STANDARD OVERHAUL PRACTICES MANUAL

APPLICATION OF INTERIOR DECORATIVE FINISHES

PART NUMBER
NONE

PUBLISHED BY BOEING COMMERCIAL AIRPLANES GROUP, SEATTLE, WASHINGTON, USA
A DIVISION OF THE BOEING COMPANY
PAGE DATE: Jul 01/2009

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STANDARD OVERHAUL PRACTICES MANUAL

Revision No. 9
Jul 01/2009

To: All holders of APPLICATION OF INTERIOR DECORATIVE FINISHES 20-41-04.

Attached is the current revision to this STANDARD OVERHAUL PRACTICES MANUAL

The STANDARD OVERHAUL PRACTICES MANUAL is furnished either as a printed manual, on microfilm, or digital products, or any combination of the three. This revision replaces all previous microfilm cartridges or digital products. All microfilm and digital products are reissued with all obsolete data deleted and all updated pages added.

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Location of Change	Description of Change
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Subject/Page	Date	Subject/Page	Date	Subject/Page	Date
TITLE PAGE					
O 1	Jul 01/2009				
2	BLANK				
20-41-04 TRANSMITTAL LETTER					
O 1	Jul 01/2009				
2	BLANK				
20-41-04 HIGHLIGHTS					
O 1	Jul 01/2009				
2	BLANK				
20-41-04 EFFECTIVE PAGES					
1	Jul 01/2009				
2	BLANK				
20-41-04 CONTENTS					
1	Mar 01/2007				
2	BLANK				
20-41-04 REVISION RECORD					
1	Jul 01/2005				
2	Jul 01/2005				
20-41-04 RECORD OF TEMPORARY REVISIONS					
1	Jul 01/2005				
2	Jul 01/2005				
20-41-04 INTRODUCTION					
1	Jul 01/2005				
2	BLANK				
20-41-04 SUBJECT					
1	Mar 01/2007				
2	Mar 01/2007				
3	Mar 01/2007				
4	Mar 01/2007				
5	Mar 01/2007				
6	Mar 01/2007				
7	Mar 01/2007				
8	Mar 01/2007				
9	Mar 01/2007				
10	Mar 01/2007				
11	Mar 01/2007				
12	Mar 01/2007				
13	Mar 01/2007				
14	BLANK				

A = Added, R = Revised, D = Deleted, O = Overflow

TABLE OF CONTENTS

All revisions to this manual will be accompanied by transmittal sheet bearing the revision number. Enter the revision number in numerical order, together with the revision date, the date filed and the initials of the person filing.

Revision		Filed	
Number	**Date**	**Date**	**Initials**

Revision		Filed	
Number	**Date**	**Date**	**Initials**

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Temporary Revision		Inserted		Removed	
Number	Date	Date	Initials	Date	Initials

Temporary Revision		Inserted		Removed	
Date	Initials	Number	Date	Date	Initials

Temporary Revision		Inserted		Removed	
Number	Date	Date	Initials	Date	Initials

Temporary Revision		Inserted		Removed	
Date	Initials	Number	Date	Date	Initials

INTRODUCTION

1. General

A. The instructions in this manual tell how to do standard shop procedures during maintenance functions from simple checks and replacement to complete shop-type repair.

B. This manual is divided into separate sections:

(1) Title Page

(2) Transmittal Letter

(3) Highlights

(4) Effective Pages

(5) Contents

(6) Revision Record

(7) Record of Temporary Revisions

(8) Introduction

(9) Procedures

C. Refer to SOPM 20-00-00 for a definition of standard industry practices, vendor names and addresses, and an explanation of the True Position Dimensioning symbols used.

D. The data is general. It is not about all situations or specific installations. Use it as a guide to help you write minimum standards.

E. If the component overhaul instructions are different from the data in this subject, use the component overhaul instructions.

APPLICATION OF INTERIOR DECORATIVE FINISHES

1. INTRODUCTION

A. The data in this subject comes from Boeing Process Specification BAC5755. The airline has a copy of the Boeing Process Specification Manual.

B. The data is general. It is not about all situations or specific applications. Use it as a guide to help you write minimum standards.

