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|  | Ansökan PBN  (RNP 0,3 endast för helikopterverksamhet) *Version 2024-10-01* |  |
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| Operatör: | | |
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| Tillståndsnummer: | Ifylld EASA Form 2 | |
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|  | | Bilaga nr: |
| Relevant elements defined in the mandatory part of the Operational Suitability Data (OSD) established in accordance with Regulation (EU) No 748/2012 are taken into account | |  |
| Transportstyrelsen | | |
| Ärendenummer: | Handläggare: | |
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| Berörda sektioner/samråd: | | |
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| Information | | |
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| Denna checklista är avsedd som stöd vid ansökan om Performance Based Navigation, PBN, i Operations Specifications benämnd Complex PBN. De PBN-specifikationer som är föremål för godkännande är:   * RNP-AR APCH, ”kurvade inflygningar” * **RNP 0,3 endast för helikopterverksamhet**   *Observera att om det skulle finnas olikheter mellan denna checklista och aktuell regel på EUR LEX alternativt mellan checklistan och av EASA presenterat AMC och GM så gäller originaltexterna.*  Övriga PBN-specifikationer kräver idag inget godkännande; operativa procedurer, träningsprogram och MEL skall detaljerat beskrivas i relevanta delar av operatörens manualverk och skickas in till myndigheten som revisioner för granskning. För mer information, se CAT.OP.MPA.126 med tillhörande AMC.  *Observera att denna checklista enbart kan användas för ansökan om RNP 0,3 för helikopterverksamhet, då den saknar referens till delar av kraven som ska uppfyllas för att kunna få ett godkännande för RNP-AR APCH.*  Vägledande material som refereras till i (EU) 965/2012:   * ICAO Doc 9613, PBN Manual * ICAO Doc 9997, PBN Ops Approval Manual   Varje regelparagraf i detta dokument följs av en ruta där operatören anger var i manualverket paragrafen omhändertagits och detta ska skrivas på detaljnivå för att underlätta och påskynda granskning och handläggning; att exempelvis endast ange OM-A kap 8 är inte acceptabelt. Ange flera referenser där så finns.  Det finns punkter i AMC som nämner ”approach operation” specifikt, men där omständigheterna kan vara relevanta att beakta även vid flygning på en ”low level route”.   |  | | --- | | Där grönmarkerade rutor förekommer ska relevanta bilagor sändas in. Bilagans nummer ska anges i checklistan. | | | |

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| SPA.GEN.100 |
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| (a) The competent authority for issuing a specific approval shall be:  (1) for the commercial operator the authority of the Member State in which the operator has its principal place of business;  (2) for the non-commercial operator the authority of the State in which the operator is established or residing.  b) Notwithstanding (a)(2), for the non-commercial operator using aircraft registered in a third country, the applicable requirements under this Annex for the approval of the following operations shall not apply if these approvals are issued by a third country State of Registry:  (1) Performance-based navigation (PBN);  (2) Minimum operational performance specifications (MNPS);  (3) Reduced vertical separation minima (RVSM) airspace |

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| SPA.GEN.105 Application for a specific approval | | |
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| (a) The operator applying for the initial issue of a specific approval shall provide to the competent authority the documentation required in the applicable Subpart, together with the following information: | | |
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|  |  | TS notes: |
| (1) the name, address and mailing address of the applicant; | Ref EASA Form 2 |  |
|  | Bilaga nr: | TS notes: |
| (2) a description of the intended operation. |  |  |
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| (b) The operator shall provide the following evidence to the competent authority: | | |
|  |  | TS notes: |
| (1) compliance with the requirements of the applicable Subpart; | This compliance checklist |  |
|  |  | TS notes: |
| (2) that the relevant elements defined in the mandatory part of the operational suitability data established in accordance with Regulation (EU) No 748/2012 are taken into account. | Ref. header of this CCL |  |
|  | Ref. in manual | TS notes: |
| (c) The operator shall retain records relating to (a) and (b) at least for the duration of the operation requiring a specific approval, or, if applicable, in accordance with Annex III (Part-ORO). |  |  |

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| AMC1 SPA.GEN.105(a) | | |
| DOCUMENTATION | | |
