

RNAV 10 JOB AID

APPLICATION TO CONDUCT RNAV 10 (RNP 10) OPERATIONS

1. Introduction

This Job Aid was developed to provide operators and inspectors with guidance on the process to be followed by an operator in order to obtain an RNP 10 approval. It shall be used for application by the operator and as an aid for the approval process by the inspector. Reference to the applicable advisory pamphlets and where required the ICAO PBN Manual (DOC9613) will be required.

2. Purposes of the Job Aid

- 2.1 To give operators and inspectors information on the main RNP 10 reference documents.
- 2.2 To provide tables showing the contents of the application, the associated reference paragraphs, the place in the application of the operator where RNP 10 elements are mentioned and columns for inspector comments and follow-up on the status of various RNP 10 elements.

3. Actions Recommended for the inspector and operator

- 3.1 At the pre-application meeting with the operator, the inspector reviews the “basic events of the RNP 10 approval process” described in this Job Aid, in order to provide an overview of the approval process events.
- 3.2 The inspector reviews this Job Aid with the operator in order to establish the form and content of the RNP 10 approval application.
- 3.3 The operator uses this Job Aid as a guide to collect the documents/annexes of the RNP 10 application.
- 3.4 The operator inserts in the Job Aid references showing in what part of its documents are the RNP 10 programme elements located.
- 3.5 The operator submits the Job Aid and the application to the inspector (documents/annexes).
- 3.6 The inspector indicates in the Job Aid whether an item is in compliance or needs corrective action.
- 3.7 The inspector informs the operator as soon as possible when a corrective action by the operator is required.
- 3.8 The operator provides the inspector with the revised material when so requested.

3.9 The CAA provides the operator with the operational specifications (OpSpecs) or a letter of authorisation (LOA), as applicable, when the tasks and documents have been completed.

4. Main reference documents

Reference Documents	Title
Namibia DCA-005/2014	Operational Directive – Performance Based Navigation for Air Operators
Namibia FSS-AOC-AP 120	PBN Approval General Information
Namibia FSS-AOC-AP 121	RNAV 10 Operations Approval Process
Other Documents	
ICAO Doc 9613	Manual on performance-based navigation
FAA Order 8400.12A	Required navigation performance 10 (RNP 10) operational approval
FAA AC 20-138	Airworthiness approval of GNSS equipment
EASA AMC 20-12	Recognition of FAA Order 8400.12A for RNP 10 operations

PART 2: INFORMATION ON THE IDENTIFICATION OF AIRCRAFT AND OPERATORS

NAME OF THE OPERATOR: _____ is applying for RNAV 10 (RNP10) operations approval.

Aircraft manufacturer, model and series	Registration numbers	Serial numbers	List relevant make and model of related navigation equipment

DATE OF PRE-APPLICATION MEETING _____

DATE APPLICATION WAS RECEIVED _____

DATE OPERATOR INTENDS TO BEGIN RNAV 10 OPERATIONS _____

SIGNATURE BY RESPONSIBLE POST HOLDER _____

NAME OF RESPONSIBLE POST HOLDER _____

CAA: NOTIFICATION DATE APPROPRIATE? YES _____ NO _____

PART 2 – OPERATOR APPLICATION (ITEMS AND DOCUMENTS)

Item	Title of Document	Indication of inclusion by the operator include (specific title)	Comments by the Inspector
1.	<p>Airworthiness documents showing aircraft eligibility for RNAV 10 (RNP 10).</p> <p>AFM, AFM revision, AFM supplement, or Type certificate data sheet (TCDS) showing that the LRNS is eligible for RNAV 10 (RNP 10).</p>		
2.	<p>Aircraft modified to meet RNAV 10 (RNP 10) standards, if applicable.</p> <p>Documentation on aircraft inspection and/or modification.</p>		
3.	<p>Maintenance program</p> <ul style="list-style-type: none"> • For aircraft with established LRNS maintenance practices, the list of references of the document or program. • For newly installed LRNS provide LRNS maintenance practices for review. 		
4.	<p>Minimum Equipment List (MEL) showing provisions for LRNS, as applicable</p>		
5.	<p>Training programmes</p> <p>For flight crews, flight dispatchers, and maintenance personnel as applicable.</p>		
6.	<p>Operating policies and procedures</p> <p>Including relevant section of Operations Manuals and checklists attached to the application, applicable to RNAV 10</p>		
7.	<p>Navigation database (as applicable)</p> <p>Details of the navigation data validation programme.</p>		

Contents of the application to be submitted by the operator

- _____ RNAV 10 compliance documentation of the aircraft/navigation systems
- _____ operating procedures and policies
- _____ sections of the maintenance manual related to LRNS (if not previously reviewed)

Note 1: Documents may be grouped in a single binder or may be submitted as individual documents.

