STANDARD OVERHAUL PRACTICES MANUAL

STRIPPING OF PROTECTIVE FINISHES

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STANDARD OVERHAUL PRACTICES MANUAL

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To: All holders of STRIPPING OF PROTECTIVE FINISHES 20-30-02.

Attached is the current revision to this STANDARD OVERHAUL PRACTICES MANUAL

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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.

STRIPPING OF PROTECTIVE FINISHES

1. INTRODUCTION

A. The data in this subject comes from Boeing Process Specifications BAC5725 and BAC5771 for stripping organic and inorganic finishes. The airline has a copy of the Boeing Process Specification Manual.

B. The data is general. It is not about all situations or specific installations. Use this data 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

NOTE: Equivalent substitutes can be used.

A. Abrasive pads, nonmetallic

B. Abrasive paper, aluminum oxide, 150 and 240 grit or finer

C. Paint brushes, natural fiber, 2- to 4-inch widths

D. Scrapers, wood or plastic

E. Scrub brushes, fiber-bristle long handled

F. Squirt bottles, polyethylene

G. Wipers – BMS 15-5 Class B (Class A optional)

H. Strippers for Organic Finishes

(1) Immersion Strippers with Water Seal

(a) Cee Bee A215 (concentrate solution), V71361

(b) Turco 5351-Thin, V61102

(2) Immersion Stripper with Oil Seal – Turco 6776 Thin, V61102

(3) Immersion Strippers, Alkali

(a) Isoprep 177, V6Z384

(b) Turco 4338, V61102

(4) Immersion Strippers, Acid

(a) Cee Bee A-805, V71361

(b) Fosrinse C.P., V86460

(5) Spray or Brush-On Strippers

(a) Cee Bee A-202, V71361

(b) Cee Bee A-228D, V71361

(c) Cee Bee A-306B, V71361

(d) Cee Bee R-256A, V71363

(e) Eldorado PR-5044, V55208

(f) EZE 593I, V78304 (Replaces Inland AP-561, V59987)

(g) Fiber-Resin ES-1, V26348

(h) Turco 5351-Thick, V61102

(i) Turco 5469, V61102

(j) Turco 5873, V61102

(k) Turco 6776 LO, V61102

(l) Turco 6840S, V61102

(6) Abrasive Stripper Blasting Media

(a) Soft Grain – A-A-1722, Types I or II

(b) Plastic media abrasive – MIL-P-85891, Type V, Grade A, 20/30 mesh, specific gravity 1.10-1.20

(c) Wheat starch – Envirostrip, 12/30 mesh or finer, 99.98% minimum purity, V35367

(d) Magic 1 Nanocomposite, 30/60 mesh, U.S. Technologies

(e) Magic 2 Nanocomposite, 30/60 mesh, U.S. Technologies

(f) Magic 3 Nanocomposite, 10/60 mesh, U.S. Technologies

(7) Miscellaneous chemicals

(a) Chromium trioxide (chromic acid) – O-C-303

(b) Nitric acid, technical – O-N-350 or 40-42° Baume'

(c) Phosphoric acid, technical – O-O-670

(d) Potassium hydroxide, technical – O-P-566

(e) Potassium permaganate, technical – MIL-P-11970

I. Strippers for inorganic finishes - Ref Paragraph 4.

3. ORGANIC FINISHES

WARNING: MANY OF THE STRIPPING SOLUTIONS ARE FLAMMABLE, POISONOUS OR CAN CAUSE CORROSION. DO NOT BREATHE SOLVENT AND STRIPPING SOLUTION VAPORS. THESE MATERIALS MUST NOT BE USED IN CONFINED SPACES WITHOUT SUFFICIENT VENTILATION. EXHAUST VENTILATION MUST BE SUPPLIED OVER OPEN SOLUTION TANKS. KEEP STRIPPING SOLUTIONS AWAY FROM SKIN. WEAR CHEMICAL-RESISTANT GLOVES. IF STRIPPING CHEMICALS COULD SPLASH, WEAR GOGGLES OR PROTECTIVE FACE SHIELD AND CHEMICAL-RESISTANT CLOTHING. IMMEDIATELY WASH OFF SOLUTION THAT GETS ON YOUR SKIN. FLUSH OUT WITH WATER ANY SOLUTION THAT IS SPLASHED INTO YOUR EYES, AND GET MEDICAL AID.

CAUTION: DO NOT LET CHEMICAL STRIPPERS GET ON SEALS, SEALANT, OR FILLET SEALS, OR FLOW INTO FAYING SURFACES OF BONDED OR SEALED JOINTS.

A. Organic finishes include paints, enamels, varnishes, lacquers and some elastomeric and polymerized resin finishes.

B. Stripping Methods

(1) Immersion stripping is preferred for detail parts. Do not use on assemblies. A stripping solution with a water seal (aqueous seal) contains two layers. Stripping takes place in the lower (inner) layer, and the upper (outer) layer prevents escape of active stripper material.

(2) Spray or brush-on stripping can be used on unsealed assemblies and detail parts too large to fit in an immersion tank, and for areas not loosened during immersion stripping. These strippers contain thickening agents that slow down evaporation. These strippers can be applied to vertical or horizontal surfaces.

(3) Chemical wipe or squirt-on stripping is used to remove wax-type materials that can be dissolved in solvent and then wiped off. Examples are crayon marks, temporary coatings and overspray.

(4) Dry abrasive stripping

(a) Conventional abrasive blasting or dry sanding can be used for ferrous alloys, titanium, nickel, and magnesium. Use soft abrasive grains on metal surfaces. Use dry sanding on composite surfaces.