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| (a) Operating procedures should be documented in the operations manual.  (b) If an operations manual is not required, operating procedures may be described in a manual specifying procedures (procedures manual). If the aircraft flight manual (AFM) or the pilot operating handbook (POH) contains such procedures, they should be considered as acceptable means to document the procedures. | | |
| SPA.GEN.110 Priviliges of an operator holding a specific approval | | |
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| The scope of the activity that an operator is approved to conduct shall be documented and specified:  (a) for operators holding an air operator certificate (AOC) in the operations specifications to the AOC;  (b) for all other operators in the list of specific approvals. | | |
| SPA GEN.115 Changes to a specific approval | | |
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| When the conditions of a specific approval are affected by changes, the operator shall provide the relevant documentation to the competent authority and obtain prior approval for the operation. | | |
| SPA.GEN.120 Continued validity of a specific approval | | |
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| Specific approvals shall be issued for an unlimited duration and shall remain valid subject to the operator remaining in compliance with the requirements associated with the specific approval and taking into account the relevant elements defined in the mandatory part of the operational suitability data established in accordance with Regulation (EU) No 748/2012. | | |
| SPA.PBN.100 PBN operations | | |
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| a) An approval is required for each of the following PBN specifications:  (1) RNP AR APCH; and  (2) RNP 0.3 for helicopter operation.  (b) An approval for RNP AR APCH operations shall allow operations on public instrument approach  procedures which meet the applicable ICAO procedure design criteria.  (c) A procedure-specific approval for RNP AR APCH or RNP 0.3 shall be required for private instrument  approach procedures or any public instrument approach procedure that does not meet the applicable ICAO procedure design criteria, or where required by the Aeronautical Information Publication (AIP) or the competent authority. | | |
| GM1 SPA.PBN.100 PBN Operations | | |
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| GENERAL  (a) PBN operations are based on performance requirements, which are expressed in navigation specifications (RNAV specification and RNP specification) in terms of accuracy, integrity, continuity, availability and functionality needed for the proposed operation in the context of a particular airspace concept.  Table 1 provides a simplified overview of:  (1) PBN specifications and their applicability for different phases of flight; and  (2) PBN specifications requiring a specific approval.  (b) More detailed guidance material for the operational use of PBN applications can be found in ICAO Doc 9613 Performance-Based Navigation (PBN) Manual.  (c) Guidance material for the design of RNP AR APCH procedures can be found in ICAO Doc 9905 RNP AR Procedure Design Manual.  (d) Guidance material for the operational approval of PBN operations can be found in ICAO Doc 9997 Performance-Based Navigation (PBN) Operational Approval Manual. | | |
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| SPA.PBN.105 PBN operational approval | | |
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| To obtain a PBN specific approval from the competent authority, the operator shall provide evidence that: | | |
|  | Bilaga nr: | TS notering: |
| (a) the relevant airworthiness approval, suitable for the intended PBN operation, is stated in the AFM or other document that has been approved by the certifying authority as part of an airworthiness assessment or is based on such approval; |  |  |
|  | Detaljerade referenser i OM: | TS notering: |
| (b) a training programme for the flight crew members and relevant personnel involved in the flight preparation has been established; |  |  |
|  | Bilaga nr: | TS notering: |
| (c) a safety assessment has been carried out; |  |  |
|  | Detaljerade referenser i OM: | TS notering: |
| (d) operating procedures have been established specifying:  (1) the equipment to be carried, including its operating limitations and appropriate entries in the minimum equipment list (MEL); |  |  |
|  | Detaljerade referenser i OM: | TS notering: |
| (2) flight crew composition, qualification and experience; |  |  |
|  | Detaljerade referenser i OM: | TS notering: |
| (3) normal, abnormal and contingency procedures; and |  |  |
|  | Detaljerade referenser i OM: | TS notering: |
| (4) electronic navigation data management; |  |  |
|  | Detaljerade referenser i OM: | TS notering: |
| (e) a list of reportable events has been specified; |  |  |
| AMC1 SPA.PBN.105(b) PBN operational approval | | |
| FLIGHT CREW TRAINING AND QUALIFICATIONS – GENERAL PROVISIONS | | |
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| (b) Ground training | | |
