



# NIGERIA CIVIL AVIATION AUTHORITY

Corporate Headquarters  
Nnamdi Azikiwe Int'l Airport, Domestic Wing, Abuja, Nigeria

## EXTENDED DEVIATION TIME OPERATIONS (EDTO) CHECKLIST

The purpose of the Extended Range Operations with Twin-Engine Aeroplane (EDTO) Checklist is to assist owners / operators with a view to ensuring that application submitted to the NCAA for EDTO approval are standardized and include all items that are required by Nig CARs 8.6.2.10 and 8.6.2.11 and also other additional NCAA nationally required items. This checklist, when completed, should be submitted with the supporting programmes or reference made to appropriate documents.

**In all cases the checklist should clearly show either compliance (yes) & location of the compliance in the notes section or not applicable (no) & the reason in the notes section.**

**AOC Number:** \_\_\_\_\_ **Operator's Name:** \_\_\_\_\_

**MCM Ref:** \_\_\_\_\_ **Amendment Status:** \_\_\_\_\_

**AMP Ref:** \_\_\_\_\_ **Amendment Status:** \_\_\_\_\_

Details of the previous approvals (MNPS, RVSM Cat II /III):

REQUIREMENTS		COMPLIANC		NOTES	NCAA	
		YES	NO		SAT	UNSAT
<b>1.0 EDTO Type Design Approval</b>						
1.1	Substantiate by a statement that the type design reliability and the performance of the proposed aeroplane/engine combination have been evaluated per the guidance in the U. S. FAA Advisory Circular 120-42, Extended-Range Operation with Two-Engine Airplanes as amended, and found suitable for extended range operations					
1.2	Type Design approval reflected in AFM, TC Data sheets, STC with pertinent information as applicable:					
	a. Special limitations (if necessary) including any limitations associated with a maximum diversion time established.					
	b. Markings or placards (if required);					
	c. Revision to the Performance and planning manual (or AFM section)?					

	d. The airborne equipment, installation, and flightcrew procedures					
	e. Description or reference to a document containing the approved airplane configuration CMP standard:					
2.0	<b>Supplemental maintenance programme</b>					
	a. that allows for safe operations under an EDTO authorization.					
	b. inclusion of specific EDTO maintenance requirements as defined in the CMP document for the airframe/engine combination.					
	c. These shall include procedures to ensure that aircraft are not dispatched for an EDTO flight following maintenance actions that affect multiple similar elements in any EDTO critical system (e.g. fuel control change on both engines).					
	d. EDTO related tasks must be identified on the air operator's routine work forms and related instructions					
	e. EDTO related procedures, such as involvement of centralized maintenance control or technical dispatch, must be clearly defined in the air operator's Maintenance program					
	f. An EDTO service check must be developed and used to verify that the status of the aeroplane and certain critical items are acceptable					
2.1	<b>Verification programme</b>					
2.1.1	A list of primary systems					
2.1.2	Conditions that require verification actions before flights					
2.1.3	Procedures for initiating verification actions					
2.1.4	Procedures that monitor and evaluate corrective actions					
2.1.5	Procedures that verify the implementation of corrective action					
2.1.6	Procedures that identify and reverse the adversetrends					

2.2	<b>Engine condition monitoring programme.</b>					
2.2.1	This program will describe the parameters to be monitored, method of data collection and corrective action process.					
2.2.2	The program should reflect the type certificate holder's instructions and industry practice					
2.2.3	Notification procedures for deterioration					
2.2.4	This monitoring will be used to detect deterioration at an early stage to allow for corrective action before safe operation is affected.					
2.2.5	The program must ensure that engine limit margins are maintained so that a prolonged single-engine diversion may be conducted without exceeding approved engine limits (i.e. rotor speeds, exhaust gas temperatures) at all approved power levels and expected environmental conditions.					
2.2.6	Engine margins preserved through this program must also account for the effects of additional engine loading demands (e.g. anti-icing, electrical, etc.) which may be required during the single-engine flight phase associated with the diversion.					
2.3	<b>Reliability programme</b>					
2.3.1	Reporting programme must include:					
	<ul style="list-style-type: none"> <li>a. in-flight shutdowns or flameouts;</li> <li>b. diversion or turn-back;</li> <li>c. uncommanded power changes or surges;</li> <li>d. inability to control the engine or obtain desired power;</li> <li>e. problems with systems critical to EDTO (engine bleed air, pressurization, electrical power, etc.).</li> </ul>					