C. Refer to SOPM 20-00-00 for a list of all the vendor names and addresses.

2. MATERIALS

WARNING: THESE FINISHES AND SOLVENTS ARE POISONOUS AND FLAMMABLE. DO ALL WORK IN A WELL VENTILATED AREA. OBEY ALL SAFETY AND FIRE PRECAUTIONS. DO NOT BREATHE VAPORS. IF CHEMICALS GET IN EYES, FLUSH WITH WATER FOR 15 MINUTES AND GET MEDICAL ATTENTION IMMEDIATELY. IF CHEMICALS GET ON SKIN, FLUSH WITH WATER. WIPE UP ALL SPILLS IMMEDIATELY.

NOTE: Equivalent substitutes can be used.

A. Solvents (SOPM 20-60-01)

(1) Petroleum Aliphatic Naphtha, TT-N-95, type 1 and 2

(2) Cleaning Solvent – BMS 3-2

(3) Mineral Spirits – TT-T-291

(4) Dry Cleaning Solvent – P-D-680, type 1

(5) Methyl Ethyl Ketone (MEK) – TT-M-261

(6) Toluene – TT-T-548

(7) Denatured Alcohol – O-E-760

(8) Butyl Cellusolve – TT-E-776

(9) Xylene – TT-X-916

(10) Lacquer Thinner – TT-T-266B

B. Cleaners (SOPM 20-60-01)

(1) Orvus WA Soap

(2) Vel Soap

C. Sealers, Fillers, Surfacers (SOPM 20-60-02)

(1) Varnish, Moisture and Fungus Resistant – MIL-V-173

(2) Varnish, Moisture and Fungus Resistant – Rudd 85-173

(3) Acrylic Bonding Sealer – AS-900

(4) Filler (Static Conditioner) – Magna 28-C-1

(5) Surfacer – Duratite Surfacing Putty (white and other colors)

(6) Surfacer – Dual Purpose No. 4 glazing putty

D. Decorative Coatings (SOPM 20-60-02 unless shown differently)

(1) Interior Decorative Water Emulsion Paint – BMS 10-55

(2) Clear Baking Enamel – BMS 10-78

(3) Interior Decorative Urethane Paint – BMS 10-83

(4) Silicone Coating – Dow Cowning RTV 3145 (SOPM 20-60-04)

(5) Flat Camouflage Lacquer – TT-L-20

(6) Gloss Cellulose Nitrate Lacquer – TT-L-32

(7) Metallic Hi-Speed Lacquer

(8) Marhyde Flexible Vinyl Lacquer

(9) Textured Hi-Speed Lacquer

(10) Hi-Speed Lacquers – Sherwin-Williams R7KP41, R7KP74, R7KB29

(11) Aluminized Epoxy Primer – 463-6-4 system

E. Screen Printing Inks

(1) Scotchcal Screen Process Pastes, Series 3900; Thinner 3911, V76381

(2) Vinyl Process Color Series 38-000; Thinner 38-905, V79436

(3) Silk Screen Process Color Series VF-000 and VG-000; Thinner VF-180; Retarder VF-182, V76708

(4) Du-Wel Dual Purpose Decal Enamel Series 10-100; Thinner 10-900, V79436

F. Tack Rags

(1) C-60, V0EK96

(2) 4B, V17359

G. Pumice – SS-P-821, grade 1-1/2

3. SURFACE PREPARATION

A. Metal Surfaces

(1) Aluminum and magnesium surfaces must have pretreatment before application of finish. Refer to the applicable overhaul instructions. If the pretreated surfaces have contamination, and are not unsealed anodize, solvent clean the surfaces immediately before you apply the finish.

(2) If the pretreatment is unsealed anodize (chromic acid, boric-sulfuric acid, or sulfuric acid anodize), the surface layer is porous and easily gets contamination.

(a) Keep the anodized surface clean and dry. Use only clean, white, lint-free gloves to touch it. Keep away from oily, dirty surfaces.

(b) Light, non-oily surface particles can be removed with clean, dry compressed air, but dirty, oily contamination cannot be cleaned off. Remove dirty anodize and apply a new anodize before you apply the finish.

(c) Do not let the new anodized surfaces wait more than 16 hours before you apply finish. If the anodize becomes older than 16 hours, remove it and apply a new anodize before you apply the finish.

