# AIRBUS

# EC 155

# **AIRWORTHINESS LIMITATIONS SECTION (ALS)**

EC 155 B



Issue date	:	2012.11.08
Revision 007	:	2021.01.22

Airbus Helicopters Direction Technique Support Aéroport International Marseille Provence 13725 Marignane Cedex FRANCE Contact: <u>contact.msm.ah@airbus.com</u>

### IMPORTANT NOTE

The practical value of this manual depends entirely upon it being updated correctly by the operator.

The successive revisions should be recorded on the relevant page of the manual.

# **RECORD OF REVISIONS**

Rev.	Issue	Inse	erted		Rev.	Issue	Inse	erted
No.	Date	Date	Name		No.	Date	Date	Name
				-				
				-				
				-				
				1				

# APPROVAL

# 1 EASA - Approval

The Airworthiness Limitations Section is approved and any change must also be approved by The EASA

Revision	04-00 LOEP Identification	Approval Date	EASA nb
REV 000	2003.07.03	EASA : 2003.10.03	-
REV 001	2004.01.02	EASA : 2004.05.03	2004-4665
REV 002	2004.06.10	EASA : 2004.11.17	2004-11069
REV 003	2005.01.20	EASA : 2005.04.07	2005-3141
REV 004	2005.06.09	EASA : 2005.09.27	R.A 01040
REV 005	2005.12.08	EASA : 2006.02.24	R.A 01090
REV 006	2006.04.07	EASA : 2006.07.24	R.C 01832
REV 007	2006.11.14	EASA : 2007.03.02	R.C 02183
REV 008	2007.03.23	EASA : 2007.04.23	R.C 02154
REV 009	2007.07.20	EASA : 2007.08.01	R.C 02545
REV 010	2008.06.27	EASA : 2008.10.09	R.C 03064
REV 011	2009.01.08	EASA : 2009.04.31	R.C 03380
REV 012	2010.04.08	EASA : 2010.06.17	10030472
REV 013	2010.07.29	EASA : 2010.12.07	10032897
REV 014	2011.06.09	EASA : 2012.01.03	10037733.R1

Revision	04-00 LOEDU Identification	Approval Date	EASA nb
New REV 000	2012.11.08	EASA : 2012.10.22	10041894
New REV 001	2013.09.12	EASA : 2014.01.20	10047763
New REV 002	2014.05.29	EASA : 2014.11.10	10051101

Revision	LOEDU Identification	N° TFSAC	Approval date	N°
New REV 003	2016.09.12	13.155.0003.a 14.155.0001.a 15.155.0002.a 15.155.0005.a 16.155.0001.a	2015.10.01 2015.11.04 2015.10.15 2015.11.25 2016.05.06	10054937 10055307 REV.1 10055158 10055640 10057793
New REV 004	2017.09.11	16.155.0003.b 16.155.0004.b	2016.12.12 2016.11.30	EASA: 10060423 EASA: 10060209 REV. 1
New REV 005	2018.09.10	17.155.0002.a	2018.06.19	AH DOA: DO/2018/034
New REV 006	2019.09.16	15.155.0001.a 18.155.0001.a 19.155.0003.a	2018.11.20 2018.06.22 2019.09.20	10067575 10065949 AH DOA : DO/2019/056
New REV 007	2021.01.22	19.155.0001.a 19.155.0004.a 20.155.0001.a	2020.05.18 2020.05.29 2021.01.12	10073297 AH DOA: DO/2017/106 AH DOA: DO/2017/024

The technical content of these revisions are approved under DOA N°EASA.21J.700 authority. This approval means that the revisions have been prepared with already EASA approved data and minor changes approved under DOA N°EASA.21J.700. The revisions are issued under DOA procedure.

The list of chapter 04 effective pages is given in the "LOEDU" which is identified by 2021.01.22.

The "LOEDU" identification does not correspond to the approval date, it is a documentation handling code provided at the bottom of all pages.

#### End of the Document Unit



Page 2

# LOEDU

### 1 Update

Refer to the "Update of the ALS" Document Unit

### 2 "Type" Column Code

N-New, to be inserted
R-Revised, to be replaced
D-To be removed from the manual
(No code) Unchanged with respect to the previous issue

D.U.	Туре	Date	D.U.	Туре	Date
TITLE	Ν	2021.01.22	04-10-00 ATA 53	-	2013.09.12
APPROVAL	Ν	2021.01.22	04-10-00 ATA 62	R	2021.01.22
LOEDU	Ν	2021.01.22	04-10-00 ATA 63	R	2021.01.22
TABLE OF CONTENTS	Ν	2021.01.22	04-10-00 ATA 64	-	2016.09.12
HIGHLIGHTS OF THE	Ν	2021.01.22	04-10-00 ATA 65	-	2018.09.10
REVISION			04-10-00 ATA 67	-	2019.09.16
GLOSSARY	-	2016.09.12	04-20-00 ATA 25	-	2017.09.11
STRUCTURE OF THE	-	2019.09.16	04-20-00 ATA 26	-	2012.11.08
	_	2013 00 12	04-20-00 ATA 53	-	2013.09.12
		2010.09.12	04-20-00 ATA 62	-	2016.09.12
ALS	-	2019.09.10	04-20-00 ATA 63	-	2019.09.16
USE OF THE ALS	-	2019.09.16	04-20-00 ATA 64	-	2017.09.11
SB INCORPORATED	-	2019.09.16	04-20-00 ATA 65	-	2013.09.12

# **TABLE OF CONTENTS**

#### TITLE

#### HIGHLIGHTS OF THE REVISION

- 1 GENERAL
- 2 OUTLINE OF THE REVISION
- **3 DETAILED DESCRIPTION** 
  - 3.1 Section 04.10.00

#### GLOSSARY

#### STRUCTURE OF THE ALS

- 1 GENERAL STRUCTURE OF THE ALS
- 2 BREAKDOWN OF THE ALS
  - 2.1 Identification of the DUs
  - 2.2 Task codes
  - 2.3 List Of Effective Document Units (LOEDU)
- 3 CLASSIFICATION OF INFORMATION

#### UPDATE OF THE ALS

- 1 REVISION OF THE ALS
- 2 UPDATE OF THE ALS
  - 2.1 Update procedure
  - 2.2 Identification of the modifications
- 3 EFFECTIVITY

#### **BREAKDOWN OF THE ALS**

- 1 PURPOSE OF THE ALS
- 2 CHANGES TO THE ALS
- **3 AIRWORTHINESS LIMITATIONS SPECIFICATION** 
  - 3.1 Components subject to a Service Life Limit (SLL)
  - 3.2 Components subject to an airworthiness inspection
- 4 EFFECTIVITY RESPONSIBILITY

### USE OF THE ALS

- 1 COMPLIANCE WITH THE ALS
- 2 OCCURRENCE REPORTING
  - 2.1 Reporting to the airworthiness authorities
  - 2.2 Reporting to the helicopter manufacturer

## AIRBUS

#### TITLE

4	CO	MPONENT PART NUMBERS
	4.1	Definition
	4.2	Part number followed by a suffix
	4.3	Applicability of the limits

**3 IN-SERVICE MONITORING OF COMPONENTS** 

- 4.4 Changes to part numbers
- 5 EXPRESSION OF THE LIMITS
  - 5.1 Flight Hours
  - 5.2 Calendar Time
    - 5.2.1 Initial aging date for a component
  - 5.3 Cycles
    - 5.3.1 Cycles with large centrifugal load variation
    - 5.3.2 Cycles with large torque variation
  - 5.4 Number of operations for certain components
  - 5.5 Airworthiness limitation units Description and counting
    - 5.5.1 Airworthiness limitation expressed in Flight Hours
    - 5.5.2 Airworthiness limitation expressed in Torque Cycles
    - 5.5.3 Airworthiness limitations expressed in Flight Hours and Torque Cycles
  - 5.6 Removal of life-limited components
  - 5.7 Provisional limitations
  - 5.8 Version identification of components
    - 5.8.1 Principle
    - 5.8.2 Marking the version
  - 5.9 Periodic and perform once airworthiness inspections
  - 5.10 Performance interval
  - 5.11 Specific and severe atmospheric operating conditions
  - 5.12 Airworthiness limitations value
    - 5.12.1 Definition of the margin
    - 5.12.2 Application of the margin
    - 5.12.3 Specification of the margin
    - 5.12.4 Example of use of the margin

### TITLE

- 6 TRANSFER OF A LIFE-LIMITED COMPONENT INCLUDED IN ALS SECTION 04-10-00 FROM ONE HELICOPTER VERSION TO ANOTHER HELICOPTER VERSION
  - 6.1 Dauphin family helicopter versions concerned by the transfer
  - 6.2 Authorization to transfer
  - 6.3 Application rules
  - 6.4 Calculation rules
    - 6.4.1 Information required for the calculations
    - 6.4.2 Calculating ty
    - 6.4.3 Calculating T
  - 6.5 Counting
  - 6.6 Recording
- 7 TRANSFER OF A COMPONENT SUBJECT TO AN AIRWORTHINESS INSPECTION INCLUDED IN SECTION 04-20-00 FROM ONE HELICOPTER VERSION TO ANOTHER HELICOPTER VERSION
  - 7.1 Dauphin family helicopter versions concerned by the transfer
  - 7.2 Authorization to transfer
  - 7.3 Transfer rules for components subject to an airworthiness inspection
- 8 CONTENT OF A TASK

#### SB INCORPORATED

#### End of the Document Unit

# **HIGHLIGHTS OF THE REVISION**

### 1 GENERAL

- Check that the content of the sections is in accordance with the List Of Effective Document Units (LOEDU).
- Return the acknowledgment card.

