CHAPTER 54

MAINTENANCE TIME LIMITATIONS SECTION PARTIAL RELIABILITY PROGRAMME OR NO RELIABILITY PROGRAMME.

0.0 LIST OF EFFECTIVE PAGES

CHAPTER FIFTY FOUR	PAGE	EFFECTIVE DATE
	1 OF 17	10th April, 2023
	2 OF 17	10th April, 2023
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	5 OF 17	10th April, 2023
	6 OF 17	10th April, 2023
	7 OF 17	10th April, 2023
	8 OF 17	10th April, 2023
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1.0 MAINTENANCE TIME LIMITATIONS

A. General. A Maintenance Time Limitations Section is prepared by the certificate holder for each type of aircraft operated and maintained in accordance with the requirements of a Continuous Airworthiness Maintenance Programme. Reference: ICAO Document 9389 - AN/919, Chapter 7, Attachment 7-A.

(1) The Maintenance Time Limitations Section shall consist of the following:

- Index
- Abbreviations and definitions
- Checks and Inspections
- Inspection frequency and overhaul

(2) A certificate holder requiring a Maintenance Time Limitations Section may reference, in Paragraph D-55 a document containing that information.

(a) The referenced document must include at least the information required to be in the Maintenance Time Limitations Section and shall be approved by the Director, Airworthiness Standards.

(b) The document must have procedures for effecting revisions and revision control acceptable to the assigned inspector.

NOTE: Each change to a time interval for an item not controlled by a reliability programme must be NCAA approved.

B. Index. The index is the revision and page control for the Time Limitations Sections. Each time a certificate holder revises an operations specifications page in this section, the index must be revised accordingly. See figure 04-01, Maintenance Time Limitations.

(1) When pages of a Maintenance Time Limitations Section are deleted, they shall be retained on the amendment of the index page for control purposes. Superseded or deleted pages shall be kept in a separate file and retained for at least 5 years.

(2) The effective date indicates the date the information was entered on the page. The certificate holder shall enter the effective date for the original or amended page in the lower right hand corner of the page. The effective date and amendment number must also be entered in the Table of Contents signature block.

C. Definitions**.** This page defines each abbreviation and term used in the Maintenance Time Limitations Section that is not self-explanatory. See Figure 04-02, Maintenance Time Limitations Abbreviations and Definitions.

NOTE: Definitions may vary from operator to operator

D. Checks and Inspections. These pages show the time limits and intervals for aircraft check and inspections approved for the operator. See Figures 04-03 and 04-04.

NOTE: The "Checks and Inspections" are the basic pages for approving the certificate holder's Continuous Airworthiness Maintenance Programme.

(1) Limits expressed in terms other than time-in-service such as clock or calendar time, must be identified on the definition page.

(2) Time-in-service and/or calendar times for checks and inspections shall be the maximum allowable increment for that item.

(3) Instruments and electrical systems

(a) Major components or ATA Systems 22 auto pilot, 23 communications, 24 electrical, 31 instrument, 33 lighting, 34 navigational, and 77 engine instruments must be identified by the following:

- Name
- Manufacturer
- Model number, part number, or other specific designator used by the carrier

(b) The component identifications must be listed, under the applicable ATA chapter, on the appropriate inspection frequency and overhaul page or document that is referenced and identified on a checks inspections page.

(4) Parts that have specified life limits imposed by the manufacturer must be listed on either of the following:

- The inspection frequency and overhaul pages under the applicable ATA Chapters for those parts
- A separate document that is referenced and identified on the checks and inspections page

(a) For example, reference documents may be the approved limitations section of the Airplane Flight Manual (AFM) or Type Certification Data Sheet.

(b) The certificate holder's manual shall contain procedures for controlling life-limited parts.

E. Inspection Frequency and Overhaul. See figure 04-04, Maintenance Time Limitations. These pages shall contain at least the following type of information using the format headings as follows:

Primary Maintenance Process	Inspection Check Period	Other
Chapter (ATA number VIS/OC and identification)	A or B or C	O

(1) The letter designation (i.e. A, B, or C) and abbreviations (OC, VIS) in the above example must be identified on the definitions page.