2.3.2	The report will also identify the following:					
	<ul style="list-style-type: none"> <li>a. aircraft identification;</li> <li>b. engine identification (make and serial number);</li> <li>c. total time, cycles and time since last shop visit;</li> <li>d. for systems, time since overhaul or last inspection of the defective unit;</li> <li>e. phase of flight; and</li> <li>f. corrective action.</li> </ul>					
2.3.2	Procedures to ensure reporting of significant individual events (engine shutdowns, flight diversions, etc.)					
2.4	<b>Engine/APU oil consumption monitoring programme</b>					
2.4.1	Established limits of consumption as recommended by TC holder					
2.4.2	Procedures for use and verification prior to the departing EDTO stations					
2.5	<b>EDTO parts control programme</b>					
2.5.1	Methods of verification of proper parts					
2.5.2	Control procedures during parts pooling and borrowing.					
2.6	<b>Maintenance training programme</b>					
2.6.1	Personnel are aware that an EDTO authorization is in place.					
2.6.2	Personnel, including contract personnel, are adequately trained on the special programmes required by an EDTO authorization.					
2.7	<b>Airframe/Engine Condition</b>					
2.7.1	Ensuring the continued integrity of the EDTO maintenance programmes					
2.7.2	Ensuring that adjustments are made, as required, to the EDTO programmes					
2.8	<b>Maintenance Control Manual (MCM)</b>					

2.8.1	The air operator Maintenance Control Manual shall be amended to address EDTO operations. The manual must include, either directly or by reference to incorporated documents					
2.8.2	All EDTO requirements, including supportive program procedures, duties and responsibilities, must be identified as being EDTO sensitive					
2.9	<b>Other Procedures that accomplish the following</b>					
2.9.1	Preclude simultaneous actions from being applied to multiple similar elements in any EDTO-critical system					
2.9.2	Identify EDTO-related tasks on routine work forms and related instructions					
2.9.3	Develop an EDTO over-water service check to verify the status of the aeroplane and ensure certain critical items are acceptable					
2.9.4	Rectification of aircraft defects.					
2.10	Assessment of operator's propulsion system reliability					
2.11	All EDTO requirements, including supportive programme procedures, duties and responsibilities, identified and subject to revision control.					
2.12	Revision to the MEL?					
2.13	ETOPS Technical Log Procedures?					

**COMPLIANCE STATEMENT**

It is understood that compliance with this programme alone does not discharge the operator from ensuring that the programme reflects the maintenance needs of the aircraft, such that continuing safe EDTO operation can be assured. It is further understood that the NCAA reserves the right to suspend, vary or cancel EDTO approval if the NCAA has evidence that the requirements of the Programme are not being followed or that the required standards of airworthiness are not being maintained.

**Name**.....

**Position.** .....

**Signed** .....

**For and on behalf of operator:** .....

**Date:** .....

**NCAA USE ONLY**

The above requirements have been evaluated and the operator is hereby recommended/not recommended for EDTO authorization (reasons for not recommending should be stated on a separate sheet)

**Signed:** .....

**for the NCAA (Name of Inspector):**

Date.....

Recommended / Not Recommended.

**GM, Airworthiness**

Signature/Date: .....

**Director Airworthiness Standards**

The above requirements have been evaluated against the operator submissions and is hereby approved for EDTO authorization

Signature/Date: .....