



CONFORMANCE CHECKLIST FOR PERFORMANCE BASED NAVIGATION APPROVAL

INSTRUCTIONS

Print or type. Do not write in shaded areas, these are for CAAV use only. Submit original only to the Flight Safety Standards Department or a CAAV Authorized Person. If additional space is required, use an attachment

A. APPLICANT INFORMATION:		
1. NAME OF APPLICANT OR HOLDER	2. DATE OF APPLICATION	3. AIRCRAFT M/M/S

B. CONFORMANCE FOR PBN AUTHORIZATION: <i>(Check all that apply)</i> <input type="checkbox"/> Initial Request <input type="checkbox"/> Additional Request					
<input type="checkbox"/>	1. RNAV/RNP-10	<input type="checkbox"/>	5. RNP-4	<input type="checkbox"/>	9. RNP 0.3
<input type="checkbox"/>	2. RNAV-5	<input type="checkbox"/>	6. RNP-2	<input type="checkbox"/>	10. RNP APRCH
<input type="checkbox"/>	3. RNAV-2	<input type="checkbox"/>	7. Advanced RNP	<input type="checkbox"/>	11. RNP-AR-APRCH
<input type="checkbox"/>	4. RNAV-1	<input type="checkbox"/>	8. RNP-1	<input type="checkbox"/>	12. Baro VNAV

C	Maintenance Documents	Applicable	Not Applicable	Manual References Chapter, Paragraph	Acceptable
1	Relevant parts of the MEL have been revised to reflect system requirements (redundancy levels) appropriate to the intended PBN operations?	<input type="checkbox"/>	<input type="checkbox"/>		
2	Proposed maintenance program includes all PBN related maintenance requirements prescribed by the manufacturer or design organization?	<input type="checkbox"/>	<input type="checkbox"/>		

D	PBN Maintenance Procedures	Applicable	Not Applicable	Manual References Chapter, Paragraph	Acceptable
1	Procedures for handling and storage of PBN database files including uploads to the aircraft?	<input type="checkbox"/>	<input type="checkbox"/>		
2	Procedures for operating equipment for handling of the PBN database (use of, handling and periodic testing)?	<input type="checkbox"/>	<input type="checkbox"/>		
3	Procedures for downgrading a non-compliant aircraft?	<input type="checkbox"/>	<input type="checkbox"/>		
4	Procedures for monitoring and reporting of repetitive defects?	<input type="checkbox"/>	<input type="checkbox"/>		
5	Procedures for reporting to FOCA?	<input type="checkbox"/>	<input type="checkbox"/>		

E	Database Integrity Assurance Procedures	Applicable	Not Applicable	Manual References Chapter, Paragraph	Acceptable
1	Operator procedures for nav database supplier evaluation?	<input type="checkbox"/>	<input type="checkbox"/>		
2	Operator procedures for integrity checks and use of software tools?	<input type="checkbox"/>	<input type="checkbox"/>		
3	Operator procedures for reporting discrepancies to the database supplier?	<input type="checkbox"/>	<input type="checkbox"/>		
4	Operator procedures for notifying flight crews of irregularities with nav database?	<input type="checkbox"/>	<input type="checkbox"/>		
5	Operator process for updating the navigation database?	<input type="checkbox"/>	<input type="checkbox"/>		

F	Navigational Databases	Applicable	Not Applicable	Manual References Chapter, Paragraph	Acceptable
1	Service provider arrangements ensure the packed navigation databases are delivered to the operator at least one week prior to the AIRAC effective date?	<input type="checkbox"/>	<input type="checkbox"/>		
2	Company policy/procedures require that the correct version of the navigation database is loaded on the aircraft in a timely manner?	<input type="checkbox"/>	<input type="checkbox"/>		
3	Company policy/procedures require that any database errors/omissions reported by the suppliers are addressed expeditiously by flight crew briefing/removal of procedures, etc	<input type="checkbox"/>	<input type="checkbox"/>		
4	Company policy/procedures require that any database errors/omissions reported by the flight crew are addressed expeditiously by flight crew briefing/removal of procedures and reported back to the database suppliers	<input type="checkbox"/>	<input type="checkbox"/>		
5	Company policy/procedures require that the version of the loaded navigation database is checked for validity by the flight crew prior to departure	<input type="checkbox"/>	<input type="checkbox"/>		
6	Company policy/procedures require that prior to use after being loaded into the area navigation system, the procedure is checked against the chart, by the flight crew, for waypoint sequence, waypoint transition, leg length, magnetic bearing, altitude constraint and speed constraint	<input type="checkbox"/>	<input type="checkbox"/>		