(2) The letter designator in the "Inspection Check Period" column may be preceded by a 2,3, or 4. This number serves as a multiple of the checks and inspection intervals. For example, if check "B" is required to be performed at 350 hours and the symbol in the "Inspection and Check Period" column is 2B, the limit for the task would be 700 hours.

(3) The aircraft make and model shall be entered at the top of each page.

2. INCREASES TO MAINTENANCE TIME LIMITATIONS (OPERATORS ISSUED PARAGRAPHS D55 AND D56)

A. General. Inspection and overhaul time limitations applicable to airframes, powerplants, propellers, and appliances normally are based on service experience. See Chapter 4 Section 8, for additional information.

(1) Time limitations may be established in terms of time-in-service based on hours, cycles, calendar months, or the number of inspection or overhaul intervals.

(2) Time limitations for appliances, where deterioration is not necessarily a result of operation hours (electronic units, emergency equipment, etc.) may be established in terms of calendar months.

B. Increasing Time Limitations

(1) An increase in time limitations may be made if the certificate holder can properly justify and substantiate the time increase.

(a) The justification should indicate that the increase would not adversely affect airworthiness of the aircraft.

(b) Submitted service records should show that a component or subcomponent does not require maintenance or adjustment because of damage, wear, or deterioration.

(2) Before applying for amended operations specifications, a certificate holder should give the assigned inspector an informal indication of intent. Every effort should be made to coordinate with the certificate holder in an effort to detect and informally resolve any problem area or item that might result in a delay or disapproval of the operations specifications submitted at the time of formal application.

C. Time Limitation Increase - Physical Inspection. During preliminary discussions, the certificate holder must be advised of the number of engines, components, appliances, etc., to be inspected. The items inspected should have been operated to within five percent of the currently approved time limitations. Physical inspection need not be conducted by an Airworthiness ASI if, in the judgment of the assigned Airworthiness Inspector, the certificate holder has a capable and qualified person to perform the inspection and properly documents the work. However, the assigned Airworthiness ASI must coordinate the inspection process with the certificate holder.

D. Airframes. Increases in time limitations for inspection, overhaul, or structural inspections of airframes are based on evaluation of all pertinent service records and/or examination of at least one aircraft of the model involved that has been operated to within five percent of the currently approved time limitation.

(1) Other methods of justifying time increase may be used when sufficient justification (such as industry experience) can be furnished by the certificate holder.

(2) When a phase inspection, modular, or block overhaul type of maintenance system is used, individual items may be rescheduled in another phase inspection, modular, or block interval (increase or decrease) if the performance and condition of the specific item warrants the change.

E. Powerplant/Propeller and Associated Appliances. Increases in engine or propeller inspection/overhaul periods may be approved in increments mutually agreed upon by the certificate holder and the assigned Airworthiness Inspector.

(1) Increases in time limitations normally are based on satisfactory service experience and/or at least one teardown examination. The engine/propeller should have operated to within five percent of the currently approved time limitations.

(2) Alternate methods acceptable to the assigned Airworthiness Inspector may be used for determining time interval increases to the established intervals for the inspection, overhaul of powerplants or propellers when sufficient justification is furnished by the certificate holder.

(3) Engine appliances may have time interval increases in multiples of the approved engine inspection/ overhaul time if it can be shown that satisfactory in-service history and inspection/overhaul experience justifies the increase and will not adversely affect the airworthiness of the appliance involved.

F. Aircraft Appliances

(1) Increase in the established time intervals for ppliance inspection, bench test, or overhaul may be granted if sufficient justification is furnished by the certificate holder and the justification meets the criteria in Paragraphs 2.2, and 3D of this section.

(2) When electrical/electronic appliances are maintained as “on condition,” special consideration should be given to the continued airworthiness of the mechanical components of such equipment.

G. Data Review. Data submitted by the certificate holder as justification for the time increase shall be thoroughly researched and evaluated. If observations made during the physical inspection or record review indicate that deterioration of reliability will result if the requested time limitation increase is approved, the certificate holder shall be required to continue at limitations currently approved.