PART 3 – GUIDE FOR DETERMINING RNAV 10 (RNP 10) AIRCRAFT ELIGIBILITY

Item	Requirement Topic	Advisory Pamphlet Reference FSS-AOC-AP 121	Operator's reference Insert N/A where not applicable	Comments by the Inspector
8.	<p>Eligibility Method 1 – Eligibility of aircraft through RNP certification. (RNP compliance documented in the AFM).</p> <p>Eligibility Method 2 - Eligibility of aircraft through previous certification of the navigation system.</p> <p>Eligibility Method 3 - Eligibility of aircraft through data collection.</p>	8.3		
	Aircraft Equipment	8.3, 8.4		
9.	Dual Long Range Navigation Systems			
10.	Dual GNSS			
11.	GNSS approved as primary means of navigation (AC 20-138 or equivalent)			
12.	Multi-sensor systems into which the GNSS is integrated (AC 20-130 or equivalent).			
13.	Complies with regulations/advisory information for use of GNSS for primary oceanic/remote performance			
14.	Approved FDE prediction programme			
	Dual INS or IRS	8.3, 8.4		
15.	INSS or IRUs approved for RNAV 10 or MNPS (time limit 6.2 hours).			
16.	Application for extended time limit			
17.	Operator route evaluation previously conducted			

Item	Requirement Topic	Advisory Pamphlet Reference FSS-AOC-AP 121	Operator's reference Insert N/A where not applicable	Comments by the Inspector
	Single IRS or IRU and Single GNSS	8.3, 8.4		
18.	INS/IRU approved to 14 CFR Part 121 Appendix G or equivalent			
19.	GNSS authorized for oceanic/remote (TSO C129a with FTE, TSO C145a/146a, or equivalent)			
20.	Approved FDE prediction programme			

PART 4 - APPLICATION FOR RNAV 10 (RNP 10) OPERATIONS

Item	Operating Procedures	Advisory Pamphlet Reference FSS-AOC-AP 121	Operator's documents reference Insert N/A where not applicable	Comments by the Inspector
	Flight Planning	10.3, 11.1 a)		
1.	Verification that that aircraft has been approved for RNAV 10 (RNP 10) operations.			
2.	Verification that the RNAV 10 (RNP 10) time limit has been taken into account (aircraft equipped with only INS/IRU).			
3.	Verification that requirements for GNSS, such as FDE, if applicable to the operation.			
4.	Verification requirement to insert the letter "R" in Box 10 of the ICAO flight plan			
5.	If required, take into account any operational restriction related to RNAV 10 (RNP 10) approval for a specific navigation system.			

Item	Operating Procedures	Advisory Pamphlet Reference FSS-AOC-AP 121	Operator's documents reference Insert N/A where not applicable	Comments by the Inspector
	Pre-flight procedures	11.1 b)		
6.	Reviewing of maintenance logs and forms for LRNS status			
7.	Reviewing of the emergency procedures for operations in RVAV 10 (RNP 10) airspace or routes.			
8.	Enroute Procedures	11.1 c)		
9.	Before oceanic or remote area point of entry verification at least two LRNS capable of navigating in RNAV 10 (RNP 10). If not consideration of using an alternate route or initiating a deviation.			
10.	Before oceanic airspace or remote area airspace entry, check aircraft position as accurately as possible using external navigation aids.			
11.	Cross-checking procedures in order to identify navigation errors in advance and prevent the aircraft from inadvertently deviating from the routes authorised by the ATC.			
12.	Operator procedures for use of a lateral deviation indicator, an FD or an AP in lateral navigation mode (LNAV) for RNP 10 operations.			
13.	Operator procedures for limiting FTE to +/- ½ navigation accuracy			
14.	Operator procedures for manual updating of position (if approved in AFM)			
15.	Contingency Procedures	11.1 d)		
16.	Notification to ATC of any degradation or failure of the navigation equipment below the nav. performance requirements, or of any deviation required for a contingency procedure.			

Item	Operating Procedures	Advisory Pamphlet Reference FSS-AOC-AP 121	Operator's documents reference Insert N/A where not applicable	Comments by the Inspector
17.	Contingency procedures for in-flight deviations due to weather.			
	Training Programme			
18.	Training programmes for flight crews and flight operations officers covering the required aspects for RNAV 10.	Para. 12		
	Navigation Database			
19.	Procedures for obtaining database from a qualified supplier including establishing a database quality system.	Para. 13		