G	PBN Preflight Planning Requirements	Applicable	Not Applicable	Manual References Chapter, Paragraph	Acceptable
1	Company policy/procedures require that the on-board navigation database, where applicable, must be current and must contain the appropriate procedures, routes, waypoints and NAVAIDS	<input type="checkbox"/>	<input type="checkbox"/>		
2	Company policy/procedures require that a check must be carried out on the availability of appropriate NAVAIDS, including, where appropriate, RNP or RAIM prediction. Any relevant NOTAMs must be addressed	<input type="checkbox"/>	<input type="checkbox"/>		
3	Company policy/procedures require that an alternate approach must be identified in the event of loss of PBN capability	<input type="checkbox"/>	<input type="checkbox"/>		
4	Company policy/procedures require flight crew verification of aeroplane PBN-RNAV/RNP approval for operations planned?	<input type="checkbox"/>	<input type="checkbox"/>		
5	Company policy/procedures require flight crew verification of applicable PBN-RNAV/RNP time limits for the operations planned?	<input type="checkbox"/>	<input type="checkbox"/>		
6	Company policy/procedures require flight crew verification of applicable requirements for GPS (RAIM, FDE)?	<input type="checkbox"/>	<input type="checkbox"/>		
7	Company policy/procedures require that the flight plan should contain the appropriate statements of capability applicable to the PBN operations anticipated during the flight	<input type="checkbox"/>	<input type="checkbox"/>		
H	PBN Preflight Procedures	Applicable	Not Applicable	Manual References Chapter, Paragraph	Acceptable
1	Company policy/procedures require that the appropriate installed equipment must be serviceable?	<input type="checkbox"/>	<input type="checkbox"/>		
2	Company policy/procedures require flight crew verification of NAV database validity/currency?	<input type="checkbox"/>	<input type="checkbox"/>		
3	Company policy/procedures require flight crew external aircraft inspection of navigation system antennas?	<input type="checkbox"/>	<input type="checkbox"/>		
4	Company policy/procedures require flight crew review of technical log regarding possible PBN restrictions?	<input type="checkbox"/>	<input type="checkbox"/>		
5	Company policy/procedures require, if applicable, flight crew uses MEL to assess any maintenance defects that might restrict PBN operations?	<input type="checkbox"/>	<input type="checkbox"/>		
I	Prior to Commencing the PBN Operation	Applicable	Not Applicable	Manual References Chapter, Paragraph	Acceptable
1	Company policy/procedures require that if all the criteria are not met, the PBN procedure must not be requested	<input type="checkbox"/>	<input type="checkbox"/>		
2	Company policy/procedures require that if offered a clearance for a procedure whose criteria cannot be met, ATC must be advised "UNABLE..."	<input type="checkbox"/>	<input type="checkbox"/>		
3	Company policy/procedures require that the loaded procedure must be checked against the chart	<input type="checkbox"/>	<input type="checkbox"/>		
4	Company policy/procedures require that it must be confirmed that the correct sensor has been selected and any NAVAID de-selection is complete, if required	<input type="checkbox"/>	<input type="checkbox"/>		
5	Company policy/procedures require that it must be confirmed that a suitable RNP value has been selected, if appropriate, and the navigation performance is adequate for the procedure	<input type="checkbox"/>	<input type="checkbox"/>		
6	Flight crew procedures to review possible alternate routings, especially those required by contingency procedures?	<input type="checkbox"/>	<input type="checkbox"/>		
J	During the PBN Operation	Applicable	Not Applicable	Manual References Chapter, Paragraph	Acceptable
1	Company policy/procedures require that manufacturer's instructions/procedures must be adhered to	<input type="checkbox"/>	<input type="checkbox"/>		
2	Company policy/procedures require that appropriate displays must have been selected	<input type="checkbox"/>	<input type="checkbox"/>		
3	Company policy/procedures require that lateral and, where appropriate, vertical deviation must not exceed prescribed values	<input type="checkbox"/>	<input type="checkbox"/>		
4	Flight crew procedures to re-assess minimum NAV equipment and communication requirements before entering a defined area using PBN?	<input type="checkbox"/>	<input type="checkbox"/>		
5	Flight crew procedure for positive position check prior to entering the PBN area?	<input type="checkbox"/>	<input type="checkbox"/>		
6	Company policy/procedures require that altitude and speed constraints must be observed	<input type="checkbox"/>	<input type="checkbox"/>		
7	Flight crew cross-check procedures to identify NAV errors?	<input type="checkbox"/>	<input type="checkbox"/>		

