



Private Bag 12003 Windhoek Namibia | (Tel) +264 61 702 212 | Web: <http://www.dca.com.na>

## AIRCRAFT MAINTENANCE PROGRAMME CHECKLIST

The purpose of the Maintenance Programmes Compliance Checklist is to assist owners / operators with a view to ensuring that Maintenance Programmes submitted to the NCAA for approval are standardised and include all items that are required by NAMCARs Part 121, 127, 133, 135, 137 and also other additional NCAA nationally required items. This checklist, when completed, should be submitted with the draft maintenance programme (two copies).

**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.**

The specific tasks and the relevant control procedures shall be included as specified in the Maintenance Programme (MP) or Maintenance Management Exposition / Maintenance Organization Exposition / Maintenance Control Manual (MME / MOE / MCM / MMM) of the operator. The relevant cross-references shall be specified in the notes column at the appropriate paragraphs and the correct term MP, MME, MCM or MOE shall be used. It is not acceptable to leave MP/MME/MOE/MCM as the reference heading.

The checklist is provided to ensure the minimum required items are contained in the Maintenance Programme. It should be enhanced as necessary to suit the aircraft's needs; operational, utilisation & environmental.

AOC Number:

Operators Name:

OMME / MOE / MCM Ref:

Amendment Status:

Details of the previous maintenance programme:

REQUIREMENTS		COMPLIANCE		NOTES	NCAA REMARKS	
		YES	NO		SAT	UNSAT
<b>1.0 Maintenance Programme Basic Information</b>						
1.1	The type/model/ and registration number of the aircraft					
1.2	The type/model of the engines					
1.3	The type/model of the propellers, <i>where applicable</i>					
1.4	The type/model of the auxiliary power units, <i>where applicable</i>					
1.5	The name and address of the owner, operator, maintenance organisation managing the aircraft airworthiness					
1.6	The programme reference, the date of issue and issue number					
1.7	A signed statement. <i>See Appendix 1 to this document</i>					
1.8	Contents list					
1.9	List of effective pages					
1.1.0	Revision status of the document					
1.1.1	Check periods for anticipated utilisation; include a					

	utilisation tolerance of not more than 25%. <i>Where utilisation cannot be anticipated, calendar time limits should also be included</i>					
1.1.2	Procedures for escalation where applicable & acceptable to the NCAA					
1.1.3	Date and reference of approved amendments					
1.1.4	Pre-flight maintenance tasks					
1.1.5	The tasks and the periods (intervals / frequencies) at which inspections should be carried out, including type and degree of inspection of the:					
	a. Aircraft					
	b. Engine(s)					
	c. APU					
	d. Propeller(s)					
	e. Components					
	f. Accessories					
	g. Equipment					
	h. Instruments					
	i. Electrical and radio apparatus					
1.1.6	The periods at which components should be:					
	a. Checked					
	b. Cleaned					
	c. Lubricated					
	d. Replenished					
	e. Adjusted					
	f. Tested					
1.1.7	Details of ageing aircraft system requirements with any specified sampling programmes, if applicable					
1.1.8	Details of specific structural maintenance programmes, if applicable, including but not limited to:					
1.1.9	a. Damage Tolerance and Supplemental Structural Inspection Programmes (SSID)					
	b. SB review performed by the TC holder					
	c. Corrosion prevention and control					
	d. Repair Assessment					
	e. Widespread Fatigue Damage					
1.2.0	Statement of the limit of validity for the structural programme in <b>if applicable</b>					
1.2.1	The periods at which overhauls should be made					
1.2.2	The periods at which replacements should be made					
1.2.3	A cross-reference to other documents related to:					
	a. Mandatory life limitations					
	b. Certification Maintenance Requirements (CMR's), if applicable					
	c. Airworthiness Directives (AD)					
	<i>Specific identification of the above items mandatory status</i>					
1.2.4	Reliability programme or statistical methods of continuous surveillance, if applicable					
1.2.5	A statement that practices and procedures should be the standards specified by the TC holder					