(3) When pretreatment is not specified:

(a) Steel – Vapor degrease, abrasive clean, then remove unwanted matter. Stainless steels of 200 and 300 series can be acid cleaned per BAC5625, Method 3 (SOPM 20-30-03, par. 12).

(b) Titanium alloys – Abrasive clean and remove unwanted matter; or, chemically clean per BAC5625, Method 2 (SOPM 20-30-03, par. 13).

(c) Copper alloys – Hand sand with 280-grit or finer abrasive paper. Manually solvent clean to remove unwanted matter.

(d) Brass or Brass Plating (Polished) – Vapor degrease or solvent clean to remove unwanted matter.

(4) All metallic surfaces must have primer before application of decorative top coats. Refer to the overhaul instructions for details.

B. Plastic Surfaces

NOTE: See Table 1 for necessary cleaner, abrasive cleaning and surfacers.

CAUTION: DO NOT LET THE SOLVENT STAY ON THE SURFACE TOO LONG A TIME, OR SURFACE DAMAGE COULD OCCUR.

(1) Clean the surface per SOPM 20-30-03, par. 11, with a cleaner from Table 1. Rinse fully and wipe dry when you use soap and water.

CAUTION: DO NOT SAND OR ABRASIVE CLEAN TEXTURED SURFACES.

(2) If necessary, abrasive clean or hand sand only the smooth surfaces.

(a) Hand sand lightly and smoothly with 180 grit or finer abrasive paper, or dry blast with 90 mesh or finer silica sand.

(b) Remove unwanted matter per Paragraph 3.B.(1).

(3) Examine the surface. As necessary, fill surface pores and defects such as roughness, flaws, cracks, per BAC5837 (SOPM 20-10-06).

(4) Apply primer, if specified by the overhaul instructions, before you apply decorative topcoats.

Table 1: Surface Preparation Requirements - Interior Decorative Plastics

TRADE NAME OR CATEGORY	GENERIC NAME/COMPOSITION	BMS	CLEANER *[1]*[2]	ABRASIVE CLEANING	SURFACER
Boltatron	PVC	8-137	*[3]		
Delrin	Acetal		*[3]	X	
Formica	Melamine/Phenolic		*[3]	X	
Kydex 100	PVC/Acrylic		*[3]		
Nylon, Nomex	Polyamide	8-271	*[3]	X	
Tenite II	Cellulose-Acetate-Butyrate		*[3]	X	
Royalite (50 series)	ABS	8-86	*[3]	X	Magna 28-C-1, or Dual Purpose No. 4 glazing putty
Cyolac	ABS	8-86	*[3]	X	
Lucite	Acrylic	8-34	*[4] or *[5]	X	
Plexiglass	Acrylic	8-34	*[4] or *[5]	X	
Lexan	Polycarbonate	8-251	*[4] or *[5]	X	Dual Purpose No. 4 glazing putty
Ultem	Polyetherimide-based thermoplastic	8-293	*[4], *[5], or *[6]	X	
		8-321	*[4], *[5], or *[6]		

Table 1: Surface Preparation Requirements - Interior Decorative Plastics (Continued)

TRADE NAME OR CATEGORY	GENERIC NAME/COMPOSITION	BMS	CLEANER *[1]*[2]	ABRASIVE CLEANING	SURFACER
Polysulfone	Polysulfone	8-253	*[4], *[5], or *[6]	X	Magna 28-C-1
Royalite (520 series)	Polysulfone		*[4], *[5], or *[6]	X	Magna 28-C-1
Tedlar, Teflon	PVF	8-98 8-121	*[7]		
Vibrin Mat	Polyester		*[7]	X	
Vinyl Surfaces	Vinyl-aluminum laminates; semi-rigid vinyls; unsupported or fabric-backed vinyls *[8]		*[3]or *[9]		
	Vinyl extrusions		*[10]		
Fiberglass	Laminated, & sandwich, molded glass fiber		Surface treat before decorative finishing per BAC5837 (Ref SOPM 20-10-06).		
Foams	Flexible sandwich, molded glass fiber	8-39	No special surface treatment necessary. Wipe or blow off dusts and other visible contamination.		
	Rigid Hetrofoam	8-133	*[11]		Duratite Surfacing Putty
Potting compounds on honeycomb panel			*[11]		Duratite Surfacing Putty
Declar	Polyetherketone ketone (PEKK)	8-319	*[4], *[7], *[5], or *[6]		

*[1] CAUTION: DO NOT ALLOW PROLONGED CONTACT OF SOLVENTS WITH PLASTIC SURFACES.

