commander got medical assistance.

Injuries to persons

<i>Injuries</i>	<i>Crew</i>	<i>Passengers</i>	<i>Others</i>
Fatal			
Serious			
None	7	190	

Personnel information

The commander

a) License and medical certificate

The commander (55 years) was the holder of a valid Danish Airline Transport Pilot License (ATPL (A)).

The ATPL contained the following type rating: A320/IR.

The type rating A320/IR was valid until 31-12-2015.

The PART-FCL medical certificate class 1 was valid until 29-8-2015. The PART-FCL medical certificate contained one restriction: *Shall have available corrective spectacles for near vision and carry a spare set of spectacles (VNL)*.

The latest Operator Proficiency Check (OPC) was valid until 31-12-2015.

b) Flying experience

With reference to the operator's log system (all aircraft types):

	<i>This month</i>	<i>Last month</i>	<i>Last 90 days</i>	<i>Last 12 month</i>	<i>Lifetime</i>
<i>Block hours</i>	<i>31:48</i>	<i>74:28</i>	<i>191:57</i>	<i>703:43</i>	<i>16243:50</i>
<i>Loggable block hours</i>	<i>31:48</i>	<i>74:28</i>	<i>191:57</i>	<i>703:43</i>	<i>16243:50</i>
<i>Simulator block hours</i>	<i>4:00</i>	<i>0:00</i>	<i>4:00</i>	<i>4:00</i>	<i>202:00</i>
<i>Number of landings</i>	<i>10</i>	<i>26</i>	<i>63</i>	<i>234</i>	<i>2160</i>

c) Flight and duty time

It was the commander's third day of flying and the first flight of the day.

The night before at 21:45 hours, the commander arrived in EKYT. The rest period before the serious incident flight was 17 hours and 20 minutes.

The first officer

a) License and medical certificate

The first officer (48 years) was the holder of a valid Danish Airline Transport Pilot License (ATPL (A)).

The ATPL contained the following type rating: A320/IR COPILOT.

The type rating A320/IR COPILOT was valid until 31-1-2016.

The PART-FCL medical certificate class 1 was valid until 1-6-2016. The PART-FCL medical certificate contained one restriction: *Shall wear corrective lenses and carry a spare set of spectacles (VDL)*.

The latest Operator Proficiency Check (OPC) was valid until 31-1-2016.

b) Flying experience

With reference to the operator's log system (all aircraft types):

	<i>This month</i>	<i>Last month</i>	<i>Last 90 days</i>	<i>Last 12 month</i>	<i>Lifetime</i>
<i>Block hours</i>	54:01	67:23	203:22	736:49	7226:07
<i>Loggable block hours</i>	54:01	67:23	203:22	736:49	7220:48
<i>Simulator block hours</i>	0:00	0:00	0:00	8:00	234:00
<i>Number of landings</i>	15	20	59	204	1892

c) Flight and duty time

It was the first officer's third day of flying and the first flight of the day.

The night before at 21:45 hours, the first officer arrived in EKYT. The rest period before the serious incident flight was 17 hours and 20 minutes.

Aircraft information

Registration:	LN-RKK
Type:	Airbus 321
Model:	232
Manufacturer:	Airbus Group
Serial number:	1848
Year of manufacture:	2002
Engine manufacturer:	International Aero Engines (IAE)
Engine type:	IAE V2530-A5

Meteorological information

Automatic Terminal Information Service (ATIS) at EKCH

This is Copenhagen arrival information X at 16:20. Runway in use for landing 22L. Transition level 65. Reduced separation procedures applied on final. After landing expedite vacating runway. Wind for landing 150° 10 knots. CAVOK. Temperature 19. Dewpoint 12. QNH 1005. Temporarily scattered cumulus nimbus 3000 feet. This was Copenhagen arrival information X.

Medical information

On ground in EKCH, the commander was taken to a nearby hospital.

The conclusion of the medical examination of the commander was:

- Normal medical examination
- Normal blood sugar
- No markers for infection
- Normal electrocardiogram

However on the day of the serious incident, the commander had a perception of not having slept well the night before.

The commander was sent back home.

Shortly after, the commander underwent extensively medical examinations by aviation medics and neurologists.

The overall conclusion of the examinations:

- A most likely vasovagal episode led to the incapacitation of the commander

Note:

- *A vasovagal episode is one of the most common causes of fainting/ brief loss of consciousness*
- *A vasovagal episode might be triggered by for instance emotional stress, sleep disorder, sudden drop of blood pressure or dehydration*

The commander had no previous medical history of either incapacitation or vasovagal attacks.

Additional information

The operator's operations manual - part A (extract) - incapacitation of crew members:

Actions to be taken - flight crew

First Step:

- *Take over control of the aircraft by announcing "My Controls",*
- *Engage autopilot,*
- *Declare an urgency or emergency – whichever is applicable -,*
- *If possible have the incapacitated flight crew member removed from his seat. In any case his seat should be moved fully back to prevent obstruction of flight controls, switches, levers, etc. The help of other crew members might be required.*

Second Step:

- *Take care of the incapacitated crew member and provide first aid (ask if doctors or other medical personnel are onboard),*
- *Arrange a landing as soon as practicable after considering all pertinent factors,*
- *Arrange medical assistance after landing – giving as many details about the condition of the affected crew member as possible.*

Third Step:

- *Prepare for landing (cockpit and cabin), but do not press for a hasty approach.*
- *Perform approach checklist earlier than normal (request assistance from other crew members or "capable" persons),*
- *Request radar vectoring and make an extended approach – where possible – to reduce workload,*
- *For landing do not change seats – fly the aeroplane from your normal position,*
- *Organize work after landing; this will include:*
 - *Depending on the situation, a change of seats for taxiing in, but only after the aeroplane has come to a complete stop;*
 - *Arrangements for the parking of the aeroplane.*
 - *Having the incapacitated crew member off-loaded to the ambulance as quickly as possible.*

ANALYSIS

A vasovagal episode most likely led to incapacitation of the commander resulting in a diversion of the flight.

With reference to the operator's procedures, the first officer made use of available internal (other crew members/automatic flight) and external (ATC/medical assistance upon landing) resources, which reduced the overall on board workload and made the medical assistance to the commander effective.

CONCLUSIONS

A vasovagal episode most likely led to incapacitation of the commander resulting in a diversion of the flight.