### 2 OUTLINE OF THE REVISION

The revision is codified as follows:

- Revision 007 2021.01.22

### **3 DETAILED DESCRIPTION**

#### 3.1 Section 04.10.00

#### **62-10 MAIN ROTOR BLADES** 10000 FH 62/10/00/000/000/005 Main rotor blade Description modified 20000 FH 62/10/00/000/000/007 Main rotor blade Description modified 1000 FH 62/10/01/000/000/000 De-iced main rotor blade Task deleted 63-10 ENGINE/MGB COUPLING 56400 TC 63/10/00/000/000/050 Coupling shaft MP/N modified 56400 TC 63/10/00/000/000/070 Engine/MGB coupling shaft Title modified MP/N modified 63-20 MAIN GEARBOX 20000 FH 63/20/00/000/000/530 Upper cover MP/N modified



# GLOSSARY

(-):	Not indicated
(P)	Provisional limitation
& :	And
// :	Or
§ :	Paragraph
ALL MP/N :	All Manufacturer Part Numbers
ALS :	Airworthiness Limitations Section
AMM :	Aircraft Maintenance Manual
ATA	Air Transport Association
CHK :	СНесК
D :	Day
DU:	Document Unit
EASA :	European Aviation Safety Agency
EXC :	EXCept
FH :	Flight Hour
FM :	Log card
FS :	Frequency Start
HC :	Hoist Cycle
LC :	Landing Cycle
LOEDU :	List Of Effective Document Units
M :	Month
MGB :	Main Gear Box
MP/N :	Manufacturer Part/Number
MRH :	Main Rotor Hub
MSM :	Master Servicing Manual (Maintenance Program)
OC :	On Condition
OEM :	Original Equipment Manufacturer
OPT :	OPTion
PN :	Part Number
PO:	Perform Once
POST:	After (POST MOD, POST SB)
PRE :	Before (PRE MOD, PRE SB)
RC :	Roping Cycle
SB :	Service Bulletin
SBV :	Vendor's Service Bulletin
SC :	Sling Cycle
SLL :	Service Life Limit
S/N :	Serial Number
IGB:	Iail Gear Box
IL:	Type Limit





TRH :	Tail Rotor Hub
TSI :	Time Since Installation
TSM :	Time Since Manufacture
WC :	Work Card
Y :	Year

# **STRUCTURE OF THE ALS**

### 1 GENERAL STRUCTURE OF THE ALS

The Airworthiness Limitations Section (ALS) is broken down into two parts.

The first part comprises general information which explains how the ALS operates and how it must be used.

It is composed of the following DUs:

- Glossary,
- Structure of the ALS,
- Update of the ALS,
- Breakdown of the ALS,
- Use of the ALS.

The second part which defines the limits comprises the following sections:

- 04-10-00, which specifies the components subject to a Service Life Limit (SLL).
- 04-20-00, which specifies the mandatory airworthiness inspections (CHK) and provides various specific information to be performed on the helicopter, periodically or a limited number of times, regardless of the operating conditions.

### 2 BREAKDOWN OF THE ALS

The various parts of the ALS are presented in the form of Document Units (DUs).

#### 2.1 Identification of the DUs

Each DU is unique and is identified by the following:

- the title of the manual at the top right hand side of the page,
- the effectivity (helicopter type and version) marked at the bottom left hand side of the page,
- the date code of the DU at the bottom left hand side of the page below the effectivity (format: year.month.day),
- the number or title of the DU at the bottom right hand side of the page,
- the ATA number at the bottom of the page only for the sections 04-10-00 and 04-20-00,
- the page number at the bottom right hand side of the page.

The end of each Document Unit is identified by "End of the Document Unit" on the last page.

#### 2.2 Task codes

The DUs in sections 04-10-00 and 04-20-00 comprise maintenance tasks. These tasks are identified by a unique code specific to Airbus, comprising a group of 15 characters.

Example :

62/20/00/000/000/075 Lower attach beam				
	365A31-4596-00 365A31-4596-01	(-) (-)	5350 FH	0

The first four characters (**62/20**/00/000/075) correspond to the breakdown into ATA system/sub-system.

Page 1

The fifth and sixth characters (62/20/00/000/000/075) are used to regroup an ATA system comprising several subjects into individual subjects.

The seventh to fifteenth characters (62/20/00/000/000/075), according to the ALS section, are used to organize the tasks in an ATA system/sub-system/subject.

#### 2.3 List Of Effective Document Units (LOEDU)

The LOEDU specifies the following information, for each DU, in a table:

- the Document Unit: this column specifies the number of the section, the ATA number or the title of the DU (example: 04-20-00, ATA 62).
- the type: this column is coded with the letter "R" if the DU is revised, "D" if the DU is deleted, "N" if the DU is new, or has no code (-) for DUs which are unchanged.
- the revision date: this column indicates the DU date code.

#### 3 **CLASSIFICATION OF INFORMATION**

The DUs in sections 04-10-00 and 04-20-00 are classed in increasing order according to ATA 100 numbering.



## **UPDATE OF THE ALS**

#### 1 **REVISION OF THE ALS**

The ALS is revised approximately every 6 months.

The ALS cover page bears the issue date code (first issue), the current revision number taken in chronological order followed by the revision date code.

Example:

issue date : 2012.01.30,

revision 002 : 2012.03.28.

The last applicable revision is revision 002 with a date code of 2012.03.28.

The date code marked on the new or revised DUs corresponds to the revision date code marked on the cover page.

#### 2 UPDATE OF THE ALS

#### 2.1 Update procedure

The user is responsible for updating his documentation each time he receives a revision or a new issue from the manufacturer. The ALS is updated using the new LOEDU which specifies which DU must be inserted (new DU), replaced (revised DU) or removed (deleted DU). A deleted DU is issued with the wording "DU TO BE REMOVED FROM THE MANUAL" in the revision concerned.

Once the ALS has been updated, the date code of each DU indicated at the bottom left hand side of each page must correspond with the LOEDU.

The beginning of the ALS includes a "HIGHLIGHTS" page which explicitly summarizes the modifications made to each revision or new issue.

#### NOTE

After updating, the "RECORD OF REVISIONS" page at the beginning of the ALS must be completed (date, name and signature).

#### 2.2 Identification of the modifications

Modifications are identified by a revision mark in the form of a vertical line in the right hand margin of the page.

Revision marks are not used in the following DUs:

- LOEDU,
- Table of Contents,
- Highlights.

#### 3 EFFECTIVITY

The operator must check the effectivity of the ALS used (correctly updated) for the helicopter concerned.

The effectivity (helicopter type and version) is indicated on the cover page and is repeated at the bottom of each page comprising the ALS DUs.

#### End of the Document Unit

**UPDATE OF THE ALS** 



# **BREAKDOWN OF THE ALS**

### 1 PURPOSE OF THE ALS

The Airworthiness Limitations Section (ALS) drafted by the manufacturer, draws up a list of all the components subject to one or more airworthiness limitations and defines these limits.

It specifies the mandatory operations and limits to ensure the continued airworthiness of the helicopter (\*), in all its varied operating missions.

For the airworthiness limitations and the life limits assigned to the engine components, refer to the engine manufacturer's documentation.

(\*) helicopter (type/version) defined by Airbus.

### 2 CHANGES TO THE ALS

The ALS section is modified by the manufacturer according to changes to the helicopter definition.

Each modification to the ALS is subject to approval by the European Aviation Safety Agency (EASA).

### 3 AIRWORTHINESS LIMITATIONS SPECIFICATION

The Airworthiness Limitations can be expressed in the form of a life limit, an airworthiness inspection interval or various specific information.

#### 3.1 Components subject to a Service Life Limit (SLL)

Life-limited components are components that are exposed to fatigue deterioration due to in-service stress, and the failure could cause catastrophic effect to the helicopter.

The loads applied to these components cause the latter to deteriorate according to one or more types of fatigue:

- vibration fatigue, which is related to the number of flight hours logged (very large number of low-amplitude load variations),
- low-cycle fatigue, which is related to a limited number of large load variations (example: centrifugal load variations, related to the number of rotor starts, or large torque variations related to takeoff, etc.),
- fatigue related to the number of times certain components are used.

These components must be removed from service when the specified limit is reached.

#### NOTE

The service life limits assigned to components guarantee flight safety with regard to the flight load fatigue alteration of components with no external deterioration. These service life limits are not a commercial guarantee because a component may be removed due to wear, fretting, corrosion or scoring, etc., before expiry of the service life.

The only warranty applicable to the helicopter and any component is the warranty included in the Sales Contract for the helicopter and the components.

#### 3.2 Components subject to an airworthiness inspection

A component subject to an airworthiness inspection must be inspected periodically to confirm:

- that there is no damage,
- or that the damage found is within the removal or maintenance criteria specified in the documentation.