*[2] Clean parts to be screen printed with cheesecloth wet with a 1:1 mixture of alcohol and water. Wipe dry. Do not scratch the cleaned surface.

*[3] Naphtha, or soap and water.

*[4] Petroleum Aliphatic Naphtha TT-N-95, Type 2, or soap and water.

*[5] Isopropyl alcohol

*[6] Acetone

*[7] Methyl Ethyl Ketone (MEK).

*[8] White vinyl to be topcoated white must have a light top coat of AS-900 bonding sealer (Paragraph 4.).

*[9] Denatured alcohol and water, 1:1.

*[10] Xylene

*[11] Fill pores and cracks per BAC5837.

C. Leather Surfaces

(1) Clean surface fully with soap and water. Rinse with cheesecloth wet with clean water. Wipe dry.

(2) Remove remaining grease with cheesecloth wet with naphtha.

(3) Apply several light cross-coats of the specified finish system, per Paragraph 4.

D. Silicone Rubber

(1) Solvent clean with clean cheesecloth wet with naphtha. Wipe immediately with clean cheesecloth. Do not let the solvent stay too long on the silicone rubber because the rubber material could swell.

(2) Brush or spray apply sufficient color coats of 3145 RTV silicone coating to completely hide the substrate. No primer is necessary.

E. Wood (Mahogany, Fir, etc.)

(1) Make sure wood surfaces are clean and dry before you apply any organic coating. Clean the dirty and greasy surfaces with a swab and naphtha. Wipe dry.

(2) If the wood is treated with toxic water repellent or fire retardant salts, sand it smooth.

(3) Seal the wood surfaces with moisture and fungus resistant varnish, per Paragraph 4.

(4) When the wood is open grained or has surface cracks or defects, fill with Duratite Surfacing Putty.

(5) When colored decorative coating is specified, apply the finish per Paragraph 4.

(6) If no colored decorative coating is specified, a protective coating is still necessary. Apply two more layers of moisture and fungus resistant varnish over the first sealer layer, but for these 2 layers thin the varnish 2:1 with toluene. Let each layer dry, and sand it lightly, before you apply the last coat.

(7) When a clear topcoat is specified, be sure to use a surfacer that agrees with the color of the wood.

F. Surfaces with a Layer of Primer

(1) Make sure that the primed surfaces have no dirt or contamination.

(2) Reactivation is not necessary for primed surfaces less than 24 hours old.

(3) Reactivate primed surfaces that are more than 24 hours old. To do this, sand them with 240 grit or finer abrasive paper and remove dusts and other unwanted matter with naphtha. If you cannot sand the surfaces, clean them with naphtha to reactivate them.

4. COATING PREPARATION AND APPLICATION

CAUTION: DO NOT PAINT POLYCARBONATES WITH HI-SPEED LACQUER. DETERIORATION OF PARTS CAN OCCUR IMMEDIATELY WITHOUT A SIGN OF A PROBLEM. MOST POLYCARBONATE PARTS ARE STAMPED ‘POLYCARBONATE‘ OR ‘PC‘. BUT IF YOU ARE NOT SURE, PAINT ONLY WITH URETHANES OR WATER-BASE MATERIALS.

A. See Figure 1for mixing, application and curing of coatings.

B. For the colors of all the coatings, refer to the overhaul instructions. Colors of dry coatings (after a 24 hr air dry) must agree with the established color standards.