(b) Plastic media blasting can be used on non-clad (bare) aluminum 0.125 inch or thicker, ferrous alloys, titanium, parts plated with cadmium-titanium, cadmium, zinc-nickel, chrome, and copper, and chemically treated or anodized magnesium. Do not strip to bare magnesium. Plastic media blasting damages plating and surface treatments such as anodize. All plating (other than chrome plate) and surface treatments must be removed by the procedures for inorganic finishes.

(c) Wheat starch blasting can be used for clad and non-clad aluminum 0.032 inch or thicker, bonded aluminum honeycomb sandwich parts with face sheets 0.012 inch or thicker, all other metals, including plated surfaces, and composites such as Kevlar, graphite and fiberglass. Complete removal of organic materials by wheat starch media damages surface treatments on the base metal such as anodize, and can remove plating. After removal of the organic finishes, remove the remaining surface treatments by the procedure for inorganic finishes.

(d) Nanocomposite blasting can be used for aluminum 0.040 inch or thicker, and bonded aluminum honeycomb sandwich parts with face sheets 0.012 inch or thicker. There are 3 types of nanocomposite abrasive media. Magic 1 is for general-purpose stripping. Magic 2 gives a faster removal rate. Magic 3 is used to remove cured sealant.

C. General

(1) Do not do the stripping operation in rain or hot sun.

(2) Do not mix strippers of different vendors although the products are in the same group.

(3) The general sequence is shown in Figure 1. Make the selection of the best stripping procedure and agents per Figure 2.

(4) If necessary to get full removal of coatings, you can use more than one of these stripping procedures unless not permitted by the material or configuration of the part.

D. Immersion Stripping

(1) Put the parts in racks, but keep to a minimum the area touched by the rack, to permit the solution to get to all of the coatings to be stripped.

(2) Put the parts in the stripper. If the stripper has a seal, make sure all of the parts are below the seal.

(3) Shake the parts in the stripper to get the stripper to touch all surfaces to be stripped.

(4) Keep the parts in the stripper no longer than the time specified for the stripper solution (Paragraph 3.I.). If a time limit is not specified, use 15-20 minutes as a guide. If the coating is not loosened after this time, more time in the stripper is permitted, if the total time is not more than the limits specified for the stripper. If the coating is not loosened by then, make tests of the stripper. If necessary, discard the solution and replace it.

(5) When the coating is loosened, move the parts immediately to a spray tank and complete the coating removal with an air-water blast or a water blast.

E. Brush-on or Spray Stripping

(1) Strip only the area that can be worked on at one time.

(2) Apply the stripper with a natural bristle brush or nonatomizing spray. Keep the area wet. Add more layers of stripper as necessary. Let the stripper soften and wrinkle the coating.

(3) Use Fiber-Resin ES-1 at 50-80°F. Use PR-5044 at 60-100°F (75-85°F is best). All of the other spray or brush-on stripper can be used at 50-100°F, but 65-80°F is preferred.

(4) Remove the loosened coating with a bristle brush, a wooden or plastic scraper, or a nonmetallic abrasive pad. Then wash the area with water, sprayed or wiped on, to remove the coating and stripper. Then dry the area.

WARNING: PR-5044 STRIPPER MAKES WATER AND OXYGEN DURING THE STRIPPING PROCEDURE. THIS ACTION WILL CONTINUE IN THE WASTE MIXTURE OF STRIPPER AND REMOVED COATING. DO NOT COLLECT THE WASTE MATERIAL IN RUSTY DRUMS, OR MIX WASTE WITH CONVERSION COATING RINSE WATER, OR THROW RAGS, GLOVES, OR OTHER FABRICS INTO THE WASTE, OR THE MIXTURE COULD START TO BURN. TO PREVENT PRESSURE BUILDUP IN CLOSED WASTE CONTAINERS, DO NOT SEAL THE CONTAINERS FOR 24 HOURS AFTER YOU PUT THE WASTE IN THEM.

(5) When you use PR-5044 peroxide-based stripper, be sure to wash off the stripper from the removed coating and paint chips. Use a fine spray of soap or rinse the paint chips with water. Put the waste in vented containers. Apply the stripper from plastic or stainless steel equipment.

F. Stripping Epoxy Adhesives and Adhesive Primers

CAUTION: DO NOT LET STRIPPER STAY ON THE PARTS FOR MORE THAN A TOTAL OF 2 HOURS.

(1) Brush small amounts of mixed stripper on the adhesive or primer. Keep the stripper only on the area to be stripped. Do not let the stripper splash or run.

(2) Let the stripper stay on the surface a maximum of 30 minutes.

(3) Remove the stripper and the loosened adhesive or primer with nonabrasive dry cloths, or hardwood or plastic scrapers that do not damage the substrate.

(4) Apply more stripper as necessary. Then do Paragraph 3.F.(2) and Paragraph 3.F.(3) again. Do not let stripper be on the part for more than a total of 2 hours.

(5) Sponge rinse with water and wipe dry, or solvent clean per SOPM 20-30-03.

(6) Remove remaining spots of adhesive with stripper applied only to the spots.

(7) Rinse and wipe dry.

G. Wipe or Squirt-on/Wipe-off Stripping

(1) Apply the stripper with a squirt bottle, or wipers wet with stripper, to the coating to be removed. Keep the surface wet.

(2) Keep the stripper on the surface for the time recommended for the stripper. If a time is not specified, use the minimum time necessary to loosen the coating. Wrinkles in the coating are a sign that the coating is loose.

(3) Peel or scrape off the stripper and the loosened coating before the surface dries. Use scrapers of soft materials such as wood or plastic.

(4) Rub the surface with wipers wet with stripper if necessary. Remove unwanted material that could become caught in tight areas of the parts.