In both cases, the component is kept in service until the next inspection. The component must be removed from service when it reaches the criterion for removal, or made serviceable again as per the instructions given in the documentation.

The visual inspection is aimed at the overall external appearance of the component (no distortion, failure, cracks, scratches, signs of heating or wear, etc.), which would modify its original condition.

STANDING INSTRUCTIONS RELATIVE TO CONDITION: Surface damage and damage to protection and paint on all helicopter components must be examined and treated without delay in accordance with the applicable instructions (criteria, then reworking).



WHEN AN AIRWORTHINESS INSPECTION REQUIRES THE MEASUREMENT OF A PHYSICAL VALUE (CLEAR-ANCE, VIBRATION LEVEL, TIGHTENING TORQUE, BONDING SEPARATION SURFACE AREA, ETC.), THE VALUE MEASURED AT EACH INSPECTION MUST BE RECORDED ON AN APPROPRIATE MEDIUM (E.G.: FOLLOW UP SHEET).

### 4 EFFECTIVITY - RESPONSIBILITY

The limits assigned to the component part numbers listed in this section are applicable to material:

- acquired directly from Airbus or through the Airbus subsidiaries or distribution network,
- purchased from the equipment vendors listed in our spare part catalogs, either directly or through their own distribution network.

In all cases, the manufacturing source is specified in the "airworthiness document", depending on the regulations (JAA Form One or equivalent).

Airbus will not carry out repairs on service life limited parts which were procured other than through the Airbus distribution network.



IT IS PROHIBITED TO REUSE PARTS, EQUIPMENT OR ASSEMBLIES ORIGINATING FROM A HELICOPTER WHICH HAS BEEN INVOLVED IN AN ACCIDENT, WITH-OUT FORMAL TECHNICAL APPROVAL FROM THE AIRBUS CUSTOMER TECHNICAL SUPPORT DEPART-MENT.

REMINDER: THE AIR ACCIDENT INVESTIGATION BOARD OF THE COUNTRY CONCERNED IS RE-SPONSIBLE FOR CLASSIFYING AN EVENT AS AN ACCIDENT.

AIRBUS

# WARNING

AN AIRCRAFT CONSIDERED DESTROYED CANNOT BE REPAIRED OR REBUILT, WITHOUT FORMAL TECH-NICAL APPROVAL FROM THE AIRBUS CUSTOMER TECHNICAL SUPPORT DEPARTMENT.

AN AIRCRAFT IS CONSIDERED TO BE DESTROYED WHEN THE OEM-DEFINED MAIN STRUCTURE IS DAMAGED (DEFORMED, CRUSHED. CORRODED, CONSUMED BY FIRE. ETC.) TO SUCH AN EXTENT THAT ITS RETURN TO AN AIRWORTHY CONDITION CAN ONLY BE ACCOMPLISHED BY UTILIZING AN-OTHER MAIN STRUCTURE OR BY REPAIRING THE DAMAGED MAIN STRUCTURE UTILIZING AN ORIGI-NAL EQUIPMENT MANUFACTURER APPROVED RIG OF REFERENCE.

End of the Document Unit

# USE OF THE ALS

### 1 COMPLIANCE WITH THE ALS

The Airworthiness Limitations Section (ALS) specifies all the components which are subject to airworthiness limitations, which must be complied with in addition to the information given in the maintenance program (MSM).



THE LIMITS MUST BE COMPLIED WITH TO ENSURE THE AIRWORTHINESS OF THE HELICOPTER. THE TIME LIMITS MUST NOT BE EXCEEDED AND ANY CHANGE MUST BE SUBJECT TO PRIOR APPROVAL BY THE EASA AND AIRBUS.

### 2 OCCURRENCE REPORTING

Reporting of any malfunction, failure, fault or other occurrence which had or may have an adverse effect on the airworthiness of the helicopter is a key factor to keeping the helicopter airworthy and for the continuous improvement of flight safety.

#### 2.1 Reporting to the airworthiness authorities

The operator shall inform his relevant Airworthiness Authorities of any occurrence, in accordance with the local regulations he is subject to.

#### 2.2 Reporting to the helicopter manufacturer

As part of the Continued Airworthiness Program, any technical incident, discovered in operation or during maintenance work, must be reported by the operator to the helicopter manufacturer.

#### A technical incident is a technical event which is unexpected.

A few examples of technical incidents are given below. This list is not exhaustive. It is given as an illustration, intended to help the operator to understand the definition of a technical incident which is to be reported to the helicopter manufacturer.

#### In case of doubt on the need to report an event, the event shall be reported.

Examples of incidents to be reported (non-exhaustive list):

- technical difficulty in accomplishing the mission as planned, including but not limited to, difficulty resulting in an aborted mission,
- technical event increasing the crew workload,
- technical event that may jeopardize the airworthiness of the helicopter for the continuation of the mission or the safety of persons onboard or on the ground,
- in-flight loss or rupture of any part,
- abnormal deterioration (wear, scratch, crack, corrosion, delamination, bonding failure, indentation, etc.) to any structural or mechanical part, especially when exceeding the Maintenance Manual (AMM) removal/repair criteria or in case no maintenance criteria exist,
- system malfunction or loss (including partial or temporary incorrect operation) and interference within or between systems,
- incorrect operation of a system intended to minimize the effects of an accident, including when being used for maintenance or test purposes,
- incorrect operation or malfunction of a system, or deterioration of a part found when complying with an Airworthiness Directive,

Page 1

- non-conformity of a product, part or equipment with respect to its approved design, or a product of unknown or doubtful origin,
- missing, misleading, incorrect or unclear procedure that could lead to a flight crew or maintenance error,
- abnormal vibration,
- abnormal heating, smoke, fire,
- repetitive instances of any technical event which in isolation would not be considered "reportable" but which due to the frequency at which they arise, form a potential hazard,
- any other occurrence which has resulted in or may result in an unsafe condition.
- In case of doubt concerning the need to report an event, the event shall be reported.

### **3 IN-SERVICE MONITORING OF COMPONENTS**

All the components listed in section 04-10-00 of the ALS are to be monitored in service, unless "not to be monitored in service" is specifically mentioned in the task.

The in-service monitoring of components consists in recording the number of flight hours and/or the calendar time and/or the cycles logged on the equipment log card (**FM**).

If the component does not have a log card (component monitored via the log card of its higher assembly, etc.), before installation, the operator must organize his documentation in order to comply with the limits relating to this component (refer to Standard Practices Manual Work Card 20.08.05.101).

These recordings must be done in the various allocations of the component: case of transfer from one helicopter to another (refer to § 6).

All the documentation must be organized to enable recording of all the parameters used to comply with the limits.

### 4 COMPONENT PART NUMBERS

#### 4.1 Definition

- **Manufacturer Part Number (MP/N)**: This is the identification number of the component marked on the identification plate or directly on the component.
- **Airbus Part Number (PN)**: This is the Airbus part number which is associated with the manufacturer's part number (MP/N) for components which are not manufactured by Airbus.

The part number of the components which is given in the ALS is the manufacturer's part number (MP/N).

In the case of components which are not manufactured by Airbus, the MP/N is followed by the associated PN (in brackets).

Example :

67/30/00/000/000/000				
Tail rotor servo-control				
	SC 7291	(704A44831153)	9000 FH	0
In some case	s the PN is not spe	cified, in this case it is rep	laced by a hyphen.	

4.2 Part number followed by a suffix

In some cases, the MP/N can be assigned a suffix (example: MP/N 365A33-6005-08**M**), used for spares to indicate the installation of an optional component or a specific configuration.

These MP/Ns with a suffix generally do not appear in the ALS.

The limit applicable to an MP/N with a suffix is identical to that of the same MP/N without a suffix.

Example: the limit given for assembly MP/N 365A33-6005-08 is valid for assembly MP/N 365A33-6005-08 and assembly MP/N 365A33-6005-08M.

#### 4.3 Applicability of the limits

The limit(s) specified for the first MP/N are valid for all the other MP/Ns listed in the same task.

Example :

63/20/00/000/000/135			
Main bevel gear wheel			
	360A32-3256-25 (-) 360A32-3256-26 (-)	20000 FH	0

#### 4.4 Changes to part numbers

Unless otherwise specified, the service life and airworthiness inspections specified in the ALS apply to the components whose part numbers are specified in this section as well as to their successive dash numbers if these are not yet specified in this section.

In this case, check the installation effectivity of the dash number with the Airbus technical support department.

Example: 360A32-3036-22 Dash Number

### 5 EXPRESSION OF THE LIMITS

A component or an airworthiness inspection can be subject to one or more airworthiness limitations, expressed in:

- flight hours,
- calendar time,
- cycles with large centrifugal load or torque variations,
- number of operations (for certain components).

#### 5.1 Flight Hours

FH (Flight Hours), are counted from takeoff to landing.

#### 5.2 Calendar Time

Calendar time can be expressed:

- in years (Y: Years),
- in months (M: Months),
- in days (D: Days).

The initial aging date for a component to be taken into account is generally the date of first installation or first removal from storage, to be recorded on the equipment log card.

The storage time before installation is therefore not to be taken into account on the condition that storage was in accordance with the applicable documentation, except for the following specific cases.

