Temporary Maintenance Instruction
TMI109-532

Main rotor blade -
Identification plate debondings - Repair procedure

A109C / A109K2 / A109E /
A109S / AW109SP/SP-REGA /
A109LUH / A109LUHS / A109LUHNZ /
A109LUHAG / A109LUHAP / A109LUHN /
A109LOH / A119 / AW119MKII
Helicopters

The technical content of this document is approved under the authority of DOA nr. EASA.21J.005.

The present TMI will be evaluated for its introduction in the standard set of Technical Publication.
If no further notice is received, the present document expires on: July 15th, 2022.

2021-07-15

Introduction

The aim of this document is to give information about the replacement of the MR blade identification plate (P/N A157A001A1 or P/N MS27253-2) installed on MR blade P/N 709-0103-01 and P/N 709-0104-01.

The content of this TMI will be endorsed within the applicable Maintenance Manual at the earliest opportunity.

Main rotor blade – Identification plate debondings - Repair procedure

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References

Table 1 References

Data Module	Title
09-A-00-50-00-00A-013A-D	Material data information publication - Numeric index
0B-A-62-11-01-00A-520A-A (1)	Main rotor blade - Remove procedure
0B-A-62-11-01-00A-720A-A (1)	Main rotor blade - Install procedure

(1) Applicable to A109S/AW109SP Helicopters. For the other helicopter models refer to the applicable Section or Data Module of the Maintenance Manual.

Preliminary requirements

Required conditions

Table 2 Required conditions

Condition	Data Module/Technical Publication
The main rotor blade must be removed	0B-A-62-11-01-00A-520A-A (1)

(1) Applicable to A109S/AW109SP Helicopters. For the other helicopter models refer to the applicable Section or Data Module of the Maintenance Manual.

Support equipment

Table 3 Support equipment

Nomenclature	Identification No.	Qty
1. Hammer, aluminium	GF-09-00 (1)	1
2. Plastic scraper	Local supply	1
3. Vacuum bag set	Local supply	1

(1) Applicable to A109S/AW109SP Helicopters. For the other helicopter models refer to the applicable Section or Data Module of the Illustrated tool and equipment publication.

Supplies

Table 4 Supplies

Nomenclature	Identification No.	Qty
1. Gauze	Local supply	A.R.
2. Abrasive paper	C055 (2)	A.R.
3. (D) Adhesive	C054 (2)	A.R.
4. (D) Aliphatic naphtha	C059 (2)	A.R.
5. (D) Solvent	C005 (2)	A.R.
6. (D) Acetone	C087 (2)	A.R.

(2) Refer to 09-A-00-50-00-00A-013A-D of the Material Data Information Publication.

Spares

Table 5 Spares

Nomenclature	Identification No.	Qty
1. Identification plate	A157A001A1	A.R.
2. Identification plate	MS27253-2	A.R.

Safety conditions

WARNING

The consumable materials which have a "(D)" before their nomenclature are dangerous materials.
Before you use them, make sure you know the safety precautions and first aid instructions printed on:

- **the label on the container material;**
- **the material safety sheet;**
- **the local safety regulations.**

Make sure that the applicable first aid material is available.

Procedure

Note

([1]) Applicable to A109S/AW109SP Helicopters. For the other helicopter models refer to the applicable Section or Data Module of the Maintenance Manual.

1. Put the main rotor blade (2, Fig 1) on an applicable work table.

2. If not fully de-bonded, remove the identification plate (1) with the Plastic scraper (Support equipment Ref. 2). If the identification plate is missing take a new identification plate (Spare Ref. 1 and / or Spare Ref. 2).

Note

When you rub the bonding area of the blade skin, make sure not to damage the composite surfaces.

3. Rub the bonding surface of the blade (2) with Abrasive paper (C055) (grit 180 or finer).

4. Rub the bonding surface of the identification plate (1) with Abrasive paper (C055) (grit 180 or finer) to remove the unwanted adhesive, if present, and prepare the surface for bonding.

5. Clean the bonding surfaces with a gauze (local supply) soaked with Acetone (C087) or Solvent (C005) or Aliphatic Naphtha (C059). Let dry for 30 minutes minimum.

6. Apply the Adhesive (C054) on the bonding surfaces with a putty knife.

7. Put the identification plate (1) in its correct position on the blade (2), see Detail A of Fig 1.

8. Apply the vacuum bag set (Support equipment Ref. 3), or, alternatively, use clamps, or weights, or similar.

9. Let the adhesive cure at:

   — Temperature: 22 - 26 °C (72 - 79 °F) (ambient temperature);

   — Pressure: 59 thru 78 kPa (8.5 thru 11.4 lbf/in^2) or firm contact;

   — Time: 5 - 7 days (you can handle the component after 24 hours).