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| (5) AFM information and operating procedures | | |
|  | Detaljerade referenser i OM: | TS notering: |
| (i) Based on the AFM or other aircraft eligibility evidence, the flight crew should address normal and abnormal operating procedures, responses to failure alerts, and any limitations, including related information on RNP modes of operation. |  |  |
|  | Detaljerade referenser i OM: | TS notering: |
| (iii) The manuals used by the flight should contain this information. |  |  |
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| (c) Initial FSTD training | | |
|  | Detaljerade referenser i OM: | TS notering: |
| (1) In addition to ground training, flight crew members should receive appropriate practical skill training in an FSTD. |  |  |
|  | Detaljerade referenser i OM: | TS notering: |
| (2) FSTD training should address the following specific elements: |  |  |
|  | Detaljerade referenser i OM: | TS notering: |
| (ii) use of aircraft RADAR, TAWS or other avionics systems to support the flight crew’s track monitoring and weather and obstacle avoidance; |  |  |
|  | Detaljerade referenser i OM: | TS notering: |
| (viii) monitoring of flight technical error (FTE) and related go-around operation; |  |  |
|  | Detaljerade referenser i OM: | TS notering: |
| (ix) handling of loss of GNSS signals during a procedure; |  |  |
|  | Detaljerade referenser i OM: | TS notering: |
| (x) handling of engine failure during the approach operation; |  |  |
|  | Detaljerade referenser i OM: | TS notering: |
| (xi) applying contingency procedures for a loss of RNP capability during a missed approach. Due to the lack of navigation guidance, the training should emphasise the flight crew contingency actions that achieve separation from terrain and obstacles. |  |  |
| TRAINING FOR PERSONNEL INVOLVED IN THE FLIGHT PREPARATION | | |
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| (h) The operator should ensure that training for flight operation officers/dispatchers should include: | | |
|  | Detaljerade referenser i OM: | TS notering: |
| (4) MEL requirements; |  |  |
|  | Detaljerade referenser i OM: | TS notering: |
| (5) aircraft performance, and navigation signal availability, e.g. GNSS RAIM/predictive RNP capability tool, for destination and alternate aerodromes. |  |  |
| AMC2 SPA.PBN.105(d) PBN operational approvalFLIGHT CONSIDERATIONS | | |
|  | Detaljerade referenser i OM: | TS notering: |
| (c) RNP management  Operating procedures should ensure that the navigation system uses the appropriate RNP values throughout the approach operation. If the navigation system does not extract and set the navigation accuracy from the on-board navigation database for each segment of the procedure, then operating procedures should ensure that the smallest navigation accuracy required to complete the approach or the missed approach is selected before initiating the approach operation (e.g. before the IAF). Different IAFs may have different navigation accuracy, which are annotated on the approach chart. |  |  |
|  | Detaljerade referenser i OM: | TS notering: |
| (f) Approach procedure confirmation  The flight crew should confirm that the correct procedure has been selected. This process includes confirmation of the waypoint sequence, reasonableness of track angles and distances, and any other parameters that can be altered by the flight crew, such as altitude or speed constraints. A navigation system textual display or navigation map display should be used. |  |  |
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| (g) Track deviation monitoring | | |
|  | Detaljerade referenser i OM: | TS notering: |
| (2) Vertical deviation should be monitored above and below the glide-path; the vertical deviation should be within ±75 ft of the glide-path during the final approach segment. |  |  |
|  | Detaljerade referenser i OM: | TS notering: |
| (3) Flight crew should execute a missed approach operation if:  (i) the lateral deviation exceeds one time the RNP value; or  (ii) the deviation below the vertical path exceeds 75 ft or half-scale deflection where angular deviation is indicated, at any time; or  (iii) the deviation above the vertical path exceeds 75 ft or half-scale deflection where angular deviation is indicated; at or below 1 000 ft above aerodrome level; unless the pilot has in sight the visual references required to continue the approach operation. |  |  |

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|  | Detaljerade referenser i OM: | TS notering: |
| (5) For installations that use a CDI for lateral path tracking, the AFM should state which navigation accuracy and operations the aircraft supports and the operational effects on the CDI scale. The flight crew should know the CDI full-scale deflection value. The avionics may automatically set the CDI scale (dependent on phase of flight) or the flight crew may manually set the scale. If the flight crew manually selects the CDI scale, the operator should have procedures and training in place to assure the selected CDI scale is appropriate for the intended RNP operation. The deviation limit should be readily apparent given the scale (e.g. full-scale deflection). |  |  |