REQUIREMENTS		COMPLIANCE		NOTES	NCAA REMARKS	
		YES	NO		SAT	UNSAT
1.2.6	Each maintenance task (i.e. inspections - detailed, scan, general, visual) should be defined in a definition section					
1.2.7	Required Inspection Items (RII) should be identified.					
1.2.8	RII Items					
2.0	<b>Programme basis</b>					
2.1	Is the programme based upon the latest revision of the MRB report, the TC holder's maintenance planning document or Chapter 5 of the maintenance manual?					
2.2	For newly type-certificated aircraft / comprehensively appraise the manufacturer's recommendations (MRB report)					
2.3	For existing aircraft types, comparisons with maintenance programmes previously approved					
3.0	<b>Amendments.</b>					
3.1	Amendments (revisions) to reflect changes: See <i>Appendix 2</i>					
	a. In the TC holder's recommendations					
	b. Introduced by modifications					
	c. Introduced by repairs					
	d. Discovered by service experience					
	e. As required by the NCAA					
4.0	<b>Permitted variations to maintenance periods</b> <i>(with the exception of items identified in 1.23)</i>					
4.1	Vary the periods through a procedure approved by the NCAA?					
	Vary the periods with the approval of the NCAA (see appendix 3)?					
5.0	<b>Periodic review of maintenance programme contents</b>					
5.1	Periodic review to ensure that the programme reflects current:					
	a. TC holder's recommendations					
	b. Revisions to the MRB report <b>if applicable</b>					
	c. Mandatory requirements					
	d. Maintenance needs of the aircraft					
5.2	Annual review defined					
6.0	<b>Reliability programmes.</b>					
6.1	Applicability					
6.1.1	Developed in the following cases:					
	a. Programme is based upon MSG-3 logic					
	b. Programme includes condition monitored components					
	c. Programme does not contain overhaul time periods for all significant system components					
	d. Specified by the Manufacturer's MPD or MRB					
6.1.2	Need not be developed in the following cases:					
	a. Programme is based upon the MSG-1 or 2 logic (only hard times or on condition items)					
	b. Not a large aircraft (= or < 5700 kgs MTWA or single engined helicopter)					

REQUIREMENTS		COMPLIANCE		NOTES	NCAA REMARKS	
		YES	NO		SAT	UNSAT
	c. Programme provides overhaul time periods for all significant system components					
6.1.3	Operator may develop own reliability monitoring programme					
6.2	Applicability, small fleets					
6.2.1	Less than 6 aircraft of the same type					
6.2.2	Reliability programme is irrespective of the fleet size					
6.2.3	Tailor reliability programmes to suit the size and complexity of operation					
6.2.4	Use of "Alert levels" should be used carefully					
6.2.5	When establishing a reliability programme, consider the following:					
	a. Focus on areas where a sufficient amount of data is likely to be processed					
	b. How is engineering judgement applied?					
6.2.6	Pool data and analysis (paragraph 6.6 specifies conditions)					
6.2.7	If unable to pool data / additional restrictions on the MRB/MPD tasks intervals specified					
6.3	Engineering judgement.					
6.3.1	Are there appropriately qualified personnel (with appropriate engineering experience and understanding of reliability concept) for the reliability programme?					
6.4	Contracted maintenance.					
6.4.1	Maintenance programme / may delegate certain functions to the maintenance organisation					
6.4.2	These are:					
	a. Developing the maintenance and reliability programmes					
	b. Collection and analysis of the reliability data					
	c. Providing reliability reports					
	d. Proposing corrective actions					
6.5	Reliability programme.					
6.5.1	Objectives.					
6.5.1.1	Statement summarising the prime objectives of the programme					
	a. Recognise the need for corrective action					
	b. Establish what corrective action is needed					
	c. Determine the effectiveness of that action					
6.5.1.2	The extent of the objectives should be directly related to the scope of the programme					
6.5.1.3	All MSG-3 related tasks are effective and their periodicity is adequate					
6.5.2	Identification of items.					
	The items controlled by the programme should be stated					
6.5.3	Terms and definitions.					
	Significant terms and definitions should be clearly identified					
6.5.4	Data sources and collection.					
6.5.4.1	Sources and procedures in the Exposition					
6.5.4.2	Type of data to be collected should be related to the objectives, examples of the normal prime sources:					
	a. Pilots Reports					
	b. confirmed failures					

	c. unscheduled removals					
	d. shop findings					
	e. Workshop Reports					
	f. Reports on Functional Checks					
	g. Reports on Sampling Inspections					
	h. Bench Checks Reports					
	i. Service Difficulty Reports					
	j. Reports on Delays and Incidents					
	k. Other sources: i.e. ETOPS, RVSM, CAT II/III					
6.5.5	Display of data.					
	Data displayed graphically or tabular or a combination					
6.5.5.1	Provisions for "nil returns"					
6.5.5.2	Where "standards" or "alert levels", information oriented accordingly					
6.5.5.3	All aircraft systems controlled by the programme in sufficient depth to enable the NCAA and other recipients evaluate the effectiveness of the total maintenance programme					
6.5.5.4	Systems that exceeded the established performance standards and discussion of what action has been taken or planned					
6.5.6	Examination, analysis and interpretation of the data.					
	Method for examining, analysing and interpreting the data should be explained					
6.5.6.1	Methods of examination may be varied - content & quantity					
6.5.6.2	The whole process should enable a critical assessment of the effectiveness of the programme as a total activity. May involve:					
	a. Comparisons of operational reliability with established or allocated standards					
	b. Analysis and interpretation of trends					
	c. Evaluation of repetitive defects					
	d. Confidence testing of expected and achieved results					
	e. Studies of life-bands and survival characteristics					
	f. Reliability predictions					
	g. Other methods of assessment					
6.5.6.1	Range and depth of analysis should be related to the particular programme:					
	a. Flight defects and reductions in reliability					
	b. Defects - line and main base					
	c. Deterioration observed - routine maintenance					
	d. Workshop and overhaul findings					
	e. Modification evaluations					
	f. Sampling programmes					
	g. Adequacy of maintenance equipment and					