For some components, the aging date to be taken into account is the date of manufacture marked on the Log Card (FM). In this case, TSM (Time Since Manufacture) is specified in each task concerned in the ALS.

#### 5.3 Cycles

#### 5.3.1 Cycles with large centrifugal load variation

To limit the number of parameters to be monitored during aircraft operation, the service life limit of the components likely to be damaged by large centrifugal load variations has been calculated based on 5 rotor starts/stops per flight hour.

If aircraft operation involves on average more than 5 rotor starts/stops per flight hour over a period of more than 600 FH, the actual service life of some components could be less than that specified in this document.

In this case, you must inform Airbus.

#### 5.3.2 Cycles with large torque variation

The number of torque variation cycles varies significantly with the missions that can be performed by a helicopter (example: external load carrying operations, such as logging, can lead to a large number of torque cycles), up to 60 per hour, whereas passenger transport flights of one hour on average lead only to one torque cycle per hour.

Therefore, no fixed number of cycles has been specified in order to avoid premature removal of components that are subject to few torque variations. The life limit of the components concerned is indicated in torque cycles (TC).

Consequently, the number of torque variation cycles logged must be monitored carefully and counted as follows:

#### - 1 landing with or without stopping the rotor = 1 cycle (1 TC)

1 external load carrying operation = 1 cycle (1 TC)

The cycles associated with external load carrying operations must be added to the landing cycles.

#### 5.4 Number of operations for certain components

Certain components may be subject to fatigue limits related to the number of operations. In this case, the type of use to be counted is defined directly in the tasks concerned with the permissible number.

#### 5.5 Airworthiness limitation units - Description and counting

#### 5.5.1 Airworthiness limitation expressed in Flight Hours

Tasks for which the Airworthiness Limitation is expressed in flight hours: count the number of flight hours.



EC 155 B

Page 4

63/20/00/000/000/135 Main bevel gear wheel	360A32-3256-25 360A32-3256-26	(-) (-)	20000 FH	0

### 5.5.2 Airworthiness limitation expressed in Torque Cycles

Tasks for which the Airworthiness Limitation is expressed in torque cycles: count the torque cycles as per § 5.3.2 or 5.4.

63/10/00/000/000/050 Coupling shaft 365A35-1067-00 365A35-1067-01	(-) (-)	56400 TC	0
--	------------	----------	---

### 5.5.3 Airworthiness limitations expressed in Flight Hours and Torque Cycles

Tasks for which the Airworthiness Limitation is expressed in flight hours and torque cycles: count the flight hours and the torque cycles logged.

63/20/00/000/000/230				
Fixed ring gear				
	365A32-7035-21	(-)	20000 FH	0
			✓ // 64900 TC	0

### 5.6 Removal of life-limited components

When a limit is reached, the component must be rejected and finally withdrawn from service. When a component is assigned several limits, it must be rejected when the first of the limits is reached (refer to § 5.10).

### 5.7 Provisional limitations

The limits for which additional fatigue tests indicate the possibility of an extension are identified by code "P" (Provisional). This code (P) follows the value of the limit in the tasks concerned.

The operator should therefore store the component in question after removal, pending a service life extension.

### 5.8 Version identification of components

Generally, new components can be installed on several Dauphin family helicopter types or versions. As the operating conditions are sometimes different from one version to another, components must be identified according to the version to which they have been assigned in order to know the versions on which the components have been used.

All the components listed in section 04-10-00 are subject to version identification.

#### 5.8.1 Principle

The version is identified by marking one or more letters or figures in a box (corresponding to the version to which the component is assigned), in an indelible manner, near to the part number, in accordance with the instructions of MTC Work Card 20.08.05.103.

Example:

[Y] - 365A35-1067-00, component installed on helicopter version X (original assignment).

[Y][X] - 365A35-1067-00, component transferred from helicopter version X to version Y; version Y must be struck out and followed by the new assigned version X.

#### 5.8.2 Marking the version

The version is marked on the components at the latest when they are removed for the first time.

The equipment log card of the component concerned or of its next higher assembly must be filled in as soon as the component is installed on a helicopter.

#### 5.9 Periodic and perform once airworthiness inspections

The maintenance operations associated with the airworthiness inspections indicated in section 04-20-00 of the ALS are to be performed:

- **Periodically:** the maintenance operation must be performed at the latest when the indicated limit is reached.

#### NOTE

For operational reasons, the maintenance operation can be performed before the limit is reached. However, the maximum interval between two maintenance operations must be complied with.

or

- **Once only:** the maintenance operation must be performed <u>once only, when the indicated limit is</u> reached. It must not be performed before the limit is reached.

These maintenance operations are identified by a dotted line around the task and by code PO (Perform Once) before the limit value.

These operations can be performed either:

- After installation of a component removed from the same helicopter,
- After the introduction to service of a new, overhauled or repaired component,
- After installation of a component originating from another helicopter,
- Each time after the component is installed.

The start of the maintenance operation is specified in each task concerned.

Example :



Page 6

62/20/00/605/000/000   Mast and/or hub	АММ	62.20.00.22	PO	3 FH	1   7 FH   
I Check tightening torque loads. Each time after the component is installed.					י     

#### 5.10 Performance interval

Some components with service life limit (SLL) and airworthiness inspections (CHK) are assigned several performance limits separated by the "//" or "&" sign.

In the case of limits separated by the "//" sign, at the first limit reached, the component must be removed and rejected or the airworthiness inspection must be performed.

The next limit at which the component is to be rejected or the maintenance operation is to be performed will once again be the first limit reached.

In the case of airworthiness inspections separated by the "&" sign, the maintenance operation must be performed at each limit indicated.

Example 1:

63/20/00/000/000/230				
Fixed ring gear				
	365A32-7035-21	(-)	20000 FH	0
			<i>1</i> 64900 TC	0

A fixed ring gear has logged only 50000 **TC** and 20000 **FH**. The fixed ring gear has reached the FH limit; it must therefore be removed and rejected.

Example 2:

25/62/00/000/000/090			۱ ۱ ۱
216064-0 (-) 216166-0 (-) 216167-0 (-) 216080-0 (-)	СММ	25.69.35	PO 6 Y 180 D & 9 Y 180 D & 12 Y 180 D
Proof pressure test and detailed check.			1

The maintenance operation must be carried out once at 6 Y, once at 9 Y and once at 12 Y. This maintenance operation shall be carried out again only if the component is removed then reinstalled or replaced.

#### 5.11 Specific and severe atmospheric operating conditions

Certain specific and severe climatic conditions are considered as specific operating conditions. This concerns the use of helicopters in the following conditions:

#### - Tropical and damp atmosphere

Combination of high ambient temperatures and high humidity level (from +28  $^{\circ}$ C (+82.4  $^{\circ}$ F) and 75% relative humidity).

#### Salt-laden atmosphere

Aircraft based on a ship or based more than 50% of the time inland at less than 1 km (.54NM) from the coast or,

flying more than 50% of the time over the sea at low altitude (less than 1000 feet).

#### - Sand and/or dust-laden atmosphere

Sand-laden wind, landing on sandy ground.

#### - Cold weather

encountered or scheduled temperatures from -15 °C (5 °F) to -25 °C (-13°F).

#### - Very cold weather

encountered or scheduled temperatures from -25 °C (-13°F) to -40 °C (-40°F).

The limitation relating to these operating conditions is covered with all the ALS tasks.

#### 5.12 Airworthiness limitations value

The airworthiness limitation value represents the limitation not to be exceeded. No tolerance is permitted on the airworthiness limitation value.

The airworthiness limitation value equals to a limit value + margin value.

#### 5.12.1 Definition of the margin

To introduce "flexibility" into maintenance planning in order to compensate for unpredictable situations (e.g.: unforeseeable increase in the helicopter utilization rate), Airbus defines a value, called "margin" which can be added to the limit value.

#### NOTE

The margin concept only concerns airworthiness checks (CHK).

No margin is allowed for SLL type limitations, therefore the margin value displayed is 0.

This margin, added to the limit value displayed in the column "CHK" to which it is applicable, results in the airworthiness limitation value (limit value + margin value) to be taken into account for two consecutive inspections.

#### 5.12.2 Application of the margin

The margin can be used repetitively for each limit value interval (see "Example of use of the margin" to § 5.12.4).

However, to maintain certain "flexibility" in maintenance planning, Airbus recommends to plan airworthiness checks using the limit value without taking the margin into account.

#### 5.12.3 Specification of the margin

The margin value and its units are specified as shown in the following example.

Example:

EC 155 B

# **USE OF THE ALS**



No unit specified when the margin equal zero.

#### 5.12.4 Example of use of the margin



X is the limit value for performing the maintenance operation and Y is the margin value added to the limit value.

After using the first margin value (partially or completely), the next maintenance operation is to be performed again within the X+Y interval, that is to say before the next airworthiness limitation value.

#### 6 TRANSFER OF A LIFE-LIMITED COMPONENT INCLUDED IN ALS SECTION 04-10-00 FROM ONE HELICOPTER VERSION TO ANOTHER HELICOPTER VERSION

#### 6.1 Dauphin family helicopter versions concerned by the transfer

The versions concerned by the transfer of a component are identified in the following table:

Dauphin Family	Civil versions
SA 365	C, C1, C2, C3
AS 365	N, N1, N2, N3
EC 155	B, B1



IT IS FORBIDDEN TO TRANSFER COMPONENTS BETWEEN CIVIL AND MILITARY VERSION HELI-COPTERS.