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| (h) System cross-check | | |
|  | Detaljerade referenser i OM: | TS notering: |
| (1) The flight crew should ensure the lateral and vertical guidance provided by the navigation system is consistent. |  |  |
|  | Detaljerade referenser i OM: | TS notering: |
| (j) Temperature compensation  For aircraft with temperature compensation capabilities, the flight crew may disregard the temperature limits on RNP procedures if the operator provides pilot training on the use of the temperature compensation function. It should be noted that a temperature compensation by the system is applicable to the VNAV guidance and is not a substitute for the flight crew compensating for temperature effects on minimum altitudes or DA/H. The flight crew should be familiar with the effects of the temperature compensation on intercepting the compensated path as described in EUROCAE ED-75C/RTCA DO-236C Appendix H. |  |  |
|  | Detaljerade referenser i OM: | TS notering: |
| (k) Altimeter setting  Due to the performance-based obstruction clearance inherent in RNP instrument procedures, the flight crew should verify that the most current aerodrome altimeter is set prior to the FAF. The operator should take precautions to switch altimeter settings at appropriate times or locations and request a current altimeter setting if the reported setting may not be recent, particularly at times when pressure is reported or expected to be rapidly decreasing. Execution of an RNP operation necessitates the current altimeter setting for the aerodrome of intended landing. Remote altimeter settings should not be allowed. |  |  |

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| (l) Altimeter cross-check | | |
|  | Detaljerade referenser i OM: | TS notering: |
| (1) The flight crew should complete an altimetry cross-check ensuring both pilots’ altimeters agree within ±100 ft prior to the FAF but no earlier than when the altimeters are set for the aerodrome of intended landing. If the altimetry cross-check fails, then the approach operation should not be continued. |  |  |
|  | Detaljerade referenser i OM: | TS notering: |
| (2) This operational cross-check should not be necessary if the aircraft systems automatically compare the altitudes to within 75 ft. |  |  |
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| (m) Missed approach operation  Where possible, the missed approach operation should necessitate RNP 1.0. The missed approach portion of these procedures should be similar to a missed approach of an RNP APCH procedure. | | |
|  | Detaljerade referenser i OM: | TS notering: |
| (1) In many aircraft, executing a missed approach activating take-off/go-around (TOGA) may cause a change in lateral navigation. In many aircraft, activating TOGA disengages the autopilot and flight director from LNAV guidance, and the flight director reverts to trackhold derived from the inertial system. LNAV guidance to the autopilot and flight director should be re-engaged as quickly as possible. |  |  |
|  | Detaljerade referenser i OM: | TS notering: |
| (2) Flight crew procedures and training should address the impact on navigation capability and flight guidance if the pilot initiates a missed approach while the aircraft is in a turn. When initiating an early missed approach operation, the flight crew should follow the rest of the approach track and missed approach track unless a different clearance has been issued by ATC. The flight crew should also be aware that RF legs are designed based on the maximum true airspeed at normal altitudes, and initiating an early missed approach operation will reduce the manoeuvrability margin and potentially even make holding the turn impractical at missed approach speeds. |  |  |
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| (n) Contingency procedures | | |
|  | Detaljerade referenser i OM: | TS notering: |
| (2) Failure on approach  The operator’s contingency procedures should address at least the following conditions:  (i) failure of the area navigation system components, including those affecting lateral and vertical deviation performance (e.g. failures of a GPS sensor, the flight director or autopilot);  (ii) loss of navigation signal-in-space (loss or degradation of external signal). |  |  |
| AMC3 SPA.PBN.105(d) PBN operational approvalNAVIGATION DATABASE MANAGEMENT | | |
|  | Detaljerade referenser i OM: | TS notering: |
| (c) The operator should implement procedures that ensure timely distribution and insertion of current and unaltered electronic navigation data to all aircraft that require it. |  |  |
| AMC1 SPA.PBN.105(e) PBN operational approvalREPORTABLE EVENTS | | |
|  | Detaljerade referenser i OM: | TS notering: |
| The operator should report events which are listed in AMC2 ORO.GEN.160. |  |  |