FIGURE 04-1

COMPANY LETTER HEAD

MAINTENANCE TIME LIMITATIONS – PART D
INDEX
(AIRCRAFT MAKE AND MODEL)

SUBJECT	PAGE	AMENDMENT	CONTROL DATE
Index	1	2	02/11/00
Abbreviations and Definitions	2	original	02/11/00
Checks and inspections	3	original	02/11/00
Checks and inspections	4	original	02/11/00
Checks and inspections	5	original	02/11/00
Checks and inspections	6	original	02/11/00
Checks and inspections	7	original	02/11/00
Checks and inspections	8	original	02/11/00
Checks and inspections	9	original	02/11/00
Checks and inspections	10	original	02/11/00
Chapter 53. Fuselage	11	deleted	02/11/00
Checks and inspections	12	original	02/11/00
Chapter 57. Wings	13	deleted	02/11/00
Checks and inspections	14	original	02/11/00
Chapter 72. Engine Turbine	15	original	02/11/00
Chapter 72. Engine Turbine	15-1	original	02/11/00
Chapter 73. Engine Fuel	16	original	02/11/00

Additional pages added to the Time Limitations Sections are to be numbered as illustrated and continue in sequence i.e. 15-2, 15-3, etc. for all chapters which have pages added.

NOTE: Numerical sequence must be retained as indicated for all deleted pages in order to maintain the page control system.

Issued by the Nigerian Civil Aviation Authority Effective date_____

FIGURE 04-02

COMPANY LETTER HEAD

MAINTENANCE TIME LIMITATIONS – PART D
ABBREVIATIONS & DEFINITIONS
(AIRCRAFT MAKE AND MODEL)

1. All reference to days and months are considered Calendar days and as applicable months

BET: Bench Test
CLN: Clean
CM: Condition Monitoring
DIS: Detailed Inspection
DRN: Drain
EC: Engine Change
EO: Engine Overhaul
FCK: Functional Check
HMV: Heavy Maintenance Visit
HT: Hard Time
LUB: Lube
M: Calendar Months
OC: On Condition
OCK: Operational Check
OVH: Overhaul
RAR: Remove and Replace
ROC: Readout
RPL: Replenish
SC: Service Check
SI: Structural EC: Inspection
STS: Self Test
SVC: Service
TAA: Test and Adjust
ULT: Ultimate Finite
VCK: Visual Check
VIS: Visual Inspection
VSW: Voltage Standing Wave Ratio

NOTE: Some deficiencies need an explanation, such as bench check, functional check, visual check, visual inspection, detailed inspection, overhaul, etc.

FIGURE 04-03

COMPANY LETTER HEAD

MAINTENANCE TIME LIMITATIONS – PART D
CHECKS AND INSPECTIONS
(AIRCRAFT MAKE AND MODEL)

INSPECTION/CHECK REQUIREMENTS:

Check shall be accomplished in accordance with applicable procedures as listed in the Maintenance Manual.

"SC" Service Check:
A service check shall be performed at intervals not exceeding_____hour's time in service.

"A" INSPECTION/CHECK:
The "A" Inspection/Check shall be performed at intervals not exceeding_____hours aircraft time in service or_____months whichever occurs first since the last "A", "B", "C", "D" or "E" check in accordance with applicable procedures in Maintenance Manual Section_____.

"B" INSPECTION/CHECK:
The "B" Inspection/Check shall be performed at intervals not exceeding_____hours aircraft time in service or_____months whichever occurs first since the last "B", "C", "D", or "E" check in accordance with applicable procedures in Maintenance Manual Section_____.

"C" INSPECTION/CHECK:
The "C" Inspection/Check shall be performed at intervals not exceeding_____hours aircraft time in service or_____months whichever occurs first since the last "C", "D", or "E" check in accordance with applicable procedures in Maintenance Manual Section_____.

"D" INSPECTION/CHECK:
The "D" Inspection/Check shall be performed at intervals not exceeding_____hours time in service or_____months whichever occurs first since the last "D" or "E" check in accordance with applicable procedures in Maintenance Manual Section_____.