REQUIREMENTS	COMPLIANCE		NOTES	NCAA REMARKS	
	YES	NO		SAT	UNSA
publications					
h. Effectiveness of maintenance procedures					
i. Staff training					
j. Service bulletins, technical instructions, etc					

6.5.6.2	Contracted maintenance - arrangements established and details for information input included				
6.5.7	Corrective Actions				
6.5.7.1	Procedures / time scales for implementing corrective actions / monitoring - should be fully described & could include:				
	i. Changes to maintenance , operational procedures or techniques				
	ii. Changes requiring amendment of the approved maintenance programme?				
	iii. Amendments to approved manuals				
	iv. Initiation of modifications				
	v. Notifying the organization responsible for taking the action				
	vi. Obtaining periodic feedback until performance reaches an acceptable level				
	vii. Critical failures in which loss of function or the secondary effects could affect the airworthiness of the aircraft				
	vii. Manpower and equipment planning				
6.5.7.2	Procedures for effecting changes should be described				
6.5.8	Organisational Responsibilities				
	Organisational structure - chains of responsibility should be defined				
6.5.9	Presentation of information to the competent authority.				
	Information submitted to the NCAA for approval of the reliability programme:				
	i. Format and content of routine reports				
	ii. Time scales for reports / distribution				
	iii. Format and content of reports requesting amendments				
6.5.10	Evaluation and review.				
	Describe procedures and individual responsibilities - continuous monitoring of the effectiveness of the programme				
6.5.10.1	Procedures for revising the “standards” or “alert levels”.				
6.5.10.2	Criteria to be taken into account during the review includes:				
	i. Utilisation (high / low / seasonal)				
	ii. Fleet commonality				
	iii. Alert Level adjustment criteria				
	iv. Adequacy of data				
	v. Reliability procedure audit				
	vi. Staff training				
	vii. Operational and maintenance procedures				
6.5.11	Approval of organisation to implement maintenance programme changes arising from the				

REQUIREMENTS	COMPLIANCE		NOTES	NCAA REMARKS	
	YES	NO		SAT	UNSA
reliability programme results:					
a. Does the reliability programme monitor the content of the maintenance programme in a comprehensive manner?					

	b. Is appropriate control exercised by the owner / operator over the internal validation of such changes?				
6.6	Pooling Arrangements				
6.6.1	Pooling information - must be substantially the same, including:				
	i. Certification / modification / SB compliance				
	ii. Operational Factors				
	iii. Maintenance factors				
6.6.2	Is there a substantial amount of commonality / has the NCAA agreed?				
6.6.3	Is the aircraft on short-term lease? NCAA may grant more flexibility				
6.6.4	Reliability programme managed by the aircraft manufacturer if agreed by the NCAA				
7.0	<b>NCAA required items</b>				
7.1	Details of who may issue a CRS				
7.2	Define which inspections/checks are considered to be base maintenance				

**Appendix 1**

**SUGGESTED OPERATOR’S CERTIFICATION STATEMENT**

In the preparation of this Maintenance Programme to meet the requirements of Namibian CAR Part 121, 127, 133, 137, 135, subpart 10 the recommendations made by the airframe constructors and engine and equipment manufacturers have been evaluated and, where appropriate, have been incorporated.

This Maintenance Programme lists the tasks and identifies the practices and procedures, which form the basis for the scheduled maintenance of the aircraft. The operator undertakes to ensure that these aircraft will continue to be maintained in accordance with this programme.

The data contained in this programme will be reviewed for continued validity at least annually in the light of operating experience. It is accepted that this programme does not prevent the necessity for complying with any new or amended regulation published by NCAA from time to time where these new or amended regulations may override elements of this programme.

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 operation can be assured. It is further understood that the NCAA reserves the right to suspend, vary or cancel approval of the Maintenance Programme if the NCAA has evidence that the requirements of the Maintenance 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: .....

**NOTE:** The post holder identified above is that person required by NAMCAR Part 121, 127, 133, 135, 137, SUBPART 6 and identified in the MME / MOE / MCM / MMM.

**FOR OFFICIAL USE ONLY**

**Recommendation / observation:**.....  
 .....

