

Advisory Wire

REFERENCE NO:	AW700-34-0607, Rev 01	INFORMATION TYPE:	Operational
ATA:	34-61	EFFECTIVITY:	Global Express / XRS (9002 - 9312, 9314 - 9380, 9384 - 9429) Global 5000 (9127 to 9383, 9389 to 9400, 9404 to 9431 and 9998)
SUBJECT:	Flight Management System (FMS) – Navigation database altitude constraint missing from the active flight plan		

1. REFERENCES:

- 1.1. Honeywell Service Information Letter (SIL) D201703000002R001, Flight Management System (FMS) Navigation Database Altitude Constraint Missing from Active Flight Plan, dated 13 Sep 2019
- 1.2. Bombardier Service Bulletin (SB) 700-31-030 / 700-1A11-31-014, Modification – Integrated Avionics Computer (IAC) System – Batch 3 Software Upgrade
- 1.3. Bombardier Service Bulletin (SB) 700-31-034 / 700-1A11-31-017, Modification – Integrated Avionics Computer (IAC) System – Batch 3.3 Software Upgrade
- 1.4. Bombardier Service Bulletin (SB) 700-31-039 / 700-1A11-31-021, Modification – Integrated Avionics Computer (IAC) System – Batch 3.4 Software Upgrade

References 1.1, 1.2, 1.3 and 1.4 are available on the Bombardier Customer Portal: my.businessaircraft.bombardier.com > Library > Search by Keyword

2. INTRODUCTION:

Revision 1 of this Advisory Wire (AW) provides an update following the release of the revised Honeywell SIL (Ref. 1.1) and of the Bombardier SB Batch 3.4 Software Upgrade (Ref. 1.4). It also advises operators and flight crew of a condition where some altitudes constraints from the Navigation Database (NavDB) may be displayed as dashes in the flight plan.

All Honeywell FMS software versions NZ5.8 and earlier, software version NZ6.1 post Batch 3 upgrade (Ref. 1.2, IC-810, IAC PN 7017300-61010), post Batch 3.3 upgrade (Ref. 1.3, IC-810, IAC PN 7017300-61013) and post Batch 3.4 upgrade (Ref. 1.4, IC-810, IAC PN 7017300-61014) currently installed on the Global Express/5000/XRS are affected by this condition.

3. DESCRIPTION:

An FMS behavior is described in the Honeywell SIL (Ref. 1.1), when two (2) procedures (STAR common route and STAR runway transition) are loaded into the FMS that have a common waypoint with the same altitude constraints, the system would display the common waypoint in the active flight plan twice.

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As shown in example Figure 1, the system displays the common waypoint in the active flight plan twice. When the aircraft sequences the first double CABOS waypoints, lateral guidance LNAV would disconnect and the lateral mode reverts to ROL.



Figure 1

This FMS anomaly of LNAV reverting to ROL mode was resolved by implementing a Database Management (DM) solution that removes the altitude constraint from the last leg of the STAR common route.

Example in Figure 2 and Figure 3 show a portion of the TMBRS2 STAR going into Portland International airport (KPDX). The altitude constraint on waypoint FLOWR in Figure 2 is per charted procedure with no DM solution applied.



Figure 2

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In Figure 3 the same partial STAR procedure but with the DM solution applied. The altitude constraint on waypoint FLOWR is removed from the active flight plan.



Figure 3

This issue is due to an FMS software anomaly where melding of a common waypoint in these type of procedures are not properly handled when both procedures contain the same altitude constraint.

4. ACTION:

Operators should be familiar with the condition detailed in the Honeywell SIL (Ref. 1.1). Flight crews are advised to fly the published procedures available in the NavDB and monitor all phases of flight.

This condition was mitigated by implementing DM solution and will be corrected in a future NZ FMS software loads.

Should you have any queries pertaining to this Advisory Wire (AW), please contact your Bombardier Field Service Representative (FSR) or the Customer Response Center (CRC).