8	Company policy/procedures require that the procedure must be discontinued if there are integrity alerts, if the navigation display is flagged as invalid or if the integrity alerting function is not available	<input type="checkbox"/>	<input type="checkbox"/>		
9	If applicable, Flight crew procedures for use of INS/IRS NAV systems without automatic radio NAV update?	<input type="checkbox"/>	<input type="checkbox"/>		
10	Flight crew procedures for use of GPS?	<input type="checkbox"/>	<input type="checkbox"/>		

K	In Event of a Contingency	Applicable	Not Applicable	Manual References Chapter, Paragraph	Acceptable
1	Company policy/procedures require that ATC must be advised of any loss of PBN capability and a proposed course of action	<input type="checkbox"/>	<input type="checkbox"/>		
2	Contingency procedures applicable to the type of PBN equipment and defined airspace?	<input type="checkbox"/>	<input type="checkbox"/>		
3	Contingency procedures for navigation errors not associated with transitions from an inertial navigation mode to a radio navigation mode	<input type="checkbox"/>	<input type="checkbox"/>		
4	Contingency procedures for unexpected deviations in lateral or vertical flight path attributed to incorrect navigation data	<input type="checkbox"/>	<input type="checkbox"/>		
5	Contingency procedures for significant misleading information without failure warning	<input type="checkbox"/>	<input type="checkbox"/>		
6	Contingency procedures for total loss or multiple failures of the PBN navigation equipment	<input type="checkbox"/>	<input type="checkbox"/>		
7	Contingency procedures for problems with ground navigation facilities leading to significant navigation errors	<input type="checkbox"/>	<input type="checkbox"/>		
8	Contingency procedures for a communications failure	<input type="checkbox"/>	<input type="checkbox"/>		
9	Flight crew guidance for reversion to and use of other NAV aids in case of PBN failure?	<input type="checkbox"/>	<input type="checkbox"/>		

L	After-Flight Procedures	Applicable	Not Applicable	Manual References Chapter, Paragraph	Acceptable
1	Company policy/procedures require that the required reporting of navigation errors or malfunctions should be completed as applicable	<input type="checkbox"/>	<input type="checkbox"/>		

M	PBN Training: Flight Crew	Applicable	Not Applicable	Manual References Chapter, Paragraph	Acceptable
1	Qualification requirements for flight crews for PBN operations?	<input type="checkbox"/>	<input type="checkbox"/>		
2	Training program requiring initial and recurrent training for flight crew tasks and decisions in PBN operations?	<input type="checkbox"/>	<input type="checkbox"/>		
3	Flight crew training curriculums which include PBN training modules with subject elements and minimum events?	<input type="checkbox"/>	<input type="checkbox"/>		
4	Procedures for PBN qualification under supervision with CAAV designated representative or qualified crew member as applicable?	<input type="checkbox"/>	<input type="checkbox"/>		
5	Procedures for re-establishing flight crew PBN qualification / currency after a defined period of in-activity?	<input type="checkbox"/>	<input type="checkbox"/>		

N	PBN Ground Training Elements: Flight Crew	Applicable	Not Applicable	Manual References Chapter, Paragraph	Acceptable
1	<i>Area navigation principles.</i> Area navigation is the basis for all PBN operations, and the same general knowledge is applicable to all navigation specifications. Pilots with previous experience with area navigation operations may not be familiar with some of the more advanced features such as radius to fix (RF) legs, fixed radius transitions, required time of arrival or the application of vertical navigation	<input type="checkbox"/>	<input type="checkbox"/>		
2	<i>Navigation system principles.</i> Flight crews should have a sound knowledge of the navigation system to be used. The relevance of the navigation system to the particular PBN operation should be clearly established. For example, knowledge of inertial navigation and updating is relevant to requirements for some oceanic and remote navigation specifications, as is knowledge of GNSS for RNP APCH operations	<input type="checkbox"/>	<input type="checkbox"/>		
3	<i>Equipment operation and functionality.</i> Considerable variation exists in the operation of navigation equipment, cockpit controls, displays and functionality. Crews with experience on one type of installation or aircraft may require additional training on another type of equipment. Special attention should be paid to the differences between stand-alone GNSS equipment and flight management systems with GNSS updating and degraded modes of operation such as loss of integrity or loss of GNSS	<input type="checkbox"/>	<input type="checkbox"/>		
4	<i>Flight planning.</i> Knowledge of the relevant aspects of each of the navigation specifications that relate to flight planning is required	<input type="checkbox"/>	<input type="checkbox"/>		
5	<i>Operating procedures.</i> The complexity of operating procedures varies	<input type="checkbox"/>	<input type="checkbox"/>		