   As an alternative, you can use a heating equipment (heating lamps or heating strips) and let the adhesive cure at:

   — Temperature: 60 - 70°C;

   — Pressure: 59 thru 78 kPa (8.5 thru 11.4 lbf/in^2) or firm contact;

   — Time: minimum 120 minutes.

10. Do a visual inspection of the identification plate for conditions and a tap test with the Hammer, aluminium (Support equipment Ref. 1) for correct bonding. No defects are permitted.

11. If necessary, vibro etch on new identification plate all the information reported on the removed one, including the final control.

Requirements after job completion

1. Remove all the tools and the other items from the work area. Make sure that the work area is clean.

2. Install the main rotor blade on the helicopter. Refer to 0B-A-62-11-01-00A-720A-A ([1]).

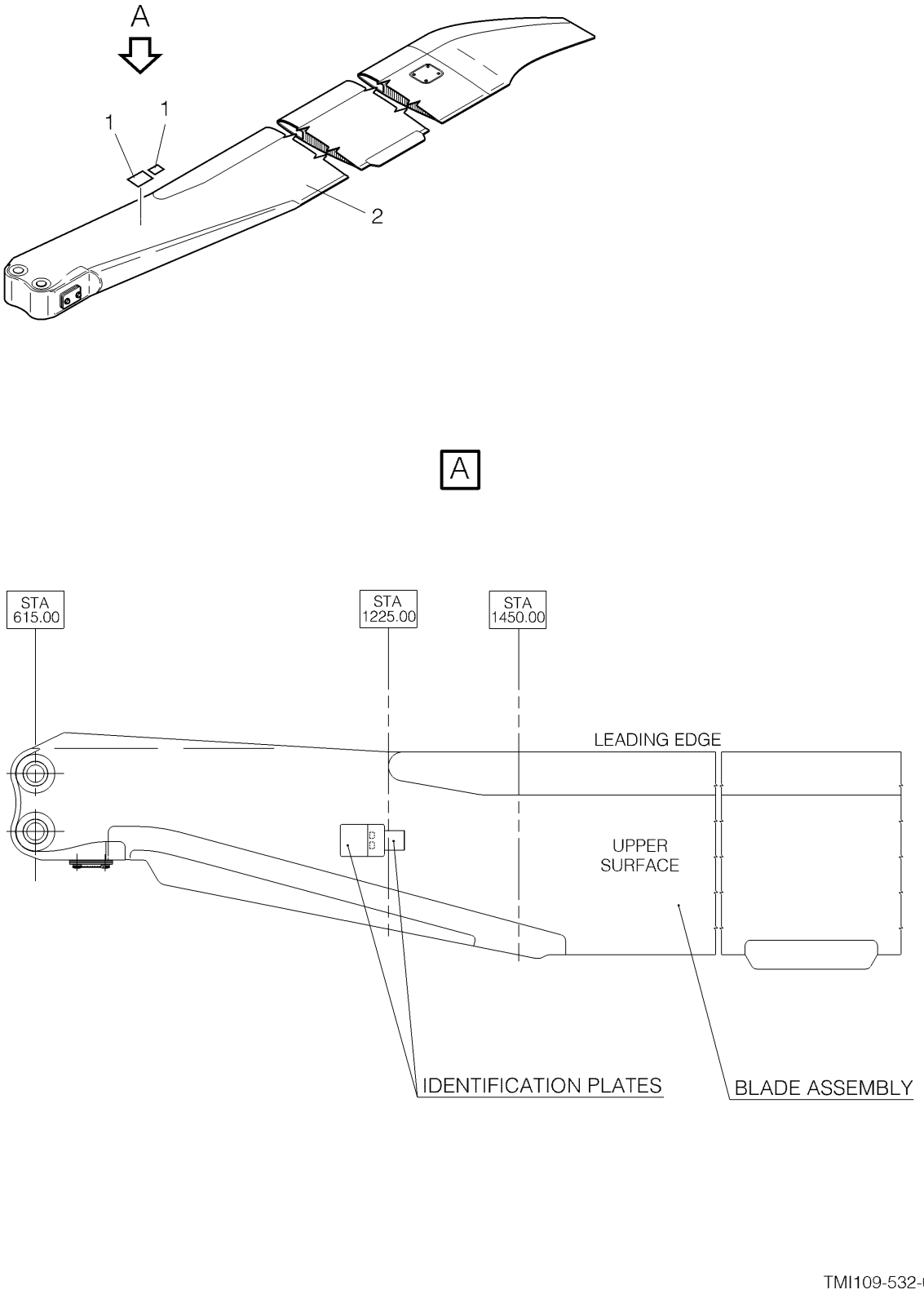

Figure 1 – Main rotor blade – Identification plate – Repair procedure.