

24 Apr 64

APPLICATION OF PROTECTIVE UNDERCOATING FOR AIRCRAFT FUSELAGE

PURPOSE

1 The purpose of this Engineering Order is to detail the application of coating the aircraft fuselage to protect the undersurfaces from stones and sand blasting damage.

APPLICATION

2 Aircraft undercoating is to be applied as follows:

(a) Ensure the area to be coated is free of dirt, grit and dust. Normal aircraft washing methods with soap and water are adequate (refer to EO 50-10A-2A).

CAUTION

Metal conditioner (Item 1) is an etching acid. The Safety Precautions of EO 00-80-4 Series apply.

(b) Mix metal conditioner (Item 1) with water. Three parts water to one part metal conditioner by volume.

(c) Apply metal conditioner solution to the applicable area. Brush or rags may be used as applicators. The metal conditioner is to be left on aircraft skin for 30 to 60 seconds but no longer than TWO MINUTES. When the period has elapsed, flush area thoroughly with a stream of water. When all acid has been removed, dry area with clean lint-free rags. Let area dry for 2 to 3 hours. Ensure area is not touched by hands or greasy rags.

NOTE

The step outlined in sub-paragraph (c) is the key to a good undercoating application. Ensure that it is carried out correctly.

(d) Mix liquid glass (Item 2) with liquid glass thinner (Item 3) as suggested by the manufacturer. The manufacturer suggests 10% by volume of thinner per gallon of liquid glass. This may be altered depending on the temperature and humidity. Normally less thinner is required on a warm day and vice versa on a cold day.

(e) Apply one coat of liquid glass solution approximately .05 mil. Let it stand for one hour to dry then apply a second coat using a spray gun with a 765 De Vilbiss air cap and a two quart pressure pot. The air pressure recommended is 50 pounds at the transformer and 20 pounds in the cup.

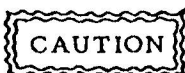
CAUTION

Clean spray equipment with Methyl Ethyl Ketone (Item 9) or Ester type thinner 1-GP-50 (Item 8) IMMEDIATELY after use as the liquid glass jells quickly and cannot be removed.

APPLICATION (Cont'd)

(f) Mix one gallon of plastic Urathane component "A" (Item 4) to one gallon of Plastic Urathane Component "B" (Item 5) to one gallon Toluol Thinner (Item 6). Let solution stand for 30 minutes prior to application.

(g) Apply two coats of Plastic Urathane mixture using a spray gun with a 765 De Vilbiss Air cap nozzle and a five gallon pressure pot. Recommended air pressure of 50 pound at the transformer and approximately 10 to 15 pounds at the pot.



Clean spray equipment immediately after use as the plastic urathane mixture jells quickly.

3 The protective coating is not permanent and requires renewal every eight months or every 1000 flying hours. Also the coating does not provide complete protection but does reduce the erosion to a more acceptable level thus adding to the life of the skin panels. This protective coating is very suitable because of its transparency which permits examination of skin panels for corrossions and defects.

NOTE

The protective undercoating should not be coloured or coated with any other materials.

REMOVAL

4 To remove undercoating, spray with paint remover (Item 7) and wipe clean with rags. Refer to EO 50-5B-2A.

| ITEM | RCAF REF. | MATERIAL | MANUFACTURER |
|------|----------------------|----------------------------------|--|
| 1 | 33C/8030-21-800-6014 | Metal conditioner | |
| 2 | 33A/NIC | Liquid glass | Jacquays, Starke and Co., Ltd, Montreal P.Q. |
| 3 | 33A/NIC | Liquid glass thinner | Jacquays, Starke and Co., Ltd., Montreal P.Q. |
| 4 | 33A/NIC | Plastiglo Urathane Component "A" | Plastiglo Industries 12830-126 Ave., Edmonton, Alta. |
| 5 | 33A/NIC | Plastiglo Urathane Component "B" | Plastiglo Industries 12830-126 Ave., Edmonton, Alta. |
| 6 | 33A/467 | Toluol thinner | |
| 7 | 33A/456 | Paint remover | |
| 8 | 33A/466 | Ester thinners 1-GP-50D | |
| 9 | 33C/6810-21-801-4869 | Methyl Ethyl Ketone | |

ISSUED ON AUTHORITY OF THE CHIEF OF THE AIR STAFF

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