



# THE ENSTROM HELICOPTER CORPORATION

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## SERVICE INFORMATION LETTER

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SERVICE INFORMATION LETTER NO. 0170

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DATE: March 22, 2010

1. SUBJECT: Application of Corrosion Prevention Compound
2. MODEL: F28A, 280, F28C, 280C, F28F, 280F, and 280FX Helicopters
3. EFFECTIVITY: All
4. REFERENCE: Enstrom Service Information Letter No.'s 0127, 0129, and 0169  
Enstrom F28F and 280F Series Maintenance Manual, Latest Revision
5. BACKGROUND:

Enstrom has received two reports of fielded aircraft recently with partial bond separation in the trailing edge structure of the main rotor blades. There were obvious signs of corrosion detected in the open portions of the debonded areas.

Several factors may lead to bond line separation and corrosion of the blades. During operational service, the polyurethane top coat applied to the blade may gradually wear away due to erosion from airborne particulate matter or precipitation. Special care should be taken to prevent nicking or chipping of the paint in the bond lines. Also, operation of the main rotor blades in wet or high humidity environments can also significantly accelerate bond line separation and the onset of corrosion through moisture intrusion into the blade. Improper storage of the blades for extended periods of time can foster corrosion.

To ensure continued airworthiness and operational safety, corrosion control must be a fundamental part of every aircraft maintenance program. The Enstrom F28F and 280F Series Maintenance Manual and Enstrom Service Information Letters 0127, 0129, and 0169 define preventative maintenance measures, inspection criteria and damage limits, and preservation and storage techniques for aircraft.

Proper use of effective corrosion control products is central to all corrosion prevention programs. This SIL identifies a Corrosion Prevention Compound (CPC) compatible with the Enstrom main rotor blade. Enstrom recommends the application of MIL-PRF-81309, Type II or III water displacing soft film CPC. The water displacing CPC acts on contact by spreading across the exterior blade surfaces, displacing any moisture present, and leaving

behind a residue to act as a further barrier after the carrier solvent has evaporated.

Application of the CPC identified in this SIL will not affect the surface finish of the painted/waxed blade if the manufacturer's recommendations for application and the instructions in this SIL are followed.

#### NOTE

**Blades delivered after March 5, 2010 have been treated with CPC during initial production and require repetitive treatment (as described in paragraph 12 of this SIL). Blades delivered before March 5, 2010 require an initial treatment of CPC (in accordance with paragraph 6.1 of this SIL), the addition of the AN526C1032R6 screw, as well as the repetitive treatment described in paragraph 12 of this SIL.**

#### WARNING

**The CPC's listed in paragraph 6.2 do not affect the bonding agent in the main rotor blade. Enstrom does not recommend any other CPC's because their effect on the bonding agent is unknown.**

#### 6. COMPLIANCE:

To aid in corrosion prevention control, Enstrom recommends inspecting, maintaining, and preserving the main rotor blades in accordance with the Enstrom F28F and 280F Series Maintenance Manual and the Corrosion Prevention Compound Guidelines defined in paragraph 6.1.

#### 6.1 CORROSION PREVENTION COMPOUND GUIDELINES

##### 6.1.1 APPLICATION OF CPC

1. For best results, remove the blades from the aircraft and arrange them on a rack.
2. Insert a P/N AN526C1032R6 screw, or equivalent, in the hole at the tip of each blade, 2.75" (69.9 mm) from the leading edge. Apply MIL-PRF-81309 Type II or III CPC (see table to paragraph 6.2 of this SIL) to the threads of the screw and in the 1032 UNF tapped hole prior to torquing the screw. Standard torque values apply.
3. Remove the tip weight assemblies from the outboard end of each blade using the Main Rotor Blade Plug Tool (Enstrom P/N T-1656-3, or equivalent). Mark each assembly to designate its position as either the forward or aft location and which blade the assemblies were removed from.

4. Following the manufacturer's recommendations, using a pump or aerosol sprayer, spray a coating of CPC on the entire interior surface (i.e. interior blade cavity) of each blade.
5. Rotate or position the spray wand to coat all interior areas of the blade with particular attention given to the interior trailing edge structure.
6. Rotate and flip the blade to introduce a sloshing effect with the excess CPC. Ensure all interior areas of the blade are coated with the CPC.
7. Drain excess CPC from the blade.

**NOTE**

**The CPC may produce toxic vapors. Use only in well ventilated areas. Avoid contact with skin and eyes. Avoid inhalation and ingestion. Follow the manufacturer's warning and safety recommendations.**

**Do not use synthetic wiping cloths or rags during application or clean up. The CPC will dissolve the fabric.**

8. Reinstall the tip weight assemblies making sure they are installed in the same location from which they were removed.
9. Wipe off dirt or excess moisture from the exterior blade surface.
10. Following the manufacturer's recommendations, apply a coating of CPC over the entire exterior surface of the blades including the trailing edge seam.

#### 6.1.2 STORAGE OF CPC

1. Follow the recommendations provided by the manufacturer.

**NOTE**

**Unless otherwise specified, do not store the CPC at temperatures greater than 50°C (120°F).**

**Keep the CPC away from open flames, heat, or sparks as they may be flammable.**

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## 6.2 PARTS:

<b>Description</b>	<b>Product/Brand Name</b>	<b>Manufacturer</b>	<b>Quantity</b>
MIL-PRF-81309, Type II or III Corrosion Prevention Compound	ACF-50	Lear Chemical Research Corporation	As Required
	Corrosion X – Aviation	Corrosion Technologies Corporation	As Required
AN526C1032R6 Screw	N/A	None Specified	1 Per Blade (3 Total)

7. SPECIAL TOOLS: Main Rotor Blade Plug Tool T-1656-3, or equivalent
8. MAN-HOURS: 0.5 hours per main rotor blade
9. WARRANTY: N/A
10. WEIGHT CHANGE: Negligible.
11. LOG BOOK ENTRY: As required for maintenance actions.
12. REPETITIVE ACTION:
  1. Due to the low viscosity of water displacing soft film CPC, Enstrom recommends periodic reapplication at a minimum once every two years.
  2. Shorter intervals may apply to aircraft operating in moderate and severe corrosion environments, as identified by SIL 0169.