

| Criterion #<br>(AC 20-128D)                         | PBN Capability   | Flight Phase          | Equipment Operating Mode       | Criterion Text  | Compliance Technique | Compliance Notes   | Results (Met / Not Met) | Comments |
|---|--|-----------------------|--------------------------------|---|----------------------|--|-------------------------|----------|
| 12-8 (Title)  |  |                       |                                | Final Approach Segment Step-Down Fixes in Navigation Databases  |                      |  |                         |          |
| 12-8 (a)  |  |                       |                                | [...] the database must include all named waypoints that make up the instrument approach procedure except for final approach segment step-down fixes. Showing step-down fixes on a vertical profile display can enhance flight crew situation awareness, but can also complicate installation issues (see paragraphs 12-8.b through 12-8.d).  |                      | This Criteria Table constitutes contact with the DND certification authority. Approval requested for the onboard navigation database to contain step-down fixes.   |                         |          |
| 12-8 (b)  | <b>RNP APCH</b> Part A (GNSS)<br><b>RNP APCH</b> Part B (GPS SBAS) | All approach segments | See PBN Capability Description | Equipment manufacturers providing final approach segment step-down fixes in their onboard navigation databases for RNAV (GPS) approach procedures must either provide a method to remove them or provide an installation limitation for cockpit configurations that cannot properly support them (i.e., define the requirements in the installation instructions/manual).   | Inspection           | The Flight Management System (FMS) installation instructions contain criteria for the cockpit configuration. Each MFD will be assessed using the criteria in the FMS installation instructions.                |                         |          |
| 12-8 (c) (excluding subparas)                       | <b>Same as above</b>   | All approach segments | See PBN Capability Description | [...] The airworthiness applicant must ensure the displayed RNAV(GPS) approach is in the primary field of view, in the proper sequence, unambiguous, and does not create detrimental clutter.   | Inspection           | As above.  |                         |          |
| 12-8 (c)(2)   | <b>Same as above</b>   | All approach segments | See PBN Capability Description | When installing equipment with final approach segment step-down fixes in the onboard navigation database, the display integration must: <ul style="list-style-type: none"> <li>• Be accessible and readable by all required flight crewmembers;</li> <li>• Clearly depict and label the aircraft's track;</li> <li>• Clearly label displayed waypoints, fixes and numeric information with sufficient detail to enable a pilot to discern a step-down fix from other fixes on a procedure.</li> </ul> | Inspection           | As above.  |                         |          |
| A12-8 c (3) First criterion                         | <b>Same as above</b>   | All approach segments | See PBN Capability Description | The suggested optimum implementation is showing final approach segment step-down fixes for LNAV and LP approaches, but not showing final approach segment step-down fixes during an LNAV/VNAV or LPV approach.  | Flight Test          | Final approach segment step-down fixes are displayed during LNAV/VNAV approaches. They are not displayed during an LPV approach.   |                         |          |
| 12-8 c (3) second criterion                         | <b>Same as above</b>   | All approach segments | See PBN Capability Description | [...] When displaying distance/bearing/track to a step-down fix on the LPV final approach segment (i.e., after crossing the final approach fix), the equipment must also provide a readily available, clear, unambiguous indication of distance/bearing/track to the LTP/FTP. Due consideration should be given to the cockpit configuration and display capabilities during the airworthiness approval process.  | Flight Test          | The MAP page shows the step-down fix name, distance and track in a callout box attached to the fix. The feature is not selectable. Non-interference with LPV path construction will be demonstrated in flight. |                         |          |
| 12-8 (d)  | <b>Same as above</b>   | All approach segments | See PBN Capability Description | [...] airworthiness applicants must include language for a limitation in the AFM(S)/ RFM(S) (or equivalent documentation) requiring the flight crew to use the primary barometric altimeter to comply with a final approach segment step-down fix altitude restriction during an LNAV, LP, or non-ILS conventional approach. [...]  | AFM                  | This is a limitation in the current AFM.   |                         |          |
| TAA Advisory 2019-05, Additional Technical Criteria | <b>Same as above</b>   | All approach segments | See PBN Capability Description | 5. Inoperative Equipment. The effect of inoperative equipment on the PBN capability must be assessed and if necessary addressed by AFM limitations, or the MEL.   | Inspection           | Display of step-down fixes will be assessed with any one MFD inoperative.  |                         |          |