

APPROACH USING FINAL APP GUIDANCE

Ident.: PRO-NOR-SOP-18-C-C-00014521.0002001 / 29 MAY 13

Applicable to: ALL

GENERAL

The following items are to be performed in addition to previous SOP chapters in the following cases:

- RNAV(GNSS) approaches with LNAV and LNAV/VNAV minima
- Conventional approaches based on VOR or NDB using FINAL APP guidance.

Ident.: PRO-NOR-SOP-18-C-C-00014522.0003001 / 09 SEP 14

Applicable to: ALL

AIRCRAFT EQUIPMENT

For RNAV(GNSS) approaches, *Refer to PRO-SPO-51 RNP APCH / RNAV(GNSS) - Required RNP APCH Equipment*

Ident.: PRO-NOR-SOP-18-C-C-00015860.0001001 / 09 SEP 14

Applicable to: ALL

FLIGHT PREPARATION

For RNAV(GNSS) approaches, GPS PRIMARY availability should be confirmed.
Refer to PRO-NOR-SOP-02 GPS PRIMARY Availability (If Installed)

Ident.: PRO-NOR-SOP-18-C-C-00014524.0002001 / 09 NOV 21

Applicable to: ALL

DESCENT PREPARATION

WEATHER AND LANDING INFORMATION.....OBTAIN | PM

- L2** - *The FMS vertical profile does not take into account the effect of low OAT. Therefore, vertical managed guidance:*
- *Must not be used when the actual OAT is below the minimum temperature indicated on the approach chart or defined by the Operator, or*
 - *May not be used when temperature corrections are required (FINAL APP mode may not engage)*
- *For RNAV (GNSS) approach with LNAV VNAV minima, use of QNH from a remote station is prohibited.*

- L1 F-PLN A page..... CHECK | PF-PM
- L2 - If a **TOO STEEP PATH** is displayed after the FDP, do not use FINAL APP guidance for approach. Use **NAV FPA**, **TRK FPA** or **FLS** for approach
 - 0.1 degree of difference between the MCDU and the charted final vertical path is acceptable
 - 1 degree of difference between the MCDU and the charted final lateral track is acceptable.

Note: A higher lateral track value can be acceptable if the navigation database has been validated to exclude potential coding error

 - 3 degree of difference between the MCDU and the charted final lateral track is acceptable for conventional radio NAVAID approach.
- L1 PROG page.....COMPLETE | PF-PM
- L2 Insert the reference RWY threshold in the BRG/DIST field for position monitoring during approach.
- L1 GO-AROUND STRATEGY.....REVIEW | PF
- L2 The briefing should include a review of the "Management of Degraded Navigation" chapter.

Ident.: PRO-NOR-SOP-18-C-C-00014525.0003001 / 22 NOV 21
 Applicable to: ALL

DESCENT

At 10 000 ft AAL :

- NAV ACCURACY.....CHECK | PF
- L2 If NAV accuracy is **LOW**, use **TRK FPA** mode for approach (Refer to APPR using FPA guidance).
- L1 ● **For RNAV(GNSS) approach:**
 - GPS PRIMARY.....CHECK | PF
 - L2 **GPS PRIMARY** must be available on at least one FMS.
- L1 BARO REF.....SET | PF
- L2 The vertical guidance requires a precise BARO setting. The maximum acceptable discrepancy between altimeters is 100 ft.

Ident.: PRO-NOR-SOP-18-C-C-00014526.0002001 / 09 NOV 21
 Applicable to: ALL

INITIAL/INTERMEDIATE/FINAL APPROACH

- POSITION.....MONITOR | PF
- L2 Check that ATC clearances allow the aircraft to fly through the capture area of vertical profile. After a radar vectoring, consider a DIR TO RDL IN to sequence the F-PLN.

airhubairlines A318/A319/A320/A321 FLIGHT CREW OPERATING MANUAL	PROCEDURES NORMAL PROCEDURES STANDARD OPERATING PROCEDURES - APPROACH
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L1 APPR pb on FCU.....PRESS | PF

L2 Press the APPR pb when all of the following conditions are satisfied:

- The aircraft is cleared for approach
- TO waypoint is the FDP.

L1 APP NAV.....CHECK ARMED or ENGAGED | PF
 FINAL.....CHECK ARMED | PF

- L2 - Check that the V/DEV scale is displayed on the PFD.
 - At the FDP, a blue arrow on ND indicates that FINAL APP engagement conditions are met.