H. Abrasive Stripping

CAUTION: ABRASIVE STRIPPING OF ORGANIC FINISHES DAMAGES CONVERSION COATINGS AND PLATING. ANODIZE OR CHEMICAL TREATMENT ON ALUMINUM PARTS, AND CADMIUM OR CADMIUM-TITANIUM PLATING ON STEEL PARTS MUST BE COMPLETELY STRIPPED AND REAPPLIED BY THE APPLICABLE SOPM SUBJECT BEFORE THE SPECIFIED ORGANIC FINISHES ARE APPLIED. ADJACENT CHROME PLATING MUST BE EXAMINED FOR THICKNESS, SMOOTHNESS AND QUALITY TO SEE IF THE CHROME PLATING MUST BE REPLACED.

(1) Dry abrasive blasting

(a) Metal surfaces

1) If you use soft grain media, use the Abrasive Cleaning procedure in SOPM 20-30-03.

2) Use a nozzle-to-part distance of approximately 6 inches and a pressure of 90-100 psi.

(b) Composite surfaces – See Paragraph 3.H.(5) below.

(2) Plastic Media Blasting

(a) Plastic media blasting can be used on these surfaces:

1) Bare unclad aluminum alloys of gage thickness 0.125 inch or thicker. This includes chemical conversion coated and anodized surfaces.

2) Ferrous alloys

3) Titanium and its alloys

4) Parts plated with cadmium-titanium, cadmium, nickel, zinc-nickel, chrome, or copper plating.

5) Chemically treated or anodized magnesium, but these must not be stripped to bare magnesium.

(b) Make sure the parts are clean, dry, and have no metal shavings.

(c) Use only equipment that is limited to plastic media blasting. Be sure the equipment is clean. See Paragraph 3.H.(2)(h) below.

(d) Use a nozzle-to-part distance of 6 inches or more, and an air pressure of 20-40 psi.

(e) Adjust the nozzle-to-part angle as necessary to remove the coating. A 45-degree angle is a good general angle to use.

(f) Put the plastic media through a screen before and while you use the media, to remove undersize media and contamination such as paint flakes, metallic particles, heavy particles, and damaged media particles. Replace or add more media as necessary.

(g) The media in the supply hopper must contain less than 0.5 weight percent particles with specific gravity more than the limit in the media specification.

(h) Be sure all blasting and media recovery components are fully cleaned before you first put the media in or change the media.

(3) Wheat starch blasting

(a) Wheat starch blasting can be used on these surfaces.

1) Aluminum alloys 0.032 inch and thicker. They can be clad, chemical conversion coated, or anodized.

2) Bonded aluminum honeycomb sandwich with face sheets 0.012 inch or more thick.

3) All other metals, plated or not.

4) Composite parts if the procedure of D6-56993 is used.

(b) Make sure the parts are clean, dry, and have no metal shavings.

(c) Use only equipment that is limited to wheat starch blasting.

(d) Use a nozzle-to-part distance of 6 inches or more, an air pressure of 30-50 psi, and a nozzle-to-part angle of 20-60 degrees. The lower angles are necessary to selectively strip organic finishes, such as topcoat from primer.

(e) Selective stripping of the different finish layers, such as topcoat down to the primer, is acceptable if the remaining layer is serviceable and agrees with overhaul instructions.

(4) Nanocomposite blasting

(a) Nanocomposite blasting can be used on these surfaces.

1) Aluminum alloys 0.040 inch and thicker. They can be clad, chemical conversion coated, or anodized.

2) Bonded aluminum honeycomb sandwich with face sheets 0.012 inch or more thick.

(b) Make sure the parts are clean, dry, and have no metal shavings.

(c) Use only equipment that is limited to nanocomposite blasting.

(d) Use a nozzle-to-part distance of 6 inches or more, an air pressure of 32 psi maximum, and a nozzle-to-part angle of 40-60 degrees. The lower angles are necessary to selectively strip organic finishes, such as topcoat from primer.

(e) Selective stripping of the different finish layers, such as topcoat down to the primer, is acceptable if the remaining layer is serviceable and agrees with overhaul instructions.

(5) Composite Surfaces

(a) Use 150-grit or finer sandpaper to remove the enamel or topcoat layer. Sand the topcoat smoothly down to the primer layer. Removal of the primer layer is not necessary to apply new layers of primer, enamel or topcoat.

(b) Sand and blend out the primer and enamel layers with 240 grit or finer sandpaper. Do not damage the fiber of the composite substrate.

(c) If the substrate has a conductive coating, sand off all of this coating in the area to be painted, to get equal conductivity after replacement of the coating.

I. Solution Makeup and Control

(1) Fully mix vendor solutions before you put them in the tank.

(2) For stripper solutions made from chemicals, fill the tank 3/4 with water, add and dissolve the chemicals, then add water to the operating level. Make analyses and adjustments as necessary.

(3) Unless the solution is a diphase process solution, mix the stripper solution after long waits, after you add stripper materials, or immediately before you start to use the solution.

(4) To make a solution with a water seal, add stripper to the tank to the tank volume or depth specified. Then carefully add tap water over the stripper to the tank volume or level specified. The seal will dissolve the stripper to change the pH to the specified range. If the pH of the seal is not sufficiently high, add some potassium hydroxide.

(5) Cee Bee A-215 Solution (with water seal)

(a) Control the A-215 at 75-80% tank volume.

(b) Control the seal at 20-25% tank volume (6-inch minimum) and pH of 10.5-11.5.

(c) Use this solution at room temperature.

(6) Turco 5351-Thin Solution (with water seal)

(a) Control the Turco 5351 at 88-92% tank volume and specific gravity of 1.15-1.19.

(b) Control the seal at 8-12% tank volume (4-inch minimum) and pH of 8.0-10.3.

(c) Use this solution at room temperature.

(7) Turco 6776 - Thin Solution (with oil seal)

(a) Use the concentrated solution as supplied.

(b) Control the temperature at 70-130°F (120-130°F is best).

