Temporary Maintenance Instruction
TMI 189-053

Helicopter external surfaces – Paint and apply marking

All AW189 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: October 25th, 2023.

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Introduction

This TMI provides the instructions to perform the paint of the external surfaces of the helicopter.
All the information reported in the subsequent pages will be introduced within next issue of pertinent technical publication.

Helicopter external surfaces

Paint and apply marking

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List of tables

References

Table 1 References

Data module/Technical publication	Title
CSPP-A-20-00-02-01A-013A-D	List of consumables for standard practices – Numeric index
CSPP-A-20-00-02-02A-010A-D	List of local supply consumables for standard practices – General data
89-A-11-00-01-00A-720A-A	Decal – Install procedure

Preliminary requirements

Required Conditions

Table 2 Required conditions

Action/Condition	Data module/Technical publication
The helicopter must be safe for maintenance	
The helicopter must be cleaned	

Support Equipment

Table 3 Support Equipment

Name	Identification No.	Quantity
No support equipment is required		

Supplies

Table 4 Supplies

Name	Identification No.	Quantity
Barrier material	C096	AR
Tape (adhesive - MB1077)	Local supply	AR
Wrapping paper	Local supply	AR
Tape (adhesive - MB260)	Local supply	AR
Tape (adhesive - 8 mm (0.3 in) width)	Local supply	AR
Abrasive paper (No. 380/400)	Local supply	AR
Primer (Surfacer EP)	Local supply	AR
Filler (Polistop)	Local supply	AR
Sealing compound	C065	AR
Abrasive paper (No. 280 - 320)	Local supply	AR
Soap water solution (neutral)	Local supply	AR
Conversion coating	C237	AR
Primer (Delfleet 2K Primer F392)	Local supply	AR
Paint (black contrast)	Local supply	AR
Abrasive pad (P/N Abranet 240)	Local supply	AR
Abrasive pad (P/N Abranet 320)	Local supply	AR
Primer (epoxy)	Local supply	AR
Cloth (anti-dust)	Local supply	AR
Primer	Local supply	AR
Polyurethane coating	C576	AR
Polyurethane coating (transparent - D800/841)	Local supply	AR
Primer (GRS Deltron BC)	Local supply	AR
Paint (Deltron BC)	Local supply	AR
Polyurethane coating (MIL-PRF-85288 - color No. 37038)	Local supply	AR

Spares

Table 5 Spares

Name	Identification No.	Quantity
No spares are required		

Safety conditions

WARNING

The materials that follow are dangerous. Before you do this procedure, make sure that you know all the safety precautions and first aid instructions for these materials:

- **Primer (Surfacer EP) (Local supply)**
- **Filler (Polistop) (Local supply)**
- **Sealing compound (C065)**
- **Conversion coating (C237)**
- **Primer (Delfleet 2K Primer F392) (Local supply)**
- **Paint (black contrast) (Local supply)**
- **Primer (epoxy) (Local supply)**
- **Primer (Local supply)**
- **Polyurethane coating (C576)**
- **Polyurethane coating (transparent - D800/841) (Local supply)**
- **Primer (GRS Deltron BC) (Local supply)**
- **Paint (Deltron BC) (Local supply)**
- **Polyurethane coating (MIL-PRF-85288 - color No. 37038) (Local supply) .**

Procedure

Note

For the preparation and application of the consumable materials used in this procedure, refer to the Data Sheets of the respective Manufacturers.

1 **Preliminary operations**

1.1 Apply the Barrier material (C096) to all transparent panels. Attach the barrier material sheets with the Tape (adhesive - MB1077) (Local supply) .

1.2 Apply the Wrapping paper (Local supply) to all helicopter surfaces where the paint is not necessary. Attach the wrapping paper sheets with the Tape (adhesive - MB260) (Local supply) .

1.3 Apply the Wrapping paper (Local supply) into the sliding door channels where you must apply the solid film lubricant. Attach the wrapping paper sheets with the Tape (adhesive - MB260) (Local supply) .

1.4 Apply the Tape (adhesive - 8 mm (0.3 in) width) (Local supply) to the internal and external perimeters of the windows.

1.5 Sand all the composite material surfaces with the Abrasive paper (No. 380/400) (Local supply) .

1.6 Apply two or more layers of Primer (Surfacer EP) (Local supply) to all the composite material surfaces.

1.7 Fill the imperfections on the composite material surfaces with the Filler (Polistop) (Local supply) .

1.8 Let the filler cure, then make the surfaces smooth with the Abrasive paper (No. 380/400) (Local supply) .

1.9 If necessary, apply the Sealing compound (C065) to the joints of the skin panels.

1.10 Remove the layer of primer from the surfaces with the Abrasive paper (No. 280 - 320) (Local supply) .

1.11 Clean the surfaces with a Soap water solution (neutral) (Local supply) , then flush them with clean water.

1.12 Let the surfaces dry, then spray the Conversion coating (C237) on them.

1.13 Clean the surfaces with clean water. Let the surfaces dry.

1.14 Fill dents and imperfections on the composite panels of the fuselage with three layers of Primer (Delfleet 2K Primer F392) (Local supply) . Apply each layer after an interval of 20 thru 30 min.

