

IBAC Technical Report Summary

Subject: NAT/CMA Scrutiny Group

Meeting: SG-17, Prestwick Scotland, 2-6 October 2017

IBAC File:

Reported by: Ron Weight

Summary:

The following is a summary primarily from a Business Aviation/GA perspective of the vertical and lateral error events reviewed at the NAT Scrutiny Group meeting for the period January through June 2017. Overall, a favourable trend for Biz Av/GA in vertical deviations and about average for the horizontal deviations.

Considering all the events reviewed for this report period, the vertical errors, Large Height Deviations (LHD), were primarily Flight Crew errors (53%) and ATC errors (29%). The lateral errors, Gross Navigation Error (GNE) or events where corrective action by ATC prevented a deviation, again being predominantly operator errors (85%) with "Following the Flight-Plan Instead Of the Clearance" continuing to be the most prevalent error.

➤ **Vertical, Large Height Deviation (LHD) Errors:**

34 - Total events reviewed plus 9 below HLA that were not reviewed.

29 - Airline

4 - Military

1 – Biz Av (1 – Flight Crew Error). 2 below HLA that were not reviewed.

10 of 34 vertical errors were due to ATC coordination

18 of 34 due to Flight Crew errors

1 of 34 due to aircraft mechanical

3 of 34 due to Turbulence

1 of 34 due to Weather Deviation

1 of 34 due to emergency

● **Biz Av/GA Errors:**

○ **2 were below High Level Airspace (HLA)**

<u>Acft Type</u>	<u>Acft Registry</u>	<u>Issue</u>	<u>Altitude</u>
C425		Crew Error CWOC*	F200/230
BE35		Crew Error CWOC**	F100/120

○ **1 within HLA**

<u>Acft Type</u>	<u>Acft Registry</u>	<u>Issue</u>	<u>Altitude</u>
E135M		Crew Error DWOC*** Due Turb	F410/400

* CWOC – Climb Without Clearance, Cleared to F200, reported in passing F210 for F240, stopped at F230

** CWOC – Climb F100 to 120 in uncontrolled airspace, failed to descend or request clearance before re-entering

*** DWOC - Descended Without Clearance, Due to turbulence. Observed via ADS-B report

➤ **Lateral Deviation Errors:**

- 112 - Total events recorded
 - 97 - Airline
 - 2 – Military plus 3 that were below HLA
 - 13 – Biz Av/GA (13 - Crew Errors) plus 2 that were below HLA
- 23 – Gross Navigation Errors (10 NM deviation or more)
- 20 – Lateral deviations less than 10 NM
- 69 – Preventions/Interventions
- 10 – ATC Coordination Errors
- 95 – Flight Crew Errors
- 7 - Other

● **BIZ AV/GA Errors:**

○ **Gross Navigation Errors (10NM or More) within HLA**

<u>Acft Type</u>	<u>Acft Registry</u>	<u>Issue</u>	<u>Altitude</u>
E55P		Crew Error, cleared 61N40W ADS-B showed proceeding north of course, re-cleared direct 61N40W then showed proceeding south of course, Re-cleared again, then proceeded on course as Cleared. 15 NM off course.	F 410
E170		Crew error, did not comply with conditional clearance, 20NM off course.	F350

○ **Gross Navigation Errors (10NM or More) Not In HLA**

<u>Acft Type</u>	<u>Acft Registry</u>	<u>Issue</u>	<u>Altitude</u>
P46T		Crew Error, flight planned, cleared and reported 63N30W, but ADS-B & radar showed them at 61N030W, 120NM/2 degrees off track.	F270
PC12		Crew error, waypoint entry error entered 6330N030W Vs 63N30W. 15 NM off track	F270

○ **Lateral Deviation Error Less Than 10NM**

<u>Acft Type</u>	<u>Acft Registry</u>	<u>Issue</u>	<u>Altitude</u>
GLEX		Crew Error, misunderstood clearance from Shannon, turned direct prior to Oceanic Exit Point. 2.5 NM off course	F410

○ **Preventions/Interventions**

<u>Acft Type</u>	<u>Acft Registry</u>	<u>Issue</u>	<u>Altitude</u>
GLF5		Crew Error FFPIOC**	F400
B737		Crew Error FFPIOC*	F370
F900		Crew Error FFPIOC**	F410
GLF5		Crew Error FFPIOC*	F430
GLF5		Crew Error FFPIOC**	F430
GLEX		Crew Error FFPIOC*	F410
B737		Crew Error FFPIOC**	F370
FA7X		Crew Error FFPIOC**	F350
GLF5		Crew Error FFPIOC***	F380
F2TH		Crew Error ****	F400

* FFPIOC – Followed Flight Plan Instead Of Clearance, ATC Prevention by ADS-C Next + 1 Position Report.

** FFPIOC – Followed Flight Plan Instead Of Clearance, ATC Prevention by CPDLC, confirm assigned route.

*** FFPIOC – Followed Flight Plan Instead Of Clearance, ATC Prevention by HF Next + 1 Position Report

**** Misunderstood STAR clearance, ATC Prevention by ADS-C Next + 1 Position Report.

Implications for Business Aviation:

There were 18 total Biz Av/GA errors during this reporting period, 3 vertical and 15 lateral. Four of the events were below HLA, therefore not reviewed and not included in formal SG report statistics.

All vertical and horizontal errors were Flight Crew errors. Vertical errors were either climbing or descending without clearance. Nine of the 15 lateral errors were Following the Flight Plan Instead of the Clearance. Two errors of misunderstanding the clearance, one due to conditional clearance, and three associated with waypoint entry into the FMS.

Three predominant errors causing most of the vertical or lateral deviations:

- Climbing or descending without clearance
- Following Flight Plan Instead Of Clearance (FFPIOC)
- Waypoint insertion errors

Crews need to be especially diligent in checking their entire Oceanic Clearance for a possible reroute. A reroute may be the entire route or possibly only one or two waypoints, and particularly oceanic exit points. Fortunately the ANSPs through conformance checks of the next+1 waypoint on position reports, and CPDLC check to confirm the assigned route are catching many of these errors on time and preventing an actual deviation. One of the more common waypoint insertion errors occurs when the longitude number is entered while still in the latitude data field, such as 6240N040W instead of the cleared position of 62N040W. This can easily go unnoticed unless you open the full 13 character Lat/Lon field on the FMS.

All of these errors are addressed in the OESB. The OESB and Sample Oceanic Checklist have been updated for clarification and to ensure that they correctly reflect current regulatory guidance. These updates should be posted soon. NAT Doc 007 is currently under revision. Scrutiny Group members will update Attachment 1 to Doc 007 when available.

Decisions Required:

The formal meeting report submitted to the SOG is attached to the email also.