L1 **At the Final Descent Point :**

FINAL APP.....CHECK ENGAGED | PF
 GO-AROUND ALTITUDE.....SET | BOTH
 FLIGHT PARAMETERS.....MONITOR | PM

- L2 - Monitor XTK error on ND
 - Monitor V/DEV on PFD
 - Crosscheck distances versus altitudes as published on the charts
 - If approaching on a conventional radio NAVAID procedure, monitor the lateral and vertical guidance using raw data
 - The PM calls out if excessive deviation occurs:
 - XTK > 0.1 NM
 - V/DEV > ½ dot
 On the vertical scale, one dot corresponds to 100 ft. Thus ½ dot is 50 ft.
 For additional information on the associated standard callouts, Refer to PRO-NOR-SCO Approach.

Ident.: PRO-NOR-SOP-18-C-C-00015015.0001001 / 09 NOV 21
 Applicable to: ALL

AT ENTERED MINIMUM +100 FT

ONE HUNDRED ABOVE.....MONITOR OR ANNOUNCE | PM

Ident.: PRO-NOR-SOP-18-C-C-00014527.0008001 / 09 NOV 21
 Applicable to: 9H-GTS, 9H-HUB

AT ENTERED MINIMUM

MINIMUM.....MONITOR OR ANNOUNCE | PM

- L2 Below minimum, the visual references must be the primary references until landing.
 For more information regarding transition to visual references, Refer to FCTM/PR-NP-SOP-250 Transition to Visual References.

L1 ■ **If visual references are sufficient:**
 CONTINUE..... ANNOUNCE | PF

At the latest at the MAP or Minimum Use Height of the AP (whichever occurs first):

AP..... OFF | PF

- L2**
- For Minimum Use Height of the AP, Refer to LIM-AFS-10 Autopilot Function
 - At minimum -50 ft, if the AP is still engaged, the message **DISCONNECT AP FOR LDG** pulses on the FMA to remind the flight crew that automatic landing is not available.

L1 FD..... AS RQRD | PF

CAUTION - From minima down to the MAP, the FD provides an additional guidance.
 The FD must be switched off if the guidance is not relevant or not followed
 - After the MAP, disregard the FD as it reverts to HDG V/S.

■ **If visual references are not sufficient:**

GO-AROUND..... ANNOUNCE | PF

L2 Initiate a go-around.

Ident.: PRO-NOR-SOP-18-C-C-00014527.0010001 / 09 NOV 21
 Applicable to: 9H-EMU

AT ENTERED MINIMUM

MINIMUM..... MONITOR OR ANNOUNCE | PM

- L2** Below minimum, the visual references must be the primary references until landing.
 For more information regarding transition to visual references, Refer to FCTM/PR-NP-SOP-250 Transition to Visual References.

L1 ■ **If visual references are sufficient:**

CONTINUE..... ANNOUNCE | PF

At the latest at the MAP or Minimum Use Height of the AP (whichever occurs first):

AP..... OFF | PF

- L2** For Minimum Use Height of the AP, Refer to LIM-AFS-10 Autopilot Function.

L1 FD..... AS RQRD | PF

CAUTION - From minima down to the MAP, the FD provides an additional guidance.
 The FD must be switched off if the guidance is not relevant or not followed
 - After the MAP, disregard the FD as it reverts to HDG V/S.

■ **If visual references are not sufficient:**

GO-AROUND..... ANNOUNCE | PF

L2 Initiate a go-around.

MANAGEMENT OF DEGRADED NAVIGATION

- **For VOR and NDB approaches, be prepared to continue the approach with reference to appropriate raw data by reverting to:**
 - NAV-FPA, if the vertical guidance is not satisfactory
 - TRK-FPA, if the lateral guidance is not satisfactory.
- **For RNAV(GNSS) approaches with LNAV minima:**
 - Use the appropriate remaining AP/FD in the following cases:
 - GPS PRIMARY LOST on one ND
 - NAV ACCUR DOWNGRAD on one ND.
 - Discontinue the approach in the following cases, if external visual references are not sufficient to proceed visually:
 - GPS PRIMARY LOST on both NDs
 - XTK > 0.3 NM
 - NAV FM/GPS POS DISAGREE
 - NAV ACCUR DOWNGRAD on both NDs.
 - Be prepared to continue the approach by reverting to NAV-FPA, if the vertical guidance is not satisfactory.
- **For RNAV(GNSS) approaches with LNAV/VNAV minima:**
 - Use the appropriate remaining AP/FD in the following cases:
 - GPS PRIMARY LOST on one ND
 - NAV ACCUR DOWNGRAD on one ND.
 - Discontinue the approach in the following cases, if external visual references are not sufficient to proceed visually:
 - GPS PRIMARY LOST on both NDs
 - XTK > 0.3 NM
 - NAV FM/GPS POS DISAGREE
 - NAV ACCUR DOWNGRAD on both NDs.
 - Discontinue the approach in the case of deviation of 75 ft below the vertical path (V/DEV > ¼ dot).