

SERVICE BULLETIN

MANDATORY No. 05.98

SUBJECT: TIME LIMITS / MAINTENANCE CHECKS
 Check of the Main Rotor Blade Root for Cracks.

LIST OF EFFECTIVE PAGES

(1) Page Revision Code

- R: Revised, to be replaced
- N: New, to be inserted
- D: Deleted, to be destroyed

CHAP/Sequence No.	PAGE	DATE	(1)	CHAP/Sequence No.	PAGE	DATE	(1)
05.98.P5	01	99-47	N				
05.98	1	99-47	N				
05.98	2	99-47	N				
05.98	3	99-47	N				
05.98	4	99-47	N				
05.98	5	99-47	N				

LIST OF APPROVED REVISIONS Not applicable.	REVISION No. 0 APPROVED Date: November 12, 1999
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1. PLANNING INFORMATION

1.A. Effectivity

Main rotor blade P/Nos.:

- 3160S11.10000 ALL DASH NUMBERS.
- 3160S11.30000 ALL DASH NUMBERS.
- 3160S11.35000 ALL DASH NUMBERS.
- 3160S11.40000 ALL DASH NUMBERS.
- 3160S11.45000 ALL DASH NUMBERS.
- 3160S11.50000 ALL DASH NUMBERS.
- 3160S11.55000 ALL DASH NUMBERS.

1.B. Reason

To check the main rotor blade root spar for cracks.

This mandatory Service Bulletin supersedes:

- Service Telex No. 01.64 dated February 3, 1998.
- Service Telex No. 01.65 dated April 9, 1998.

This mandatory Service Bulletin forms the subject of the 56th Airworthiness Directive for SA 316/319 helicopters.

1.C. Description

Further to the distribution of Service Telex No. 01.65 dated April 9, 1998 and after analyzing the results of the investigations carried on a LAMA helicopter main rotor blade (on which the spar had failed at the first cuff-to-spar assembly bolt), we have:

- redefined the interval at which crack detection checks should be carried out on the spar.
- added another criterion that makes this check necessary (sudden occurrence of vibrations).

The check procedure is described in paragraph 2.B.

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1.D. Compliance

EUROCOPTER renders compliance with this Service Bulletin mandatory:

At the works : Not applicable.

Retrofit action : By the operator. Comply with paragraph 2.B. :

- 1.a) for blades which have logged less than 400 flight hours :
at 400 flight hours at the latest.
- 1.b) for blades which have logged 400 flight hours or more and which have
undergone a check (checks) when complying with Service-Telex No. 01.64
or Service-Telex No. 01.65 : within 25 flight hours of the last check.
- 1.c) for blades which have logged 400 flight hours or more, and which have not
yet been checked in compliance with Service-Telexes No. 01.64 and
No. 01.65: before the next flight.
- 2) then every 100 flight hours or 600 cycles (whichever limit is reached first).

CAUTION : DEFINITION OF A CYCLE:

- GENERAL OPERATION:
1 CYCLE = 1 LANDING WHETHER OR NOT THE
ROTOR IS STOPPED.
- SPECIFIC SLING OPERATION:
1 CYCLE = 1 UNDERSLUNG LOAD CARRYING
OPERATION.

NOTE : These cycles must be added to those that are to be counted down in
accordance with the principle which applies to the general case.

- 3) After sudden occurrence of vibrations at 1 omega.

Spares : By the operator. Comply with paragraph 2.B:
- Before returning a blade to service.

1.E. Approval

Approval is limited to civil version helicopters subject to an Airworthiness Certificate.

**The technical information contained in this Service Bulletin was approved on November 12, 1999
under the authority of DGAC Design Organisation Approval N° F.JA01.**

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1.F. Manpower

**Qualification: 1 mechanic plus 1 assistant during handling of the blades.
1 hour for 1 blade set.**

1.G. Material - Cost - Availability

Not applicable.

1.H. Tooling - Cost - Availability

Not applicable.

1.I. Weight and Balance

Not applicable.

1.J. Effect on Electrical Loads

None.

1.K. References

Refer to:

- **Standard Practices Manual (MTC) 20.02.09.101.**
- **Service Bulletin No. 65.137 R1.**

2. ACCOMPLISHMENT INSTRUCTIONS

2.A. General

The check can be carried out with the blades installed on the helicopter.

2.B. Operational Procedure

1. Preliminary Steps

- Clean the blade root area using Teepol or an equivalent product.
- Take up the weight at the blade tip to eliminate the blade deflection during the check of the blade lower surface.

2. Check of the spar at the first blade cuff attachment bolt, FIGURE 1.

- Visually check the hatched areas for cracks.
- If necessary, use a tangential light or a magnifying glass with approximately tenfold magnification.
- Start with the check on the lower surface of the hatched area of the blade, then in continuation of this area, check the flat on the trailing edge side (B), the blade upper surface, then the flat side of the leading edge.