(c) Keep the seal depth at 12-15 percent of the total depth of the solution, to 8 inches maximum seal depth. Use Turco seal additive when you add more seal.

(d) Analyze the solution and adjust it by the vendor's instructions. Add new solution as necessary to adjust for evaporation.

(e) Rinse the stripped parts as quickly as possible. Clean per BAC5744, BAC5749, BAC5750 or BAC5763 (SOPM 20-30-03) as quickly as possible, to remove the oil seal.

(f) Discard the stripper when more than 12 hours in it is necessary to remove coatings.

(g) This solution will remove anodizes and conversion coatings. Rinse parts as quickly as possible after removal from the tank to stop the etching action. Anodizes and conversion coatings touched by this stripper must be removed by the procedure for inorganic coatings (Paragraph 4.).

(h) This solution can cause galvanic corrosion. Do not let different metal parts touch. Use basket liners and coatings on holding fixtures of non-conductive materials such as Teflon or polyethylene.

(8) Turco 4338

CAUTION: THIS STRIPPER CAN BE USED ONLY ON TITANIUM.

(a) Mix 225 pounds Turco 4338 per gallon water. Control at 32-40 ounces per gallon. Control potassium permanganate at 6-8 ounces per gallon. Control the temperature at 190-210°F.

(b) Put the parts in the stripper for 30-40 minutes. Then remove the parts and rinse them. Then rinse them with pressure spray until all unwanted matter is removed.

(9) Cee Bee A-805

(a) Use this stripper full strength. Add water to the tank as necessary to adjust for evaporation.

(b) Control chromic acid at 40-70 ounces per gallon, phosphoric acid at 50-84 ounces per gallon, and the ratio of chromic to phosphoric acids at 0.90-1.10. Add one acid or the other as necessary to adjust.

(c) Control the temperature at 170-190°F.

(d) Discard the stripper when more than 20 minutes in it is necessary to remove coatings.

(e) This solution will remove anodizes and conversion coatings. Rinse parts as quickly as possible after removal from the tank to stop the etching action. Anodizes and conversion coatings touched by this stripper must be removed by the procedures for inorganic coatings (Paragraph 4.).

(f) This solution can cause galvanic corrosion. Do not let different metal parts touch. Use basket liners and coatings on holding fixtures of non-conductive materials such as Teflon or polyethylene.

(10) Fosrinse C.P.

(a) Use this stripper full strength. Add water to the tank as necessary to adjust for evaporation.

(b) Control chromates at 32-60 ounces per gallon. Add chromic acid to adjust.

(c) Control phosphoric acid at 53-96 oz/gal. Add more phosphoric acid to adjust.

(d) Control the ratio of chromic to phosphoric acids at 0.90-1.10. Add one acid or the other to adjust.

(e) Control the temperature at 170-190°F.

(f) Discard the stripper when more than 20 minutes in it is necessary to remove coatings.

(g) This solution will remove anodizes and conversion coatings. Rinse parts as quickly as possible after removal from the tank to stop the etching action. Anodizes and conversion coatings touched by this stripper must be removed by the procedure for inorganic coatings (Paragraph 4.).

(h) This solution can cause galvanic corrosion. Do not let different metal parts touch. Use basket liners and coatings on holding fixtures of non-conductive materials such as Teflon or polyethylene.

(11) Chromic Acid-Nitric Acid

(a) Mix 3.5 pounds chromic acid per gallon of water. Add nitric acid in the amount of 5% of final tank volume.

(b) Control the chromic acid at 48-64 ounces per gallon. Add nitric acid as necessary to keep the stripping rate.

(c) Control the temperature at 155-175°F.

(d) Discard the stripper when more that 15 minutes in it is necessary to remove coatings.

(e) This solution will remove anodizes and conversion coatings. Rinse parts as quickly as possible after removal from the tank to stop the etching action. Anodizes and conversion coatings touched by this stripper must be removed by the procedures for inorganic coatings (Paragraph 4.).

(f) This solution can cause galvanic corrosion. Do not let different metal parts touch. Use basket liners and coatings on holding fixtures of non-conductive materials such as Teflon or polyethylene.

(12) Chromic Acid

(a) Mix 3.5 pounds chromic acid per gallon of water. Control the chromic acid at 48-64 ounces per gallon.

(b) Control the temperature at 155-175°F.

(c) Discard the stripper when more than 15 minutes in it is necessary to remove coatings.

(d) This solution will remove anodizes and conversion coatings. Rinse parts as quickly as possible after removal from the tank to stop the etching action. Anodizes and conversion coatings touched by this stripper must be removed by the procedure for inorganic coatings (Paragraph 4.).

(13) Nitric Acid

(a) Fill the tank with nitric acid. Control the nitric acid at 50-78% by weight.

(b) Control the temperature at 100-120°F.

(c) Discard the stripper when more than 20 minutes in it is necessary to remove coatings.

(d) This solution will remove anodizes and conversion coatings. Rinse parts as quickly as possible after removal from the tank to stop the etching action. Anodizes and conversion coatings touched by this stripper must be removed by the procedure for inorganic coatings (Paragraph 4.).