C. Refer to Paragraph 5. for application of special finishes.

COATING	THINNER	RATIO FINISH/ THINNER	DRY FILM THICKNESS, MILS (0.001 INCH)	CURING TIME (70-80°F, UNLESS NOTED)	ADDITIONAL PROCESSING INFORMATION
SEALERS					
VARNISH, MOISTURE AND FUNGUS RESISTANT	NAPHTHA, TOLUENE, OR XYLENE	1/1	--	LET DRY UNTIL SURFACE CAN BE SANDED WITHOUT BALLS ON ABRASIVE PAPER (APPROX. 2 HRS.)	DIP PARTS IN OR BRUSH ON SEALER. SEE THAT SEALER SOAKS IN AND DOES NOT MAKE A GLOSSY FINISH ON SURFACE. SAND AND REMOVE THE DUST.
ACRYLIC BONDING SEALER AS-900	--	--	0.3-0.5	1 HR. BEFORE TOP COAT	SPRAY APPLY LIGHT CROSS-COATS ON VINYL SURFACES AS NECESSARY.
SURFACER					
DURATITE SURFACING PUTTY	--	--	--	LET DRY UNTIL SURFACE CAN BE SANDED WITHOUT BALLS ON ABRASIVE PAPER (APPROX. 30 MIN.)	FILL WOODEN SURFACES THAT HAVE OPEN GRAIN, CRACKS OR DEFECTS. WITH A PUTTY KNIFE, APPLY MORE FILLER THAN NECESSARY AND WORK INTO GAPS AND OPENINGS. SAND AND REMOVE THE DUST.
SILICONE COATING					
DOW-CORNING 3145 RTV CLEAR	NAPTHA 3	BRUSH: DO NOT THIN. SPRAY: 4/1	1.0-1.5	BEFORE SERVICE: 8 HR.	SPRAY OR BRUSH APPLY. 1
WATER EMULSION					
BMS 10-55 COLORED, FLAT, OR SEMI-GLOSS 2	TAP WATER	10/1	2.0 MAX	TO HANDLE: 4 HR AT 70-80°F 1.5 HR AT 125-135°F 1 HR AT 155-165°F	DO NOT SHAKE TOO MUCH TO DECREASE AIR BUBBLES. SPRAY APPLY. WAIT 30-40 MIN. FLASH-OFF TIME AT 70-80°F BEFORE YOU START AN ACCELERATED CURE.
DECORATIVE PRIMER					
ALUMINIZED EPOXY PRIMER 463-6-4 SYSTEM (SRF-14.963)	TL-52	4/1	0.8-1.2	BEFORE SERVICE: 4 HR.	SPRAY APPLY. MIX 3 PARTS PRIMER BASE TO 1 PART CATALYST.
URETHANE PRIMER					
BMS 10-83, TYPE 1 MIX PARTS BY VOLUME E61WB2: 6 PARTS V66V27: 1 PART	METHYL CELLU-SOLVE	7/8	0.5-1.0	BEFORE TOPCOAT: 16 HR AT 65-75°F OR 4 HR AT 120-140°F	LET STAND 15 MIN. BEFORE YOU SPRAY. APPLY 1 CROSS COAT. POT LIFE OF MIXED PRIMER IS 16 HRS.

Coating Mixing, Application, and Cure Data
Figure 1 (Sheet 1 of 3)