#### 6.2 Authorization to transfer

The transfer of a component (part or assembly) listed in section 04-10-00 from helicopter version "x" to helicopter version "y", is authorized only if the following conditions are met simultaneously:

both helicopter versions "x" and "y" must be listed in the table above. The transfer of components
originating from any other version or any other type of helicopter is forbidden,

- the part number of the component to be transferred is listed both in section 04-10-00 of version "x" and in section 04-10-00 of version "y",
- the component to be transferred does not have a provisional limitation (neither in section 04-10-00 of version "x" nor in section 04-10-00 of version "y").

#### 6.3 Application rules

If the transfer is authorized, comply with the following application rules:

- **6.3.1** If the component Service Life Limits are exactly the same on the aircraft version "x" and "y", you must continue to count the flight hours and/or torque cycles on the aircraft version "y".
- **6.3.2** If the component Service Life Limits on the aircraft versions "x" and "y" are different, convert the flight hours and/or torque cycles already logged by applying the calculation rules given in paragraph 6.4.

#### 6.4 Calculation rules

#### 6.4.1 Information required for the calculations

Calculating the equivalent flight time on version "y" when the component has already flown on version "x":

- flight time logged on version "x" = tx
- component service life limit on version "x" = SLLx
- component service life limit on version "y" = SLLy
- equivalent flight time on version "y" = ty
- remaining flight time available = T

#### 6.4.2 Calculating ty

ty = tx X (SLLy : SLLx)

#### 6.4.3 Calculating T

Remaining flight time available: T = SLLy - ty

#### NOTE

This type of calculation also applies for components with a service life limit expressed in torque cycles.

#### Examples:

Component 'A' that has logged 2000 FH on a version B1 helicopter and is transferred to a version N2 helicopter:

- service life limit of component 'A' on version B1: 6000 FH.
- service life limit of component 'A' on version N2: 3000 FH.
- equivalent flight time on version N2: 2000 x (3000 : 6000) = 1000 FH
- remaining flight time on version N2: 3000 1000 = 2000 FH.

Component 'B' that has logged 4000 FH on a version N1 helicopter and is transferred to a version N2 helicopter:

- service life limit of component 'B' on version N1: 8000 FH.
- service life limit of component 'B' on version N2: 10000 FH.
- equivalent flight time on version N2: 4000 x (10000 : 8000) = 5000 FH
- remaining flight time on version N2: 10000 5000 = 5000 FH.

Component 'C' that has logged 1500 FH on a version B1 helicopter and is transferred to a version N2 helicopter:

**USE OF THE ALS** 

- service life limit of component 'C' on version B1: 4500 FH.
- service life limit of component 'C' on version N2: 3000 FH. <u>provisional limitation</u> (no indication authorizing transfer)
- In this case the transfer is not authorized.

NOTE

The examples above can be adapted directly to service life limits expressed in torque cycles by replacing flight hours (FH) with torque cycles (TC).

#### 6.5 Counting

Then count the flight hours and/or torque cycles and add them to the equivalent flight time "ty".

#### 6.6 Recording

In all cases record the transfer information and calculation on the equipment log card of the component concerned (refer to § 5.8).

An individual log card must be drawn up if the component has been monitored via the log card of its higher assembly.

### 7 TRANSFER OF A COMPONENT SUBJECT TO AN AIRWORTHINESS INSPECTION INCLUDED IN SECTION 04-20-00 FROM ONE HELICOPTER VERSION TO ANOTHER HELICOPTER VERSION

#### 7.1 Dauphin family helicopter versions concerned by the transfer

The versions concerned by the transfer of a component are identified in the following table:

Dauphin Family	Civil versions
SA 365	C, C1, C2, C3
AS 365	N, N1, N2, N3
EC 155	B, B1

#### 7.2 Authorization to transfer

The transfer of a component included in section 04-20-00 of helicopter version "x" to helicopter version "y", is authorized only if the following conditions are met simultaneously:

- both helicopter versions "x" and "y" must be listed in the table above. The transfer of components
  originating from any other version or any other family of helicopter is forbidden,
- the part number of the component to be transferred is listed both in section 04-20-00 of version "x" and in section 04-20-00 of version "y".

#### 7.3 Transfer rules for components subject to an airworthiness inspection

If the inspection intervals (flight hours and/or torque cycles) for the component are identical on version "x" and version "y", continue counting the flight hours and/or torque cycles on version "y".

If the inspection intervals are different on version "x" and version "y", perform the airworthiness inspection when the component is transferred, then comply with the inspection interval specific to version "y".

### 8 CONTENT OF A TASK

Section 04-10-00

Fictitious example.

## AIRBUS



- 1 Task number (refer to § 2.2 of the DU "Structure of the ALS")
- 2 designation of the component
- 3 equipment manufacturer's part number and the Airbus management number (refer to § 4)
- 4 // (or), & (and). (refer to § 5.10)
- 5 limit value(s) and unit(s) (refer to § 5.1, 5.2, 5.3)
- 6 P: provisional limitation for the service life limit in flight hours (refer to § 5.7)
- 7 margin value(s) and unit(s) (refer to § 5.12)
- 8 comments if necessary
- 9 PO (perform once): one-off operation (refer to § 5.9)
- 10 Reference of the documentation: AMM, CMM, etc.

## **SB INCORPORATED**

Airbus is required to issue Service Bulletins (ASB/SB) subsequent to new events (incidents, etc).

The information contained in the SBs is incorporated in the ALS if, and only if:

The SB contains new periodic checks, or modifies the existing ALS limitations and its incorporation is approved by EASA.

The table below specifies for each SB incorporated:

- the number of the SB and its revision number,
- the subject of the SB,
- the ATA chapter/section concerned,
- the number of the associated EASA Airworthiness Directive (AD),
- the date on which the SB is incorporated in the ALS.

SB N°	Subject	ATA	AD number	Incorporation date
04A003 R0	Reduced service life for the tail rotor pitch change control rod.	65–20	2001-444-003(A)	2001.11.30
04A005 R0	Tail Rotor Pitch Change Control Rod.	65–20	2001-473-006(A)	2003.07.03
05A006 R1	Check and Replacement of Baggage Compartment Fire Extinguisher and Engine Fire Extinguishers.	26–21	F-2004-180	2005.01.20
05A007 R0	Check of the MGB Planet Gear Carrier.	63–20	F-2005-181	2005.01.20
62A006 R0	Check for Correct Positioning of the Filler Wedge of the Tenon at the Main Rotor Blade Tip.	62-10	F-2004-106	2005.01.20
64-003 R0	Tail Rotor Blade Protection Against Sand Erosion.	64–10	Not Applicable	2005.01.20
05A005 R1	Check of the Main Gearbox (MGB) Base Plate.	63–20	F-2004-023	2005.06.09
05A011 R0	Tail Rotor Blade Check.	64–10	AD-2006-0099	2006.11.14
62A014 R0	MAIN ROTOR - Check of the Rotor Mast / Hub Nut.	62–20	EAD-2006-0368-E	2008.06.27
05A007 R2	Check of the MGB Planet Gear Carrier This SB revision leads to no change the ALS.	63–20	2007-0288-E	2010.04.08
05A007 R3	Check of the MGB Planet Gear Carrier This SB revision leads to no change the ALS.	63–20	2007-0288-R1	2013.09.12
05A027 R1	Check of the deployment system of the external life rafts located in the footsteps.	25–69	2014-0214	2017.09.11
05A021 R1	Visual check of the 10-blade TRH hub.	64–21	2012-0227-1	2017.09.11

# **SB INCORPORATED**

ALS



Task Number Description/Remarks	MP/N (PN)	Type of limit: SLL	Margin

### ATA 53-FUSELAGE

### 53-10 PRIMARY STRUCTURE

53/10/00/000/000/005				
Transmission deck - 1	MGB forward fitting			
	365A21-8117-00 365A21-8117-01	(-) (-)	16100 FH	0
53/10/00/000/000/010				
Transmission deck - ]	MGB fitting assy			
	365A21-8201-00	(-)	20000 FH	0
53/10/00/000/000/020				
Transmission deck -	MGB aft fitting			
	365A21-3355-04 365A21-3355-05	(-) (-)	3200 FH	0
53/10/00/000/000/030				
Carbon tube - TGB 1	nount			
	365A23-4211-00 365A23-4211-02	(-) (-)	30000 FH	0
53/10/00/000/000/040				
Carbon tube - TGB 1	nount			
	365A23-4210-02 365A23-4213-00	(-) (-)	20000 FH	0

Task Number Description/Remarks MP/N (PN)	Type of limit: SLL	Margin
--	--------------------	--------

### ATA 62-ROTOR (S)

### 62-10 MAIN ROTOR BLADES

62/10/00/000/000/005 Main rotor blade					
	365A11-0080-00	(-)	10000 FH	0	
62/10/00/000/000/007 Main rotor blade	365A11-0080-01	(-)	20000 FH	0	