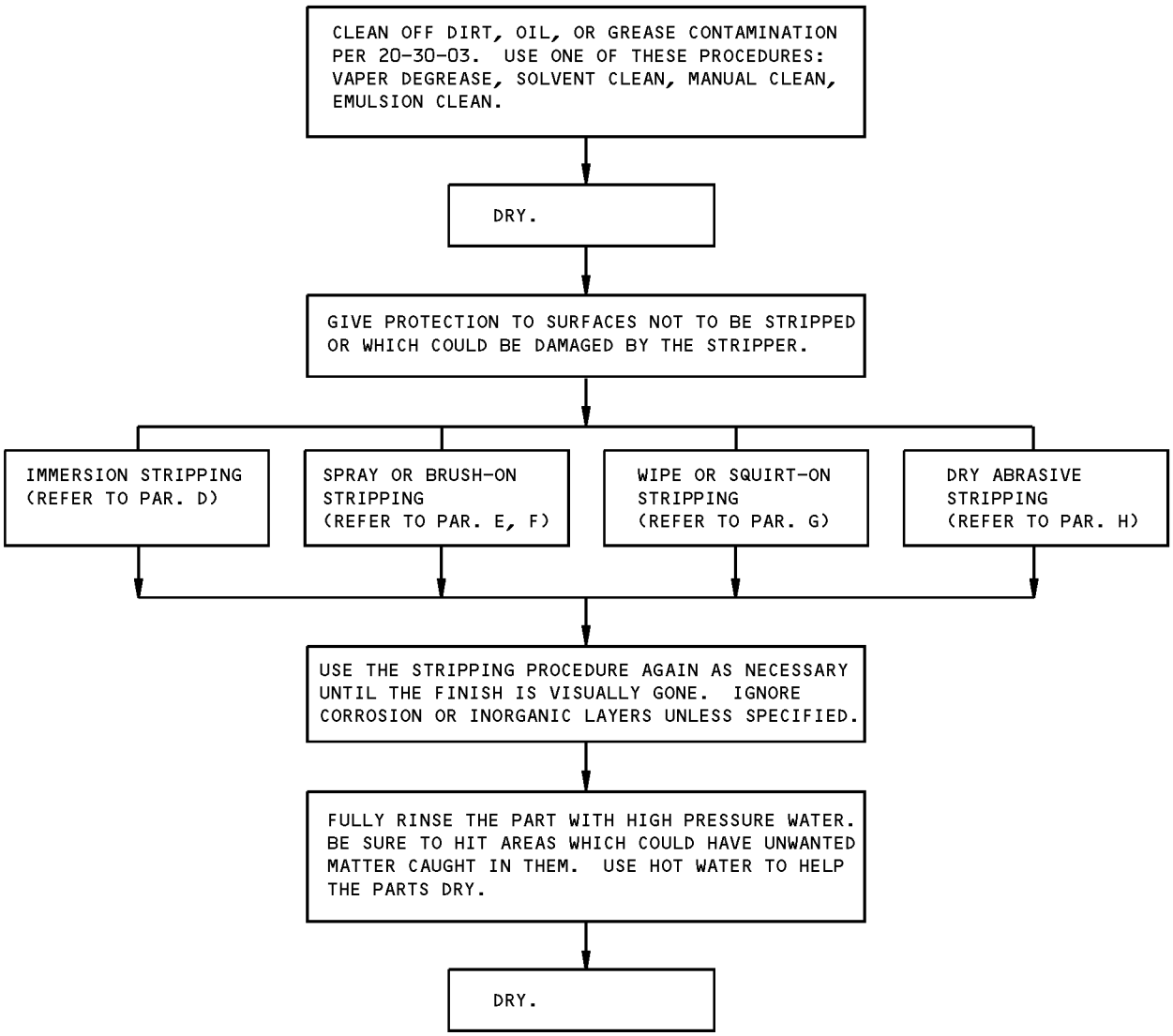
(e) This solution can cause galvanic corrosion. Do not let different metal parts touch. Use basket liners and coatings on holding fixtures of non-conductive materials such as Teflon or polyethylene.

(14) Isoprep 177

(a) Mix 0.40 pounds (6.4 ounces) Isoprep 177 per gallon of water. Control this at 6-12 ounces per gallon.

(b) Control the temperature at 180-190°F.

(c) Discard the stripper when more than 20 minutes in it is necessary to remove coatings.



General Procedure for Stripping Organic Finishes
Figure 1

ORGANIC MATERIAL TO BE REMOVED	BASE MATERIAL	RECOMMENDED STRIPPERS 1	
		DETAIL PARTS ONLY	DETAIL PARTS OR ASSEMBLIES
EPOXY PRIMERS, TOPCOATS. POLYURETHANES ALKYDS POLYSULFIDES OTHER COATINGS PRIMERS, TOPCOATS	ALLOY STEELS ABOVE 220 KSI ALUMINUM AND ALLOYS CRES NICKEL/COBALT ALLOYS TITANIUM AND ALLOYS MAGNESIUM ALLOYS	CEE BEE A215 TURCO 5351 THIN	CEE BEE R-256A ELDORADO PR-5044 TURCO 5351-THICK TURCO 5469 TURCO 6840S
	ALLOY STEELS BELOW 220 KSI ALUMINUM AND ALLOYS CRES NICKEL/COBALT ALLOYS TITANIUM AND ALLOYS	CEE BEE A215 TURCO 5351-THIN CEE BEE A-228D 2 CEE BEE A-805 SOLUTION FIBER-RESIN ES-1 FOSRINSE C.P. SOLUTION TURCO 6776 THIN TURCO 6776 LO	CEE BEE A-306B ELDORADO PR-5044 CEE BEE R-256A TURCO 5351-THICK TURCO 5873 TURCO 6840S
EPOXY PRIMERS, TOPCOATS	ALUMINUM	CEE BEE A-202 CEE BEE A-228D 2 EZE 593I CHROMIC-NITRIC ACID SOLUTION CHROMIC ACID SOLUTION NITRIC ACID SOLUTION	---
	TITANIUM	CHROMIC-NITRIC ACID SOLUTION	---
BAC5710 TYPE 24 HIGH TEMPERATURE COATING FOR TITANIUM	TITANIUM	ISOPREP 177 SOLUTION TURCO 4338 SOLUTION	---
BAC5710 TYPE 49 NYLON COATING	ALL	ABRASIVE BLAST (BAC5748 TYPE 2, CLASS 7)	
TEMPORARY MARKINGS TEMPORARY COATINGS WAXES UNCURED OVERSPRAY	ALL, INCLUDING COMPOSITES	FINAL CLEAN PER BAC5750 (SOPM 20-30-03)	