"E" INSPECTION/CHECK:

FIGURE 04-03 (cont.)

COMPANY LETTER HEAD

MAINTENANCE TIME LIMITATIONS – PART D
CHECK AND INSPECTIONS
(AIRCRAFT MAKE AND MODEL)

The "E" Inspection/Check shall be performed at intervals not exceeding_____hours aircraft time in service or months whichever occurs first since the last "E" check in accordance with applicable procedures in Maintenance Manual Section_____.

STRUCTURAL INSPECTIONS

5000 FLIGHT STRUCTURAL INSPECTION shall be performed at intervals not exceeding 5000 flights until 20,000 flights and thereafter at 3000 flights.

1200 HOUR STRUCTURAL INSPECTION shall be performed at intervals not exceeding 1200 hours time in service or 6 months, whichever occurs first, since the last 1200 Hour Structural Inspection.

2400 HOUR STRUCTURAL INSPECTION shall be performed at intervals not exceeding 2400 hours time in service or 12 months, whichever occurs first, since the last 2400 Hour Structural Inspection.

3600 HOUR STRUCTURAL INSPECTION shall be performed at intervals not exceeding 3600 hours time in service or 18 months, whichever occurs first, since the last 3600 Hour Structural Inspection.

4800 HOUR STRUCTURAL INSPECTION shall be performed at intervals not exceeding 4800 hours time in service or 24 months, whichever occurs first, since the last 4800 Hour Structural Inspection.

9600 HOUR STRUCTURAL INSPECTION shall be performed at intervals not exceeding 9600 hours time in service or 48 months, whichever occurs first, since the last 9600 Hour Structural Inspection.

The structural inspections identified above shall be performed in accordance with _____.

FIGURE 04-03 (cont.)

COMPANY LETTER HEAD

MAINTENANCE TIME LIMITATIONS – PART D
CHECK AND INSPECTIONS
(AIRCRAFT MAKE AND MODEL)

Service life limits contained in the Maintenance Manual Document _____ Chapter _____ as revised will be adhered to.

Service life limits contained in Service Letter No. as revised will be adhered to.

Service life limits contained in Pratt and Whitney Service Bulletin_____as revised (Engine Turbine/Turboprop Rotor Component-Service Life) will be adhered to.

All condition monitored (CM) items will be maintained in accordance with the Maintenance Evaluation Programme as outlined in Section_____of_____Airlines, Inc. General Maintenance Manual.

Major Components of ATA Systems 22 auto pilot, 23 communications, 24 electrical, 31 instrument, 33 lighting, 34 navigational, and 77 engine instruments shall be identified by name, manufacturer, and either a model number, part number, or other specific designator used by the carrier on the appropriate inspection frequency and overhaul page.

FIGURE 04-04

COMPANY LETTER HEAD

MAINTENANCE TIME LIMITATIONS- PART D
INSPECTION FREQUENCY AND OVERHAUL
(AIRCRAFT MAKE AND MODEL)

PROCESS	PRIMARY MAINTENANCE CHECK PERIOD	INSPECTION & OTHER		
Chapter 21 Air Conditioning	OC	ABCDE	VIS	
Air Bleed Compressor to Air Cycling Machine Ducting	CM			
Flight Deck and Passenger Cabin Temperature Control	CM			
Shut off Valve	CM			
Low Pressure Switch	OC		E	FCK
High Pressure Switch	OC		E	FCK
Check Valve	OC		E	FCK
Shut Off Valve	CM			
Dual By Pass Valve (cabin)	CM			
Bypass Valve (flight deck)	CM			
Main Fan	CM			
Over Temperature	OC		E	FCK
Spar box Overheat Thermistor	OC		E	FCK
Heat Exchanger	CM			

FIGURE 04-04 (cont.)

