Lufthansa Systems

Lufthansa Systems FlightNav

General Navigation Data Information

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Advisory Vertical Guidance with no Published Vertical and Descent Angle (FAA Special Airworthiness Information Bulletin HQ-14-25, August 26, 2014)

Background

At the end of August 2014, the FAA published Special Airworthiness Information Bulletin (SAIB) HQ-14-25. This SAIB intends to alert the industry of Instrument Approach procedures (IAP) that are published by the FAA without an advisory vertical descent angle. The document is accessible at the following address: http://rgl.faa.gov/Regulatory_and_Guidance_Library%5CrgSAIB.nsf/%28LookupSAIBs%29/HQ-14-25?OpenDocument

The FAA is concerned that the advisory vertical descent angle may be used by flight crews still as a reference while flying the visual segment of an IAP (hence below the minimum descent altitude). The FAA advises that IAPs where the visual segment is not clear of obstacles are published with a note “Descent Angle NA” or “Descent Angle NA – Obstacles” in the profile view of the procedure.

Included in US terminal procedure source documents are so called “ARINC 424 database format specifications” (FAA Form 8260-10). In there, the vertical descent angle will be published as “0” (zero) for the above mentioned approaches.

The SAIB explicitly advises that there are “unintended consequences” that certain RNAV systems will encounter when a “0” (zero) vertical angle coded is coded in the onboard navigation database. These issues range from constructing a “problematic, inaccurate vertical path guidance” to “creating a ‘divide-by-zero’ mathematical error” and “automatically defaulting to a 3 (three) degree vertical angle”. Another possible consequence is that the IAP is not available in the onboard navigation database at all.

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Lufthansa Systems will continue to employ its current Coding Practices also for IAPs that are published without a published vertical descent angle and that carry a note “Descent Angle NA” or “Descent Angle NA – Obstacle” in source documents. This will mean that a vertical angle will be calculated based upon published altitude constraints. If that calculated angle is lower than 3 (three) degrees, it will be raised to 3 (three) degrees. Affected procedure can be identified and will be charted in Lido/RouteManual by a profile annotation “OBST BLW MDA”.

Please let us know about any questions or comments.

Lufthansa Systems FlightNav Inc.
Customer Care Operations
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