	considerably between different PBN operations. RNP APCH and RNP AR APCH require a detailed knowledge of standard operating procedures for both normal and non-normal operations				
6	<i>Operating limitations.</i> Operating limitations (e.g. time limits, minimum equipment) vary both between and within the navigation specifications, and flight crews need to be able to recognize this and plan accordingly. Alternative means of navigation or other contingency procedures must be addressed. Flight crews need to be aware of the ATC procedures that may be applicable to the particular PBN operation	<input type="checkbox"/>	<input type="checkbox"/>		

O	PBN Flight Training Elements: Flight Crew	Applicable	Not Applicable	Manual References Chapter, Paragraph	Acceptable
1	<i>En-route (oceanic, remote and continental).</i> In general flight training is not required for en-route operations.	<input type="checkbox"/>	<input type="checkbox"/>		
2	<i>Arrival and departure.</i> Because arrival and departure operations require strict adherence to track during periods of higher workload and may be associated with minimum terrain clearance and reduced route spacing, crews need to be fully conversant with the operation of the navigation system. Consequently, unless crews have significant appropriate operational experience, simulator or flight training must be provided. Particular care should be taken when this type of operation is conducted with stand-alone GNSS equipment where functional limitations require crew intervention.	<input type="checkbox"/>	<input type="checkbox"/>		
3	RNP APCH operations training using stand-alone GNSS equipment, particularly in a single- pilot aircraft, normally requires multiple in-flight exercises, each with preflight and post-flight briefing.	<input type="checkbox"/>	<input type="checkbox"/>		
4	Considerable attention should be given to the programming and management of the navigation system, including in-flight re-programming, holding, multiple approaches, mode selection and recognition, human factors and the navigation system functionality	<input type="checkbox"/>	<input type="checkbox"/>		
5	Approaches conducted in FMS-equipped aircraft are generally much easier to manage because the aircraft are usually equipped with map displays which aid situational awareness.	<input type="checkbox"/>	<input type="checkbox"/>		
6	Additional training should be provided to ensure familiarity and competency in operations which involve changes to the planned approach, system alerting and missed approaches.	<input type="checkbox"/>	<input type="checkbox"/>		
7	Attention should also be given to the method of vertical navigation to LNAV minima, to LNAV/VNAV minima and to LPV minima	<input type="checkbox"/>	<input type="checkbox"/>		
8	RNP AR APCH operations require that all aspects of the operation are carefully addressed and appropriate attention is given to training. The safety of the RNP AR operation is often predicated upon the fact that the crew procedures provide a significant mitigation for a number of the hazards associated with the procedure. However, mitigations vary widely depending upon the cockpit displays and the RNP system functionality.	<input type="checkbox"/>	<input type="checkbox"/>		
9	RNP AR APCH operations require that all aspects of the operation are carefully addressed and appropriate attention is given to training. The safety of the RNP AR operation is often predicated upon the fact that the crew procedures provide a significant mitigation for a number of the hazards associated with the procedure. However, mitigations vary widely depending upon the cockpit displays and the RNP system functionality.	<input type="checkbox"/>	<input type="checkbox"/>		

P	PBN Training: Ground Personnel	Applicable	Not Applicable	Manual References Chapter, Paragraph	Acceptable
1	Qualification requirements for flight dispatchers and other persons supporting PBN operations?	<input type="checkbox"/>	<input type="checkbox"/>		
2	Training program for ground staff requiring initial and recurrent training for tasks supporting PBN operations?	<input type="checkbox"/>	<input type="checkbox"/>		
3	Training curriculums for ground staff which include PBN training modules with subject elements and minimum events?	<input type="checkbox"/>	<input type="checkbox"/>		

Q	PBN Training: Maintenance Personnel	Applicable	Not Applicable	Manual References Chapter, Paragraph	Acceptable
1	Qualification requirements for maintenance personnel supporting PBN operations?	<input type="checkbox"/>	<input type="checkbox"/>		
2	Training program requiring initial and recurrent training for maintenance personnel for tasks supporting PBN operations?	<input type="checkbox"/>	<input type="checkbox"/>		
3	Training curriculums for maintenance personnel which include PBN training modules with subject elements and minimum events?	<input type="checkbox"/>	<input type="checkbox"/>		