1 REFER TO PAR. I. FOR SOLUTION MAKEUP AND CONTROL DETAILS

2 DO NOT USE ABOVE 100°F

3 REFER TO PAR. F. FOR BRUSH STRIPPING PROCEDURES TO REMOVE EPOXY ADHESIVES AND ADHESIVE PRIMERS

Stripper Selections
Figure 2 (Sheet 1 of 2)

ORGANIC MATERIAL TO BE REMOVED	BASE MATERIAL	RECOMMENDED STRIPPERS 1	
		DETAIL PARTS ONLY	DETAIL PARTS OR ASSEMBLIES
ALL EPOXIES, POLYURETHANES, ALKYDS, POLYSULFIDES, OTHER COATINGS, PRIMERS, TOPCOATS	MAGNESIUM FERROUS ALLOYS TITANIUM NICKEL/COBALT ALLOYS	DRY ABRASIVE BLAST PER BAC 5748 (SOPM 20-30-03) WITH SOFT GRAIN MEDIA	
BMS 10-82 GOLD COATING	CRES TITANIUM	HAND REMOVE (BAC5748 TYPE 2, CLASS 5) WITH ABRASIVE FABRIC PAD, PAPER OR WHEEL, 100 GRIT OR FINER	
BONDING ADHESIVES ADHESIVE PRIMERS	ALUMINUM TITANIUM	FOSRINSE C.P. SOLUTION CHROMIC-NITRIC ACID SOLUTION NITRIC ACID SOLUTION CEE BEE A-805 SOLUTION	FIBER RESIN ES-1 3 TURCO 5351-THICK 3 TURCO 5469 3
	STAINLESS STEELS	TURCO 5351-THIN	TURCO 5353-THICK 3 TURCO 5469 3

1 REFER TO PAR. I. FOR SOLUTION MAKEUP AND CONTROL DETAILS

2 DO NOT USE ABOVE 100°F

3 REFER TO PAR. F. FOR BRUSH STRIPPING PROCEDURES TO REMOVE EPOXY ADHESIVES AND ADHESIVE PRIMERS

Stripper Selections
Figure 2 (Sheet 2 of 2)

4. INORGANIC FINISHES

WARNING: MANY OF THESE STRIPPING SOLUTIONS ARE POISONOUS OR CAN CAUSE CORROSION. DO NOT BREATHE STRIPPING SOLUTION VAPORS. THESE MATERIALS MUST NOT BE USED IN CONFINED SPACES WITHOUT SUFFICIENT VENTILATION. IF THE STRIPPING SOLUTION GETS ON YOUR SKIN, WASH IT OFF IMMEDIATELY WITH WATER. IF THESE CHEMICALS GET IN YOUR EYES, FLUSH IT OUT QUICKLY WITH WATER. IMMEDIATELY GET MEDICAL AID. IMMEDIATELY WASH OFF SOLUTION THAT GETS ON YOUR SKIN. FLUSH OUT WITH WATER ANY SOLUTION THAT IS SPLASHED INTO YOUR EYES AND GET MEDICAL AID.

CAUTION: DO NOT LET CHEMICAL STRIPPERS GET ON SEALS, SEALANT, OR FILLET SEALS, OR FLOW INTO FAYING SURFACES OF BONDED OR SEALED JOINTS.

A. Solution Selections

(1) For a list of the approved stripping solutions and types, see Table 1. Refer to BAC5771 for details about solution preparation and control.

(2) For solutions to remove metal coatings, see Table 2. If the metal coatings are thermal sprayed, see Table 3.

(3) For solutions to remove conversion and anodic coatings, see Table 4.

(4) For solutions to remove one type of coating but let a different type stay, or to remove different coatings at the same time, see Table 5.

Table 1: Stripping Solutions

Solution Number *[1]	Solution Name	Type		
		Immersion	Electrolytic	Manual
1	Ammonium Nitrate	X		X
1E	See Solution 48			
1J	See Solution 46			
2	Hydrochloric Acid	X		
2E	See Solution 49			
3	Caustic-Cyanide		X	
3E	See Solution 50			
4	Electrolytic Cleaner *[2]		X	
4E	See Solution 51			
5	Chromium Plate Etch		X	
5E	See Solution 52			
6	Sulfuric Acid-Magnesium Sulfate Anodic Etch		X	
7	Sulfuric Acid		X	
8	Nitric Acid	X		

Table 1: Stripping Solutions (Continued)

Solution Number *[1]	Solution Name	Type		
		Immersion	Electrolytic	Manual
9	Sodium Hydroxide-Sodium Carbonate		X	
9E	See Solution 32			
10	Acetic Acid-Hydrogen Peroxide	X		
10E	See Solution 54			
11	Enstrip S, V02258	X		
12	Enstrip A, V02258	X		
13E	See Solution 55			
14	Chromic-Sulfuric Acid	X		X
15	Chromic Acid	X		
16	Ammonium Hydroxide	X		X
17	Chromic Acid-Sodium Nitrate	X		X
18	Chromic-Phosphoric Acid	X		
19	Sulfuric-Nitric Acid	X		
20	Alkaline Cleaner *[3]	X		X
21	TEC 838-F, V25227	X		X
22	Metex Strip-Aid, V99631	X		
22E	See Solution 37			
22J	See Solution 47			
24	Amchem 4, 6, or 7, V84063	X		X
27	Enstrip TL-Enstrip A, V02258	X		
29	Enstrip NP, V02258	X		
30	N-Ergy 5010, V26264	X		
31	Turco 4181, V61102	X		
32	Nitric-Hydrofluoric Acid Etch	X		
34	Lectrokem 1109, V69438	X		