### 62-20 MAIN ROTOR HEAD

62/20/00/000/000/075				
Lower attach beam				
	365A31-4596-00	(-)	5350 FH	0
	365A31-4596-01	(-)		
62/20/00/000/000/097				
Upper attach beam				
	365A31-4597-01	(-)	5350 FH	0
	365A31-4706-00	(-)		
	365A31-4706-01	(-)		
62/20/00/000/000/120				
Spherical thrust beari	ng			
	57910600	(704A33633213)	4300 FH	0
Service life limit for the	e metal section only.			
62/20/00/000/000/143				
Frequency adapter en	d-fitting			
	12-11505P	(704A33633218)	20000 FH	0
	12-11506P	(704A33633217)		-
62/20/00/000/000/150				
Frequency adapter				
	F4T410001	(704A33640090)	20000 FH	0
Service life limit for the	e metal section only.			
62/20/00/000/000/170				
Unequipped rotor bla	de pin			
I. FF	▲ 365A31-2031-20	(-)	2800 FH	0
			2000111	U



Task Number Description/Remarks	MF	²/N (PN)	Type of limit: SLL	Margin
62/20/00/000/000/190 Blade horn				
	365A31-4561-00 365A31-4561-01	(-) (-)	20000 FH	0
62/20/00/000/000/200				
Spherical thrust bearing - A	Attach beam bolt			
	704A33-633-224	(-)	8000 FH	0
62/20/00/000/000/220				
Frequency adapter - Attach	ı beam bolt			
	704A33-633-242	(-)	8050 FH	0
62/20/00/000/000/230				
Scissors drive adapter				
	365A31-1171-00	(-)	5000 FH	0
62/20/00/000/000/300				
Non-rotating swashplate				
	365A31-4531-01	(-)	3800 FH	0
	365A31-4531-02	(-)		
62/20/00/000/000/310				
Rotating swashplate				
	365A31-4541-01 365A31-4541-02	(-) (-)	20000 FH	0
62/20/00/000/000/330				
Pitch - Change rod body				
	T24497	(704A33633216)	1000 FH	0
62/20/00/000/000/337 Pitch - Change rod body				
I nen enungerou souj	T25274V	(704A33633259)	20000 FH	0
	TB212100-004	(704A33633268)	20000	č
62/20/00/000/000/340				
Pitch - Change rod end-fitt	ing	(== : : : : : : : : : : : : : : : : : :		-
	1211507P 1211508P	(704A33633220) (704A33633221)	20000 FH	0
	XMRE10RSF14	(704A33633222)		
	XMRE10RSF14G	(704A33633219)		
62/20/00/000/000/350				
Scissors lower link				
	365A31-1116-03	(-)	20000 FH	0
	303A31-1110-04	(-)		
62/20/00/000/000/360				
Scissors upper mik	365431-1115-03	(-)	20000 EH	0
	365A31-1115-04	(-)	20000111	0

Task Number Description/Remarks	N	IP/N (PN)	Ту	vpe of limit: SLL	Margin
62/20/00/000/000/370					
Flared housing					
	365A31-4591-00	(-)		6400 FH	0
	365A31-4591-01	(-)			
	365A31-4591-02	(-)			
	303A31-4391-03	(-)			
62/20/00/000/000/380					
Rotor mast bearing spacer					
	365A31-4527-00	(-)		1300 FH	0
62/20/00/000/000/382					
Rotor mast bearing spacer					
	365A31-4527-01	(-)		13700 FH	0
62/20/00/000/000/392					
Rotor shaft					
	365A31-4521-00	(-)		2470 FH	0
	365A31-4521-02	(-)	//	25795 TC	0
	365A31-4521-03	(-)			-
	365A31-4521-04	(-)			
	303731-4321-03	(-)			
62/20/00/000/000/395 Rotor shaft					
Rotor shart	205424 4524 00				0
	365A31-4521-06 365A31-4521-07	(-)		7850 FH	0
	000/101/1021/07	()	П	30037 10	0
62/20/00/410/000/100					
Scissors upper link					
	365A31-1115-05	(-)		10900 FH	0
62/20/00/605/000/030					
Mast and/or hub - Nut					
	365A31-2060-20	(-)		6200 FH	0
			//	31100 TC	0
62/20/00/605/000/040					
Mast and/or hub - Nut					
	365A31-2060-21	(-)		13800 FH	0
			//	69400 TC	0

Task Number		Tune of limit, SLL	Margin
Description/Remarks	MIP/IN (PIN)	Type of mint. SEL	warym

# ATA 63-ROTOR DRIVE (S)

### 63-10 ENGINE/MGB COUPLING

63/10/00/000/000/025				
Coupling shaft forwar	d flared housing			
	365A35-1010-24	(-)	6500 FH	0
	365A35-1010-25	(-)		-
63/10/00/000/000/035				
Coupling shaft aft flar	ed housing			
	365A35-1011-28	(-)	2900 FH	0
63/10/00/000/000/050				
Coupling shaft				
	365A35-1067-00	(-)	56400 TC	0
	365A35-1067-01	(-)		
	365A35-1067-02	(-)		
	365A35-1067-03	(-)		
63/10/00/000/000/070				
Engine/MGB coupling	shaft			
	365A35-1064-00	(-)	56400 TC	0
	365A35-1064-01	(-)		
	365A35-1064-02	(-)		
	365A35-1064-03	(-)		
	365A35-1073-00	(-)		
	365A35-1073-01	(-)		
	365A35-1073-02	(-)		
	365A35-1073-03	(-)		
63/10/00/000/000/080				
MGB input flange				
	365A32-5427-21	(-)	49400 TC	0
	365A32-5427-22	(-)		-

### 63-20 MAIN GEARBOX

63/20/00/000/000/030					
Servo-control attachme	ent fitting				
	360A32-1163-03 360A32-1163-04	(-) (-)		20000 FH	0
63/20/00/000/000/050					
Housing					
	365A32-2046-15	(-)	//	10000 FH 29300 TC	0 0
63/20/00/000/000/060					
Planet gear carrier					
	360A32-3036-20 360A32-3036-21 360A32-3036-22	(-) (-) (-)		25900 TC	0

Task Number

Task Number Description/Remarks	M	P/N (PN)	Type of limit: SLL	Margin
				-
63/20/00/000/000/095				
Tail rotor drive shaft bevel	gear wheel			
	365A32-1058-22	(-)	12500 FH	0
63/20/00/000/000/135				
Main bevel gear wheel				
	360A32-3256-25	(-)	20000 FH	0
	300A32-3230-20	(-)		
63/20/00/000/000/155				
Tail rotor drive shaft bevel	pinion			•
	360A32-1029-26 360A32-1029-29	(-) (-)	2800 FH	0
Part : assembly				
360A32-1029-26 : 360A32-1	218-06			
360A32-1029-29 : 360A32-1	218-09			
63/20/00/000/160				
First reduction pinion				
×	365A32-4129-03	(-)	20000 FH	0
62/20/00/000/400				
Double ninion				
Double plinon	365A32-7100-20	(-)	20000 FH	0
			20000111	
63/20/00/000/000/230 Fixed ring goor				
rixeu ring gear	265422 7025 21			0
	305A32-7035-21	(-)	20000 FH // 64900 TC	0
				-
63/20/00/000/000/260 Sun gear vertical shaft				
Sun gear vertical shart	365432-7021-23	(-)	20000 EH	0
	303732-1021-23	(-)	20000111	0
63/20/00/000/000/261				
Sun gear vertical shaft	005400 7004 04			•
	365A32-7021-24	(-)	7200 FH	0
63/20/00/000/000/275				
Freewheel shaft				
	365A32-5424-01	(-)	101600 TC	0
63/20/00/000/000/280				
Freewheel driven head shaf	ft			
	365A32-5422-20	(-)	18300 TC	0
63/20/00/000/000/320				
Planet gear				
	365A32-7023-21	(-)	5000 FH	0
Part: assembly				
365A32-7023-21 : 365A32-9	011-00,			
365A32-90	J13-00.			

Description/Remarks	MP/N (PN)	Type of limit: SLL	Margin

63/20/00/000/340			
First reduction gear housing			
365A32-7108-00	(-)	20000 FH	0
	.,		-
63/20/00/000/525			
Half-gimbal joint			
365A32-7110-00	(-)	20000 FH	0
365A32-7112-00	(-)		
63/20/00/000/530			
Upper cover			
265 A22 7102 00	()		0
365432-7824-00	(-)	20000 FH	0
365A32-7824-01	(-)		
63/20/00/000/545			
Gimbal ring			
365A32-7113-20	(-)	20000 FH	0
365A32-7113-21	(-)		
Part : assembly			
365A32-7113-20 : 365A32-7114-00			
365A32-7113-21 : 365A32-7114-01			
00/00/000/000/550			
MCD bottom			
MGB Dottom			
366A32-1060-26	(-)	52600 TC	0
Part : assembly			
366A32-1060-26 : 366A32-1062-06			
63/20/00/000/555			
MGB bottom			
366A32-1060-29	(-)	17000 TC	0
366A32-1060-30	(-)		
Part : assembly			
366A32-1060-29 : 366A32-1062-09			
366A32-1060-30 : 366A32-1062-10			
63/20/00/000/560			
Fixed flange (tail rotor drive)			
360A32-2034-20	(-)	2800 FH	0
360A32-2034-21	(-)		
360A32-2034-22 360A32-2034-23	(-)		
	(-)		
63/20/00/000/570			
Tail rotor drive shaft flange			
360A32-1035-20	(-)	20000 FH	0
360A32-1035-21	(-)		

Task Number Description/Remarks	MP/N (PN)	Type of limit: SLL	Margin

63/20/00/000/575				
Accessory drive pinion				
365A32-4059-20	(-)	10600 FH	0	
Service life limit applicable only to aircraft equipped with OP63B98.				