COATING	THINNER	RATIO FINISH/ THINNER	DRY FILM THICKNESS, MILS (0.001 INCH)	CURING TIME (70-80°F, UNLESS NOTED)	ADDITIONAL PROCESSING INFORMATION
URETHANE PRIMER (CONTINUED)					
WHITE E61WC40 POLANE MIX PARTS BY VOLUME: E61WC40: 7 PARTS V66V27: 1 PART	R7KB29	2/1	0.5-1.0	5 MIN. BETWEEN COATS. 30 MIN. TO HANDLE.	LET STAND 15 MIN. BEFORE YOU SPRAY. APPLY ONE CROSS COAT. POT LIFE OF MIXED PRIMER IS 8 HR.
URETHANE ENAMEL					
BMS 10-83 TYPE 2 MIX PARTS BY VOLUME F63-SERIES: 7 PARTS V66V29: 1 PART	R7KB29 OR R7K84 OR R99KY29	2/1	1.2-1.8	5 MIN. BETWEEN COATS. 2 HRS. TO HANDLE.	LET STAND 15 MIN. BEFORE YOU SPRAY.
TEXTURED BMS 10-83, TYPE 2 MIX PARTS BY VOLUME F63-SERIES: 7 PARTS V66V29: 1 PART	NONE	--	BASE COAT TO HIDE COLOR.	BASE COAT: 1 HR. BEFORE TEXTURE COAT. TEXTURE COAT: 3 HRS. TO HANDLE.	REFER TO PAR. 5.A. FOR DETAILED APPLICATION INSTRUCTIONS.
BMS 10-83 TYPE 3 MIX PARTS BY VOLUME: H99-SERIES: 7 PARTS V66V29: 1 PART	R7KB29 OR R7K84 OR R99KY29	2/1	1.2-1.8	5 MIN. BETWEEN COATS. 2 HR. TO HANDLE.	LET STAND 15 MIN. BEFORE YOU SPRAY.
TEXTURED BMS 10-83, TYPE 3 MIX PARTS BY VOLUME: H99-SERIES: 7 PARTS V66V29: 1 PART	NONE	--	BASE COAT TO HIDE COLOR.	BASE COAT: 1 HR. BEFORE TEXTURE COAT. TEXTURE COAT: 3 HR. TO HANDLE.	REFER TO PAR. 5.A. FOR DETAILED APPLICATION INSTRUCTIONS.
CLEAR TOPCOAT MIX PARTS BY VOLUME: F63V1 (INCLUDES 2% V66VB11 ACCELER-ATOR): 7 PARTS V66V29: 1 PART	R7KB29 OR R6K10	3/1	1.5-2.0	FLASH OFF THEN 30 MIN. AT 150-160°F	SPRAY APPLY IN 2 COATS. LET FIRST COAT DRY TACK-FREE. POT LIFE OF MIXED TOPCOAT IS 1 HR.
OTHER ENAMELS					
BMS 10-11, TYPE 2 COLORED, SEMI-GLOSS OR FLAT	(REFER TO 20-41-02)				
CLEAR BAKING ENAMEL BMS 10-78	BUTYL CELLU-SOLVE	9/1	0.8-1.2	20 MIN. AT 345-355°F	THIN AS NECESSARY TO SPRAY. SPRAY APPLY ONE CROSS COAT.

Coating Mixing, Application, and Cure Data
Figure 1 (Sheet 2 of 3)

COATING	THINNER	RATIO FINISH/ THINNER	DRY FILM THICKNESS, MILS (0.001 INCH)	CURING TIME (70-80°F, UNLESS NOTED)	ADDITIONAL PROCESSING INFORMATION
LACQUERS					
HI-SPEED CLEAR AND COLORED, FLAT, SEMI-GLOSS, AND GLOSS	R7KP41, R7KP74 OR R7KB29	1/1	0.8-1.2	BETWEEN COATS: 5 MIN. FOR HANDLING: 30 MIN.	SPRAY APPLY.
HI-SPEED CLEAR, SEMI-GLOSS	R7KP41, R7KP74 OR R7KB29	2/1	0.8-1.2	BETWEEN COATS: 5 MIN. TO HANDLE: 30 MIN.	SPRAY APPLY ON SCREEN PRINTED PATTERNS WHERE NO TEDLAR OVERLAY IS SPECIFIED BY OVERHAUL INSTRUCTIONS.
METALLIC HI-SPEED, SEMI-GLOSS	R7KP41, R7KP74 OR R7KB29	1/1	0.8-1.2	BETWEEN COATS: 5 MIN. TO HANDLE: 30 MIN.	SPRAY APPLY. (SOME COLORS ARE AVAILABLE AS BASE/ POWDER KIT. MIX A SMALL AMOUNT OF BASE INTO POWDER. AFTER SMOOTHLY MIXED, ADD BACK TO THE BASE CONTAINER. THEN SHAKE CAN AND PUT ON A PAINT SHAKER.)
MARHYDE FLEXIBLE VINYL LACQUER	NONE	--	0.8-1.2	BETWEEN COATS: 5 MIN. TO HANDLE: 30 MIN.	SPRAY APPLY.
TEXTURED HI-SPEED; COLORED, FLAT AND SEMI-GLOSS	NONE	--	--	BASE COAT: 30 MIN. BEFORE TEXTURE COAT. TEXTURE COAT: 30 MIN. TO HANDLE.	REFER TO PAR. 5.A. FOR DETAILED APPLICATION INSTRUCTIONS.
FLAT, CAMOUFLAGE	TT-T-266 LACQUER THINNER	1/2	0.8-1.2	BETWEEN COATS: 5 MIN. TO HANDLE: 30 MIN.	SPRAY APPLY.
GLOSS, CELLULOSE NITRATE	TT-T-266 LACQUER THINNER	1/2	0.8-1.2	BETWEEN COATS: 5 MIN. TO HANDLE: 30 MIN.	SPRAY APPLY.