COMPANY LETTER HEAD

MAINTENANCE TIME LIMITATIONS - PART D
INSPECTION FREQUENCY AND OVERHAUL
(AIRCRAFT MAKE AND MODEL)

MAINTENANCE PROCESS	PRIMARY INSPECTION & CHECK PERIOD		OTHER
Chapter 21 Air Conditioning (Cont.)	OC	ABCDE	VIS
Air Cycling Machine	OC	2B	SVC-drain and replenish with new oil
Over Temperature Switch (Cabin)	OC	E	KK
Over Temperature Switch (Flight deck)	OC	E	KK
Duct Temperature Sensor	CM		
Temperature Sensor	CM		
Temperature Sensor	CM		
Temperature Controller (cabin)	CM		
Temperature Controller (Flight deck)	CM		
Water Separator	CM	See note 1	
Chapter 23 COMMUNICATIONS	OC	A,B,C	Fixed
Radio Installation	OC	C	BET 2000
Isolation Amplifier Telephonics AI-27	OC	C	
Transceiver HF Collins 618T-2	OC	C	
Control VHF Comm Gables G-4817	OC	C	
Cockpit Voice Recorder Fairchild A-100	OC	C	

FIGURE 04-04 (cont.)
COMPANY LETTER HEAD

MAINTENANCE TIME LIMITATIONS – PART D
INSPECTION FREQUENCY AND OVERHAUL
(AIRCRAFT MAKE AND MODEL)

	PRIMARY MAINTENANCE PROCESS	INSPECTION & CHECK PERIOD	OTHER
Chapter 31 INSTRUMENTS			
Flight Data Recorder (Fairchild P/N 15630-601)	OC	A,B,C	BET
Clock (Elgin A-3)	OC	A	
Chapter 26 Fire Protection	OC	ABCDE	VIS
Smoke Detection			
Smoke Sensor	OC	C	CLN
Smoke Detector Amplifier	OC	SC	STS
Fire Detection (Engine)	OC	E	FCK-Note 1
		D	FCK-Note 2
Sensor	OC	E	FCK-Note 1
	OC	D	FCK-Note 2
Wire Fire Detection	OC	E	FCK-Note 1
		D	FCK-Note 2
Fire Warning Bell	CM		
Automatic Integrity Monitor	OC	D	FCK-Note 2
		B	FCK
Fire Extinguishing			
Extinguisher	HT	*	SVC-Weight
	OVH-	Check Include hydrostatic pressure test	
Unit Cartridge	HT	Note	RAR
Pressure Relief Indicator	OC	SC	VCK
Directional Flow Valve	OC	E	FCK
Hand Type Extinguisher	HT	*	SVC-Weight
Check	OVH-Include		hydrostatic pressure test

FIGURE 04-04 (cont.)
COMPANY LETTER HEAD

MAINTENANCE TIME LIMITATIONS – PART D
INSPECTION FREQUENCY AND OVERHAUL
(AIRCRAFT MAKE AND MODEL)

Inspections, hydrostatic test, and life limits will be accomplished as set forth in the United States 49 FAR part 173 currently in effect. If the fire extinguisher were manufactured and approved in another foreign country, the inspections, test and life-limits established by the country of manufacture would apply.

NOTE 1: Heat test detector wire
2: Electrical Check
3: A cartridge must be removed from service two years after removal from its sealed package or five years from date of manufacture whichever expires first.

	PRIMARY MAINTENANCE PROCESS	INSPECTION & CHECK PERIOD	OTHER
Chapter 55 Stabilizers	OC	ABCDE	VIS
Horizontal	OC	4800 HRS.	VIS
	OC	9600 HRS.	VIS
Elevator	OC	4800 HRS.	VIS
Vertical	OC	4800 HRS.	VIS
		9600 HRS.	VIS
Rudder	OC	4800 HRS.	VIS
		9600 HRS	VIS
Attach Fittings	OC	4800 HRS.	VIS

FIGURE 04-04 (cont.)
COMPANY LETTER HEAD

MAINTENANCE TIME LIMITATIONS – PART D
INSPECTION FREQUENCY AND OVERHAUL
(AIRCRAFT MAKE AND MODEL)

	PRIMARY MAINTENANCE PROCESS	INSPECTION & CHECK PERIOD	OTHER
Chapter 72 Engine	OC	ABC	VIS
Engine Turbo Prop (Type)	HT	ABC	OVH 4000 HRS
Hot Section	HT	ABC	HSI 1250 HRS