## 63-30 MOUNTS AND ATTACHMENTS

63/30/00/000/000/070			
MGB forward suspension bar			
365A38-4520-00	(-)	1000 FH	0
63/30/00/000/000/071			
MGB forward suspension bar			
365A38-4520-01	(-)	5560 FH	0
63/30/00/000/000/075			
MGB aft right suspension bar			
365A38-4521-00	(-)	1000 FH	0
63/30/00/000/000/076			
MGB aft right suspension bar			
365A38-4521-02	(-)	8600 FH	0
63/30/00/000/080			
MGB aft left suspension bar			
365A38-4521-01	(-)	1000 FH	0
63/30/00/000/000/081			
MGB aft left suspension bar			
365A38-4521-03	(-)	8600 FH	0
63/30/00/000/000/105			
Suspension bar/fitting bolt			
704A33-633-233	(-)	20000 FH	0



### ATA 64-TAIL ROTOR

### 64-10 ROTOR BLADES

64/10/00/000/000/000				
Tail rotor blade				
	365A12-0060-01	(-)	1500 FH	0
This part number must	t not be mixed with the par	rt numbers 365A12	-0070-00 and 365A12-0070-01.	
64/10/00/000/000/005				
Tail rotor blade				
	365A12-0070-00	(-)	5000 FH	0
	365A12-0070-01	(-)		-
These part numbers m	aust pat ha mixed with the	nort number 2654	12 0060 01	

### 64-20 TAIL ROTOR HEAD

64/20/00/000/000/225				
Tail rotor hub				
	365A33-3511-00 365A33-3511-01 365A33-3511-02 365A33-3511-03	(-) (-) (-)	13000 FH	0
64/20/00/000/000/230				
Plate				
	365A33-3522-20	(-)	20000 FH	0
64/20/00/000/000/240				
Splined flange				
	365A33-3523-00	(-)	16000 FH	0
64/20/00/000/000/250				
Torsion bar bolt				
	365A33-3525-20	(-)	20000 FH	0
64/20/00/000/000/270				
Blade attaching bolt				
	365A33-3535-20	(-)	20000 FH	0

Task Number Description/Remarks	MP/N (PN)	Type of limit: SLL	Margin

### ATA 65-TAIL ROTOR DRIVE

### 65-10 TAIL ROTOR DRIVE SHAFT

65/10/00/000/006				
Flexible coupling				
	365A34-1033-01	(-)	20000 FH	0
65/10/00/000/000/020				
Forward shaft element				
	365A34-4510-00	(-)	6300 FH	0
65/10/00/000/000/035				
65/10/00/000/000/035 Center shaft element				
65/10/00/000/000/035 Center shaft element	365A34-4520-00	(-)	6300 FH	0
65/10/00/000/000/035 Center shaft element 65/10/00/000/000/055	365A34-4520-00	(-)	6300 FH	0
65/10/00/000/000/035 Center shaft element 65/10/00/000/000/055 Aft shaft element	365A34-4520-00	(-)	6300 FH	0

### 65-20 TAIL GEARBOX

65/20/00/000/025				
Input pinion				
	365A33-6123-22	(-)	11700 FH	0
	365A33-6123-24	(-)		·
65/20/00/000/000/035				
Bevel gear wheel				
	365A33-6104-00	(-)	20000 FH	0
	365A33-6104-01	(-)		
	365A33-6104-02	(-)		
	365A33-6104-03	(-)		
	365A33-6104-04	(-)		
	365A33-6104-05	(-)		
65/20/00/000/0055				
Sliding flange				
	365A33-6197-21	(-)	8400 FH	0
	365A33-6197-22	(-)		-
65/20/00/000/000/065				
Input flange				
	365A33-6196-21	(-)	11700 FH	0
	365A33-6196-22	(-)		-
	365A33-6196-23	(-)		
	365A33-6196-24	(-)		
65/20/00/000/000/085				
Control shaft				
	365A33-6161-21	(-)		
Control shaft not-airworthy.				

Task Number Description/Remarks	М	P/N (PN)	Type of limit: SLL	Margin	
65/20/00/000/000/090					
Control shaft					
	365A33-6214-20	(-)	20000 FH	0	
	365A33-6214-21	(-)			
	365A33-6214-22	(-)			
	365A33-6214-23	(-)			
65/20/00/000/000/105					
Control rod					
	365A33-6145-21	(-)	20000 FH	0	
65/20/00/000/000/110					
Control rod					
	365A33-6145-20	(-)	20000 FH	0	
65/20/00/000/000/115					
Input housing					
	365A33-6128-00	(-)	20000 FH	0	
	365A33-6128-01	(-)		-	
For blades on which the protective plates be lost,	optional MOD OP61B3 each flying hour logged	3 has been embo d without a protec	odied, should one or more polyuret tive plate shall be counted double.	hane	
05/00/000/000/000/405					
Uousing					
nousing		<i>.</i> .			
	365A33-6137-02 365A33-6137-03	(-)	20000 FH	0	
	000/00-0107-00	(-)			
65/20/00/000/000/135					
Flared coupling tube					
	365A33-6141-20	(-)	20000 FH	0	
	365A33-6141-21	(-)			
	365A33-6141-22	(-)			
<b></b>	JUJAJJ-0141-23	(-)			
Element followed throug	in its own log card.				
For blades on which the	optional MOD OP61B3	3 has been embo	pdied, should one or more polyuret	hane	
protective plates be lost,	each flying hour logged	a without a protec	tive plate shall be counted double.		

Task Number Description/Remarks	MP/N (PN)	Type of limit: SLL	Margin

### ATA 67-ROTORS FLIGHT CONTROL

### 67-30 SERVO-CONTROLS

67/30/00/000/000				
Tail rotor servo-contro	ol			
	SC7291	(704A44831153)	9000 FH	0
67/30/00/000/000/010				
Main rotor servo-cont	rol			
	SC8037 SC8037-1	(704A44831149) (704A44831155)	10900 FH	0
67/30/00/000/000/020				
Servo-control end-fitti	ng			
	1211350P 1211351P	(704A33632062) (704A33632061)	3400 FH	0



Task Number Description/ Remarks	MP/N (PN)		Тур	e of limit: CHK	Margin	Documentation
		ATA 25-EC	QUIPN	IENTS/FURNISH	HINGS	
25-69 OPT -	LIFE RAF	<u>rs</u>				
25/69/06/200/000/100						
Life raft						
	200-188	(704A34130230)	//	600 FH 1 Y	0 0	AMM 25.69.01.222
PRE MOD 072	25C69					
Check of abser	nce of corros	ion inside the jund	ction bo	)X.		



Task Number Description/ Remarks	MP/N (PN)	Type of limit: CHK	Margin	Documentation		
ATA 26-FIRE PROTECTION						

### 26-21 ENGINE FIRE EXTINGUISHING

26/21/00/604/000/010					
Engine fire extinguisher - Cylinder					
	862780-00	(704A42820039)	6 M	0	AMM 26.21.00.222
Weighing.					

### 26-23 BAGGAGE COMPARTMENT FIRE EXTINGUISHING

26/23/01/221/000/000							
Fire extinguisher - Cylinder							
	864250-00	(704A42820042)	//	100 FH 2 M	10 FH 0	AMM 26.23.01.221	
Weighing.							





Task Number Description/ Remarks	MP/N (PN)	Type of limit: CHK	Margin	Documentation
		ATA 53-FUSELAGE		
<u>53-10 PRIMAF</u>	RY STRUCTURE			
53/10/00/000/000 Transmission de	<b>ck - MGB forward fitti</b> 365A21-8117-00 (-) 365A21-8117-01 (-)	ng 600 FH	60 FH	AMM 53.41.00.991 53.41.00.991.001 GRT 06
53/10/00/000/000/015 Transmission de	<b>ck - MGB aft fitting</b> 365A21-3355-04 (-) 365A21-3355-05 (-)	600 FH	60 FH	AMM 53.41.00.991 53.41.00.991.002 GRT 06



Task Number Description/ Remarks	MP/N	(PN)	Type of limit: CHK	Margin	Documentation
		А	TA 62-ROTOR (S)		
62-10 MAIN F		DES			
62/10/00/000/000/000					
Main rotor bla	de - Tip cap				
Remove the bla	de tip cap and o	do a check of t	buu FH he blade-to-tip cap attachn	ou FH nent area.	AMM 62.10.00.223
62-20 MAIN F	ROTOR HEA	D			
62/20/00/000/000/110					
Spherical thrus	ALL MP/N	(-)	15 FH	0	AMM 05.22.00.213
				-	05.22.00.213.003
Check the elast	tomer section.				
62/20/00/000/000/111 Spherical thrus	st bearing				
~P	57910600	(704A33633213)	600 FH	60 FH	AMM 62.24.02.991
					62.24.02.991.001 GRT 01
Check the reinf	orcements.	WORY 1220 EU	provided that the interval	botwoon	
two checks doe	sn't exceed three	ee years.		Detween	
62/20/00/000/000/160					
Frequency ada	pter			0	4444 05 00 00 040
	ALL MP/N	(-)	15 FH	0	AMM 05.22.00.213 05.22.00.213.003
Check the elast	tomer section.				
62/20/00/000/000/185					
Blade horn - A	ttach beam bol 704A33-633-226	t (704A33633226)	1200 FH	120 FH	AMM 62 24 03 991
	704A33-633-227	(704A33633227)	1200111	120111	62.24.03.991.001
Check.					
62/20/00/000/000/196	d Blada have	halt			
i nun unange ru	704A33-633-228	(-)	1200 FH	120 FH	AMM 62.26.01.991
Chash					62.26.01.991.001
Cneck.					