Table 1: Stripping Solutions (Continued)

Solution Number *[1]	Solution Name	Type		
		Immersion	Electrolytic	Manual
35	Metex Solder Stripper, V99631	X		X
36	Tri-Acid Etchant	X		
37	Smut Go No. 4, V61102	X		
38	Enstrip N-170, V02258	X		
39	Cuposit Electroless Nickel Stripper 424, V22079	X		
40	Niculoy Stripper 432, V22073	X		
41	Enstrip Q-516, V02258	X		
42	Enstrip 165 S, V02258	X		
43	ARP 60 Stripper, V54785 or V99442	X		
44	Chemelex T- Strip, V34964	X		
45	Nitric-Bifluoride	X		
46	Inhibited Hydrochloric Acid	X		
47	Inhibited Nitric Acid	X		
48	ACP No. 2 (now renamed Deoxidizer No. 2), V84063	X		
49	Oakite No. 34, V44389	X		
50	Turco 4461 (Smut Go No. 1), V61102	X		
51	Wyandotte 2487 (now renamed DW2487), V83339	X		
52	ACP No. 1, V84063	X		
53	ACP No. 1 with Sulfuric Acid, V84063	X		

Table 1: Stripping Solutions (Continued)

Solution Number *[1]	Solution Name	Type		
		Immersion	Electrolytic	Manual
54	Sodium Dichromate - Sulfuric Acid	X		
55	Nitric Acid	X		
56	Aldox V, V86460	X		
57	BAC5772 – any solution	X		
58	BAC5786 – any solution	X		
59	Cee Bee A805, V71361	X		
60	Unichrome 80 and 80X, V12941 or V76323		X	
61	Boeclene, V81205	X		
62	Enstrip 3880, V02258	X		
63	SCM 4570 Lead Tin Stripping Solution, V13929	X		
64	SCM 4590 Lead Tin Stripping Solution, V13929	X		
65	Modified Sulfuric		X	
PP *[4]	Oakite Deoxidizer 231, V44389	X		
QQ *[4]	Deoxalume 2300, V84063	X		
RR *[4]	Cufix-E		X	
SS *[4]	BAC5625 Solution 14	X		
TT *[4]	Rostrip Stripping Salts M-10, V71361	X		
UU *[4]	Enstrip C-38, V02258	X		
VV *[4]	Metex Copper Stripper F, V99361	X		
WW *[4]	Alk-Cu-Strip (non Cyanide)	X		
XX *[4]	Sodium Carbonate-Tartaric Acid		X	

Table 1: Stripping Solutions (Continued)

Solution Number *[1]	Solution Name	Type		
		Immersion	Electrolytic	Manual
YY *[4]	Kolene Molten Salts	X		
ZZ *[4]	GMC 800	X		
AAA *[4]	Hydrochloric acid	X		
BBB *[4]	Low Concentration Nitric Acid	X		
CCC *[4]	Deoxidizer No. 2L, V84063	X		

*[1] Solution numbers without a letter suffix refer to BAC5771. (Solution numbers with an E suffix refer to BAC5765. Solution numbers with a J suffix refer to BAC5625, which replaces BAC5751. But these all have equivalents in BAC5771, as indicated.) Refer to BAC5771 for details of preparation and control.

*[2] Hot alkaline solution per BAC5749 Type K, now replaced by BAC5749 immersion cleaners, medium duty soak/electrolytic (SOPM 20-60-01).

*[3] Hot alkaline cleaning solution per BAC5749 Type B, now replaced by BAC5749 immersion cleaners, medium duty soak/electrolytic (SOPM 20-60-01).

*[4] Refer to BAC5771 PSD 6-78.

Table 2: Stripping Solutions for Metal Coating Removal

COATING	BASE METAL				
	Low Alloy Steels *[1]	Corrosion Resistant Steels *[2]*[1]	Aluminum Alloys *[3]	Copper Alloys *[2]*[4]	Titanium Alloys
Cadmium and Cadmium-Titanium	1, 3, 11, 12, 22, 27, 41, 46, 59	1, 3, 8, 46, 47, 59	8, 45, 59	1, 2, 43, 46, 59	1, 3, 8, 59
Aluminum	46, 57, 58	46, 57, 58	–	46, 57, 58	46, 57, 58
Zinc	3, 11, 12, 22, 27, 41, 46, 59	2, 8, 46, 47, 59	8, 45, 59	2, 46, 59	3, 8, 59
Silver	3, 11, 12, 14, 22, 41,	3, 8, 47	8, 45	3, 19	3, 8
Copper	3, 11, 12, 14, 22, 27, 41, 59, 62, RR, TT, UU, VV, WW, *[5]	3, 8, 11, 22, 59, 62, TT, UU, VV, WW, *[5]	8, 45, 59	–	3, 8, 45, 59
Chromium	4, 5, 9, 60	2, 4, 9	5	2, 4	4, 9
Nickel and Electroless Nickel	6, 7, 11, 12, 22, 27, 29, 38, 39, 40, 41	8, 11, 22, 38, 39, 40, 41	8, 45, BBB *[5]	6, 7, 29, 42, 43	8
Tin	3, 4	3, 4, 8, 47	8, 45	2, 4	3, 8
Gold	3, 12	2, 12	–	3	3

Table 2: Stripping Solutions for Metal Coating Removal (Continued)

COATING	BASE METAL				
	Low Alloy Steels *[1]	Corrosion Resistant Steels *[2]*[1]	Aluminum Alloys *[3]	Copper Alloys *[2]*[4]	Titanium Alloys
Lead or Lead Solder	10	10, 47	10	10, 34, 35, 44	–
Diffused Nickel Cadmium	12	12	–	–	–
BMS 14-4, Type 1	31	31	–	–	–
BMS 14-4, Type 2	30	30	–	–	–
Brush Tin-Lead-Nickel	63, 64, 65	63, 64, 65	65	–	–
Brush Nickel Sulfamates and Nickel Tungsten	65	65	65	–	–
Zinc, Zinc-Nickel	1, 3, 11, 12, 22, 27, 41, 46	1, 2, 8, 46, 47	8, 45	1, 2, 46	1, 3, 8

*[1] Do not use solutions 2, 6, 7, 10, 14, 27, 39, 46 or 47 on steels that must be baked per Table 6. These high-strength steels can also be stripped by abrasive blasting per SOPM 20-30-03 or by grinding per SOPM 20-10-02.