1 CAUTION: EQUIPMENT USED TO MIX AND APPLY SILICONES MUST BE MARKED "FOR SILICONES ONLY" AND MUST BE CLEANED WITH NAPTHA. SILICONES MUST BE APPLIED IN AN AREA DIFFERENT FROM THOSE FOR NON-SILICONE COATING, TO PREVENT CONTAMINATION.

2 CAUTION: WATER BASE COATINGS ARE SUPPLIED IN LINED CONTAINERS. DO NOT STORE IN UNLINED CONTAINERS.

3 KEEP NAPTHA DRY WITH DRYING CRYSTALS SUCH AS ANHYDROUS SODIUM SULFATE. ADD OR REPLACE CRYSTALS TO COVER THE BOTTOM OF CONTAINER WHEN YOU FILL THE CONTAINER AGAIN.

Coating Mixing, Application, and Cure Data
Figure 1 (Sheet 3 of 3)

5. SPECIAL APPLICATION PROCEDURES

A. Textured Flat Finish - Textures A, B, D, F

NOTE: These finishes are available in Hi-Speed lacquer and BMS 10-83, Type 2 enamel. Do not apply one paint system as topcoat of another.

(1) Base Coat – Spray apply to completely hide the old color and let this dry as indicated (Figure 1).

(2) Texture Coat

(a) Do not thin. Apply the same paint system as the base coat, with pressure-feed spray equipment. A DeVilbiss (V17431) JGA 502 spray gun, with AV15-E head, 402E needle, and 765 air cap is satisfactory.

(b) A line pressure of 25 psi and a spray-pot pressure of 5 psi are recommended.

(c) Hold the spray gun approximately 12 inches from the surface to be coated. Apply the number of coatings necessary to get the texture and color specified by the overhaul instructions.

B. Texture C

(1) Base coat – Spray apply to completely hide the old color. Let this dry 2 hours.

(2) Mix and thin the paint as indicated (Figure 1). Let this wait 15 minutes. During application, adjust the viscosity to 35 seconds on a No. 2 Zahn cup.

(3) Use this Binks (V07334) equipment or equivalent: Model 7 gun, No. 36 needle tip (0.070-inch orifice), Model 80 (1-quart) pressure cup. Adjust the fan width to fully open, open the fluid control 1/2 turn from the closed position, and use a pressure to the cup of 30 psi.

(4) Apply 5 cross coats, one after the other, with 50% overlap. Apply these coats with no drying time between coats. Use a gun-to-work distance of 6-8 inches.

C. Texture E

(1) Base coat – Spray apply to completely hide the old color. Let this dry 2 hours.

(2) Mix and thin the paint as indicated (Figure 1). Let this wait 15 minutes. During application, adjust the viscosity to 65 seconds on a No. 2 Zahn cup.

(3) Use this Binks (V07334) equipment or equivalent: Model 7 gun, No. 36 needle tip (0.070-inch orifice), Model 80 (1-quart) pressure cup. Adjust the fan width to fully open, open the fluid control 3/4 turn from the closed position, and use a pressure to the cup of 30 psi.

(4) Apply one cross coat, with 30% overlap. Use a gun-to-work distance of 6-8 inches.

6. SCREEN PRINTING

A. General

(1) Screen printing equipment (screen, screen table, squeegees) must have no old ink, ink clots, dirt, or contamination. Solvent clean as necessary with methyl ethyl ketone on a clean cloth. Wipe dry.

(2) To print metallic colors, use 110-mesh or 160-mesh screens of monofilament polyester, nylon, or silk. For opaque and transparent colors, use 160-mesh screens.

(3) Use straight and sharp squeegees (Shore A hardness 55-65) with square-cut edges, and no cuts or nicks.