Task Number Description/ Remarks	MP/N (PN)		Type of limit: CHK	Margin	Documentation
62/20/00/000/205 Spherical thrus Check	<b>st bearing - At</b> 704A33-633-224	tach beam bol (-)	lt 600 FH	60 FH	AMM 62.24.02.991 62.24.02.991.002 GRT 01
62/20/00/000/000/215					
Frequency ada	pter - Attach k	beam bolt			
	704A33-633-242	(-)	1200 FH	120 FH	AMM 62.25.01.991 62.25.01.991.001
Check.					
62/20/00/000/000/290					
Swashplate bea	ring				
-	ALL MP/N	(-)	100 FH	10 FH	AMM 62.23.02.641 62.23.02.641.001
Grease.					
62/20/00/000/000/295					
Swashplate bea	ALL MP/N	(-)	600 FH	60 FH	AMM 62.23.02.641 62.23.02.641.002
Grease.					GITI UT
62/20/00/000/000/296					
Non-rotating sv	washplate				
	365A31-4531-01 365A31-4531-02	(-) (-)	600 FH // 2 Y	60 FH 0	AMM 62.23.02.991 62.23.02.991.001
Check.					
62/20/00/000/000/305					
Rotating swash	plate				
	365A31-4541-01 365A31-4541-02	(-) (-)	1200 FH	120 FH	AMM 62.23.02.991 62.23.02.991.002
Check.					
62/20/00/000/000/320 Pitch - Change	rod All MP/N	(-)	15 FH	0	AMM 05.22 00 213
Check.				Ĵ.	05.22.00.213.003



Task Number Description/ Remarks	MP/N (PN)		Type of limit: CHK	Margin	Documentation	
62/20/00/000/000/348						
Scissors lower	link					
	365A31-1116-03 365A31-1116-04	(-) (-)	600 FH	60 FH	AMM 62.23.01.991 62.23.01.991.001 GRT 01	
Check.						
62/20/00/000/000/358						
Scissors upper	link					
	365A31-1115-03 365A31-1115-04 365A31-1115-05	(-) (-) (-)	600 FH	60 FH	AMM 62.23.01.991 62.23.01.991.002 GRT 01	
Check.						
62/20/00/000/000/366						
Flared housing	g - Forward ba	r attachment				
	365A31-4591-00 365A31-4591-01 365A31-4591-02 365A31-4591-03	(-) (-) (-)	600 FH	60 FH	AMM 62.22.00.991 62.22.00.991.001 GRT 01	
Check.						
62/20/00/000/000/368						
Flared housing	g - Skin					
	365A31-4591-00 365A31-4591-01 365A31-4591-02 365A31-4591-03	(-) (-) (-)	600 FH	60 FH	AMM 62.22.00.991 62.22.00.991.002 GRT 01	
Check.						
62/20/00/000/000/390						
Rotor shaft						
	365A31-4521-00 365A31-4521-02 365A31-4521-03 365A31-4521-04 365A31-4521-05 365A31-4521-06 365A31-4521-07	(-) (-) (-) (-) (-) (-) (-)	1200 FH	120 FH	AMM 62.21.00.991 62.21.00.991.001	
Check.						
62/20/00/605/000/020						
Mast and/or h	ub					
	365A31-4500-00 365A31-4500-01 365A31-4500-03 2C42	(-) (-) (-)	600 FH	60 FH	AMM 62.20.00.291 GRT 01	
Check the nut	MP/N 360A31-	1020-20.				

Task Number Description/ Remarks	MP/N	(PN)	Type of limit: CHK	Margin	Documentation
		AT	A 63-ROTOR DRIVE (S)		
<u>63-10 ENGIN</u>	E/MGB COU	IPLING			
63/10/00/000/000/010 Flexible couplin	ng (MGB side) 365A32-2872-00	(-)	15 FH	0	AMM 05.22.00.213
Detailed visual	365A32-6530-00 check.	(-)		-	05.22.00.213.003
63-20 MAIN (	GEARBOX				
63/20/00/000/000 MGB – Electric	<b>cal or non-elec</b> ALL MP/N	etrical magne (-)	tic plug 10 FH	0	AMM 12.20.00.211
63/20/00/000/000/055 Planet gear car	rier 360A32-3036-20 360A32-3036-21	(-) (-)	50 FH	0	AMM 63.20.00.291
Borescope insp	ection.				
63/20/00/000/000/549 MGB bottom	366A32-1060-26	(-)	15 FH	0	AMM 63.20.00.212
Visual check. Operation to be Part : assembly 366A32-1060-26	carried out fro	om 2600 cycle 62-06	es onwards.		
63-30 MOUN	TS AND ATT	ACHMENT	S		
63/30/00/000/000/069					

MGB forw	ard suspension ba	ır			
	365A38-4520-01	(-)	1200 FH	120 FH	AMM 63.30.01.991 63.30.01.991.001
Check.					
63/30/00/000/000/0	174				
MGB aft r	ight suspension ba	ar			
	365A38-4521-02	(-)	1200 FH	120 FH	AMM 63.30.01.991 63.30.01.991.002
Check.					

Task Number Description/ Remarks	MP/N (PN)	Type of limit: CHK	Margin	Documentation
63/30/00/000/000/079 MGB aft left su	<b>Spension bar</b> 365A38-4521-03 (-)	1200 FH	120 FH	AMM 63.30.01.991
Check.				63.30.01.991.002



Check.

64/20/00/420/211/000 Tail rotor hub

Detailed visual inspection.

365A33-3511-00

365A33-3511-01

365A33-3511-02

(-)

(-)

(-)

Task Number Description/ Remarks	MP/N (PN)		Type of limit: CHK	Margin	Documentation
		Ą	TA 64-TAIL ROTOR		
64-10 ROTO	R BLADES				
64/10/00/000/000/020 Tail rotor blad	e - Stainless st	eel ring			
	365A12-0060-01 365A12-0070-00	(-) (-)	15 FH	0	AMM 05.22.00.213 05.22.00.213.004
Visual check. Without blade r	removal.				
64-20 TAIL R	OTOR HEAL	D			
64/20/00/000/000/224 Tail rotor hub					
	365A33-3511-00 365A33-3511-01 365A33-3511-02 365A33-3511-03	(-) (-) (-)	1200 FH	120 FH	AMM 64.20.04.991 64.20.04.991.001
Check.					
64/20/00/000/000/238 Splined flange					
	365A33-3523-00	(-)	1200 FH	120 FH	AMM 64.20.00.992 64.20.00.992.001
Check.					
64/20/00/000/000/245 Torsion bar					
	365A33-3527-00	(-)	2000 FH	0	AMM 64.20.00.225 64.20.00.225.008

End of the Document Unit

50 FH

AMM 64.20.04.211

5 FH



Task Number Description/ Remarks	MP/N	(PN)	Type of limit: CHK	Margin	Documentation
		ΑΤΑ	65-TAIL ROTOR DRIV	E	
65-10 TAIL RO <sup>-</sup>		<u>SHAFT</u>			
65/10/00/000/000/004 Flexible coupling	265424 4022 04			0	4444 05 00 00 040
	365A34-1033-01	(-)	15 F H	0	AMM 05.22.00.213 05.22.00.213.003
MGB output tail ro Detailed visual ch	otor drive sha eck.	ft flexible co	upling.		
65/10/00/000/005					
Flexible coupling	365A34-1033-01	(-)	50 FH	5 FH	AMM 65.10.00.211 65.10.00.211.001
All tail rotor drive Detailed visual ch	shaft flexible eck without re	couplings. emoval.			
65/10/00/000/000/018					
Forward shaft ele	ement 365A34-4510-00	(-)	600 FH	60 FH	AMM 65.10.01.991 65.10.01.991.001
Check.					GRT 02
65/10/00/000/000/033					
Center shaft elem	ent 365A34-4520-00	(-)	600 FH	60 FH	AMM 65.10.02.991
					65.10.02.991.001 GRT 02
Check.					
65/10/00/000/000/053 Aft shaft element					
	365A34-4530-00	(-)	600 FH	60 FH	AMM 65.10.03.991 65.10.03.991.001
Check.					GRI UZ

### 65-20 TAIL GEARBOX

65/20/00/000/000/015							
Flexible coupling							
365A33-6213-00	(-)	50 FH	5 FH	AMM 65.10.00.211 65.10.00.211.001			
Detailed visual check.							