If in doubt:

- Perform a dye penetrant inspection without stripping the paint, as per Standard Practices Manual MTC 20.02.09.101, or do an EDDY current inspection using a FORSTER defectoscope AF 2830 or 2833 F generator equipped with a HOCKING 314P24 2 MHz sensor or equivalent.

CAUTION : THE BLADE MUST BE WITHDRAWN FROM SERVICE IMMEDIATELY IF A CRACK IS DETECTED.

- Comply with the instructions given in paragraph 2.2 of Service Bulletin No. 65.137 R1 if this has not already been done. This operation consists in applying a sealant bead (1) around the cuff on blades manufactured or repaired before August 1989.

**IMPORTANT : If an anomaly is detected inform:
EUROCOPTER LA COURNEUVE
Service E/S.MPT
Fax 33.(0)1.49.34.41.70**

2.C. Identification

Record the first compliance with this Service Bulletin on the equipment log card (FME) of each blade.

2.D. Operating and Maintenance Instructions

In accordance with the aircraft documents.

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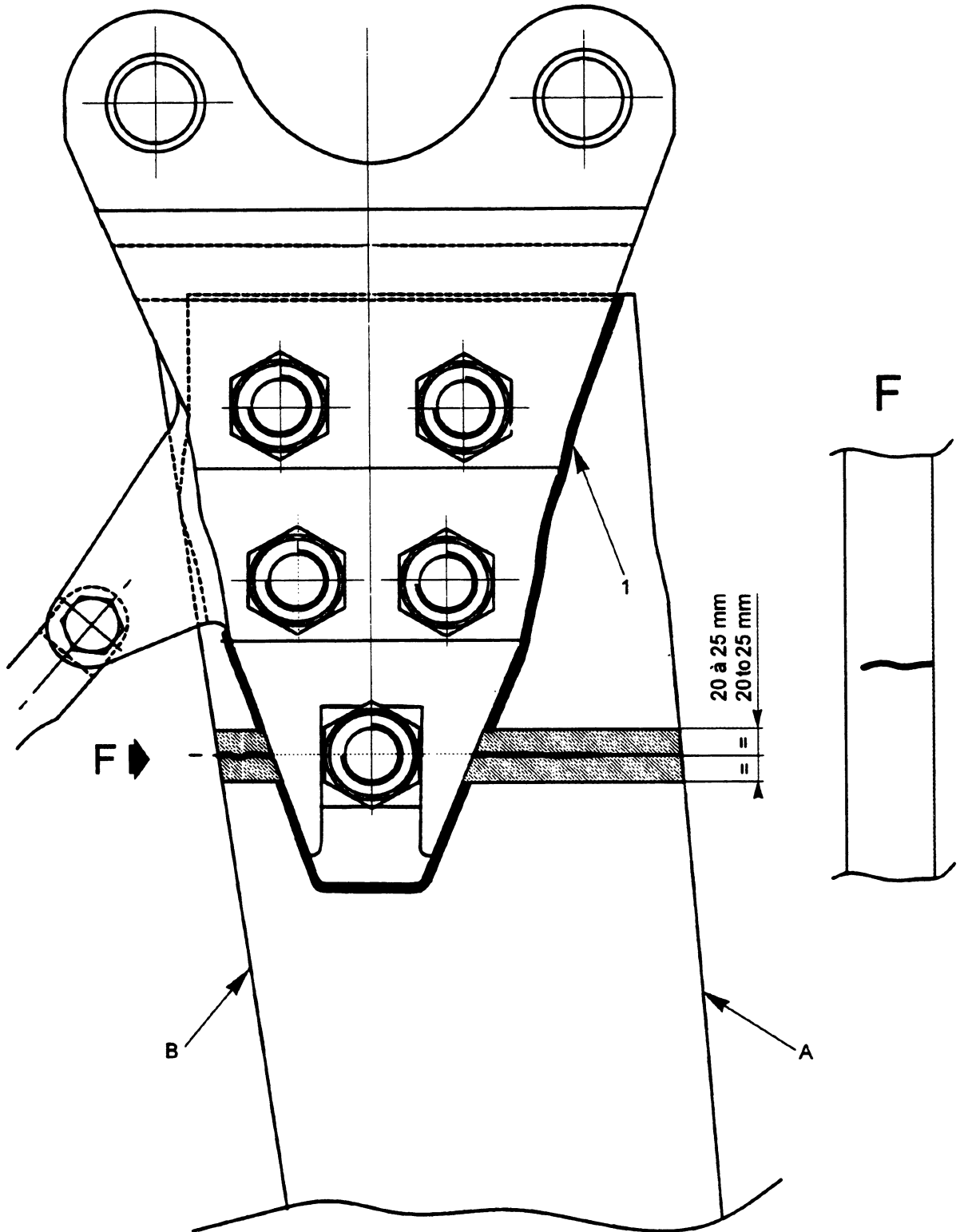


FIGURE 1

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