(4) Refer to Figure 2 for mixing, application, and drying of inks.

B. Equipment Preparation

(1) Install the screen in the frame support. Adjust and align it to let the screen frame rest on the prefixed spacing supports with up to approximately 0.5 inch clearance between the screen and the printing surface.

(2) Install the squeegee into the mount of the sliding arm. Adjust the blade pitch to approximately 15 degrees.

C. Ink Preparation (Figure 2)

(1) For the correct ink color, refer to the color standard and the overhaul instructions.

(2) For most inks used in screen painting, the recommended viscosity is 90-120 sec. with a No. 5 Zahn cup. Add thinner as necessary to adjust viscosity. Use retarder when the ink dries too quickly or clogs the stencil.

D. Screening Operation

(1) Put the substrate material on the screen table. Make sure it is flat, without wrinkles and distortion. Hold it in position with tape along the side, or with vacuum if vacuum is supplied by the screen table.

(2) Lower the screen, pour a ridge of ink along the full width of the pattern, then squeegee the ink across the screen to flood the stencil.

(3) To print, move the squeegee with downward pressure across the pattern in a smooth motion. Flood the stroke before each print. Always print in the same direction.

(4) Force dry each pattern for 90 seconds minimum at 150-160°F before you print the next pattern.

E. Cleanup – Wash all equipment with methyl ethyl ketone. Do not let ink stay on the stencil.

SCREEN PRINTING INK	THINNER	RETARDER	DRY FILM THICKNESS, MILS (0.001 INCH)	DRYING TIME (70-80°F, UNLESS NOTED)	ADDITIONAL PROCESSING INFORMATION
Scotchcal 3900 series	3911	Butyl Cellu-solve	0.2-0.5	1.5 min. at 150-160°F between patterns. Air dry 24 hr. at 70-80°F before you apply clear topcoat	Screen print on vinyl substrates with or without final clear topcoat.
Vinyl Process 38-000 series	38-905	Butyl Cellu-solve	0.2-0.5	Same as Scotchcal 3900-series	Same as Scotchcal 3900-series.
Naz-Dar VF-000 series (flat)	VF-180	VF-182	0.2-0.5	Same as Scotchcal 3900-series	Same as Scotchcal 3900-series.
Naz-Dar VG-000 series (gloss)	VF-180	VF-182	0.2-0.5	1.5 min. at 150-160°F between patterns. Air dry 24 hr. at 70-80°F before you laminate Tedlar. *[1]	Screen print on vinyl substrates when pattern is to be laminated with Tedlar or topcoated with Hi-Speed lacquer.

Ink Mixing, Application, and Cure Data
Figure 2 (Sheet 1 of 2)

SCREEN PRINTING INK	THINNER	RETARDER	DRY FILM THICKNESS, MILS (0.001 INCH)	DRYING TIME (70-80°F, UNLESS NOTED)	ADDITIONAL PROCESSING INFORMATION
Du-Wel 10-100 series	10-900	--	0.2-0.5	Same as Scotchcal 3900-series *[1]	Screen print on acrylic, formica, or other rigid and smooth surfaces.

*[1] For transparent colors, 48 hrs. is usually necessary.

Ink Mixing, Application, and Cure Data
Figure 2 (Sheet 2 of 2)

7. IN-PROCESS CORRECTION

CAUTION: DO NOT GO DOWN TO THE BARE METAL, BECAUSE BARE METAL MUST HAVE A PRETREATMENT LAYER UNDER THE PRIMER OR FINISH LAYERS.

A. Smooth and blend out the damaged area with 180 grit or finer abrasive paper. Do not sand down to the bare metal.

B. Remove contamination with clean cheesecloth and the correct cleaner for the surface (Paragraph 3.). Wipe dry.

C. Apply the finish again per Paragraph 5.. Smoothly blend the coating as it overlaps the adjacent undamaged area. The total thickness of overlaps must not be more than one mil thicker than the specified dry film thickness on areas where the access is easy.

D. Spray application is not permitted on electronic boxes and modules containing electrical components (hardware). Use only a brush to apply the finish on these surfaces.

E. Let the coating dry for the specified time (Figure 1).