1.15 Let the primer cure, then apply a light layer of Paint (black contrast) (Local supply) on the composite panels of the fuselage.

1.16 Sand the surfaces until you remove all the primer. To do this use the Abrasive pad (P/N Abranet 240) (Local supply) .

1.17 Sand the surfaces again with the Abrasive pad (P/N Abranet 320) (Local supply) . This to get smooth surfaces.

Note

Refer to the applicable Exterior Paint Scheme for the location of the different colors used on the external surfaces of the helicopter.

1.18 Apply the Wrapping paper (Local supply) to the internal surfaces of all the access doors and panels. Attach the wrapping paper sheet with the Tape (adhesive - MB260) (Local supply) .

1.19 Apply a thin layer (thickness of 12 thru 17 µm - 480 thru 680 µin) of Primer (epoxy) (Local supply) . Let the epoxy primer dry.

1.20 Clean the surfaces with the Cloth (anti-dust) (Local supply) .

2 **Paint finish**

2.1 Apply one layer of Primer (Local supply) on the applicable areas of the fuselage. Make sure that this layer is shadded on the edges.

Note

Do this step 24 h maximum after you do Step 1.19.

2.2 After the flash period, apply a cross layer of Primer (Local supply) to obtain a dry film thickness of 20 thru 30 µm (800 thru 1200 µin).

2.3 After the flash period, apply one layer of Polyurethane coating (C576) . Make sure that this layer is shadded on the edge.

2.4 After the flash period, apply a cross layer of Polyurethane coating (C576) to obtain a dry film thickness of 20 thru 30 µm (800 thru 1200 µin).

2.5 Make sure that the surfaces of the fuselage are clean and free from defects.

2.6 Apply a layer of Polyurethane coating (transparent - D800/841) (Local supply) .

2.7 After the flash period, apply a cross layer of Polyurethane coating (transparent - D800/841) (Local supply) to obtain a dry film thickness of 45 thru 55 µm (1800 thru 2200 µin).

2.8 Use the Tape (adhesive - MB1077) (Local supply) to identify the contours of the area you must apply a different color (darkest) from the color used in Step 2.3.

2.9 Apply on the adjacent surfaces the Wrapping paper (Local supply) . Attach the wrapping paper sheet with the Tape (adhesive - MB260) (Local supply) .

2.10 Use the Tape (adhesive - MB1077) (Local supply) to identify an area of 50 mm (2 in) around all the windows.

2.11 Sand the uncovered surfaces with Abrasive paper (No. 380/400) (Local supply) .

2.12 Remove the residues of abrasive paper from the surfaces with clean, dry compressed air and anti-dust cloths.

2.13 Apply on the surfaces one layer of Primer (GRS Deltron BC) (Local supply) .

2.14 After the flash period apply a cross layer of Primer (GRS Deltron BC) (Local supply) to obtain a dry film thickness of 20 thru 30 µm (800 thru 1200 µin).

2.15 Let the primer cure, then apply one layer of Paint (Deltron BC) (Local supply) .

2.16 After the flash period, apply a cross layer of Paint (Deltron BC) (Local supply) to obtain a dry film thickness of 25 thru 35 µm (1000 thru 1400 µin).

2.17 Do Step 2.5 thru Step 2.7 again.

2.18 Do Step 2.8 thru Step 2.16 again if it is necessary to apply another color on the fuselage. Refer to the applicable Exterior Paint Scheme.

2.19 If required by the applicable Exterior Paint Scheme, paint the top surface of the nose cowling (radome) as follows:

2.19.1 Use the Tape (adhesive - MB1077) (Local supply) to identify the contours of the top surface of the nose cowling.

2.19.2 Do Step 2.9 thru Step 2.12 again.

2.19.3 Apply on the surface one layer of Polyurethane coating (MIL-PRF-85288 - color No. 37038) (Local supply) .

2.19.4 After the flash period, apply a cross layer of Polyurethane coating (MIL-PRF-85288 - color No. 37038) (Local supply) to obtain a dry film thickness of 45 thru 55 µm (1800 thru 2200 µin).

2.20 Use the applicable stencils to write on the fuselage the different markings. Refer to the applicable Exterior Paint Scheme.

2.21 Apply the stencils with the Tape (adhesive - MB260) (Local supply) .

2.22 Do Step 2.9 thru Step 2.12 again.

2.23 Paint the markings that are necessary.

2.24 Apply on the fuselage the decals. Refer to 89-A-11-00-01-00A-720A-A.

2.25 Remove the adhesive tape strips and the wrapping paper sheets used to protect the surfaces of the fuselage.

Requirements after job completion

No conditions.