*[2] Solution 2 can attack corrosion resistant steels. Solutions 2, 3, 19, 46, 59 can attack copper.

*[3] Solution 45 has a high etch rate on aluminum. A maximum of 0.0004 inch per surface could be removed.

*[4] Use only solutions 34 and 35 to strip lead solder from copper clad laminate materials.

*[5] Ref BAC5771 PSD 6-78.

Table 3: Stripping Solutions for Removal of Thermal Spray Coatings

BAC5851 COATING TYPES *[1]	BASE METAL					
	LOW ALLOY STEELS *[2]*[3]	CORROSION RESISTANT STEELS *[3]	TITANIUM ALLOYS *[3]	NICKEL BASED ALLOYS *[3]	ALUMINUM ALLOYS	COPPER ALLOYS
Type 1 (Tungsten Carbide-Cobalt)	11, XX	11, XX	11, XX, YY *[4]	11, YY	—	—
Type 2 (Aluminum Bronze)	3, 11, 12, 14, 22, 27, 41, 59, 62	3, 8, 11, 22, 59, 62, SS	3, 8, 59, 62, SS, YY *[4]	3, 11, 12, 14, 22, 27, 41, 59, 62, SS *[5]	8, 45 *[6], 59	—
Type 3 (Aluminum Oxide)	46, 57, 58	46, 57, 58	57, 58	46, 57, 58	18, 36	57, 58

Table 3: Stripping Solutions for Removal of Thermal Spray Coatings (Continued)

BAC5851 COATING TYPES *[1]	BASE METAL					
	LOW ALLOY STEELS *[2]*[3]	CORROSION RESISTANT STEELS *[3]	TITANIUM ALLOYS *[3]	NICKEL BASED ALLOYS *[3]	ALUMINUM ALLOYS	COPPER ALLOYS
Type 4 (Chromium Oxide)	XX	XX	XX, YY *[4]	YY	—	—
Type 7 (C. P. Aluminum)	46, 57, 58	46, 57, 58	46, 57, 58	—	—	46, 57, 58
Type 10 (7XXX Aluminum Alloy)	46, 57, 58	46, 57, 58	46, 57, 58	—	—	46, 57, 58
Type 14 (Copper-Nickel-Indium Alloy)	—	SS	SS, YY *[4]	SS, *[5], YY	—	—
Type 15 (Cobalt Alloy T-400)	—	SS	SS, YY *[4]	SS, *[5], YY	—	—
Type 16 (Chromium Carbide)	11, 12, XX	11, 12, XX	11, 12, XX, YY *[4]	11, 12, YY	—	—
Type 17 (Tungsten Carbide-Cobalt-Chrome)	11, XX	11, XX	11, XX, YY *[4]	11, XX, YY	—	—

*[1] For coating details, see SOPM 20-10-05.

*[2] Do not use solutions 14, 27, or 46 on steels heat treated above 220 ksi.

*[3] Solutions SS thru YY refer to BAC5771 PSD 6-78.

*[4] Because of the high temperature of Solution YY, shot peened parts stripped in this solution must be peened again by the overhaul instructions.

*[5] BAC5625 solution 14B or 14E only. Four hour maximum soak time for either solution.

*[6] Solution 45 has a high etch rate on aluminum. A maximum of 0.0004 inch per surface could be removed.

Table 4: Stripping Solutions for Conversion and Anodic Coating Removal

BASE METAL	CONVERSION COATINGS	STRIPPING SOLUTIONS (Table 1)
Ferrous	Manganese Phosphate or dry film lubricants Iron or Zinc Phosphate	15 16
Magnesium	Dow 7, 17 or 19	15, 17

Table 4: Stripping Solutions for Conversion and Anodic Coating Removal (Continued)

BASE METAL	CONVERSION COATINGS	STRIPPING SOLUTIONS (Table 1)
Aluminum	Chemical Conversion Coatings	
	Colored, fresh and Clear, fresh and aged	18, 21, 24, 36, 37, 48 thru 53, 56, 57 *[1], 58, 59, PP, QQ, ZZ, CCC *[2]
	Colored, aged	18, 21, 24, 36, 37, 56, 57 *[1], 58, 59, PP, QQ, ZZ, CCC *[2]
	Anodic Coatings	
	All	18, 21, 24, 36, 37, 56, 57 *[1], 58, 59, PP, QQ, ZZ, CCC *[2]
	Hard anodize	18, 36
	Other than hard anodize	22E, 58, 61; QQ, ZZ *[2]
Zinc or Cadmium Plate	Chromate Passivation	20
Titanium	Phosphate-Fluoride	32

*[1] Solution 57 has a high etch rate. Be careful that the metal thickness is not decreased below the minimum dimensions permitted by overhaul instructions.

*[2] Refer to BAC5771 PSD 6-78.

Table 5: Stripping Solutions for Parts With More Than One Finish

BASE METAL	COATINGS	COATING(S) TO BE STRIPPED	STRIPPING SOLUTION (Table 1)	NOTES
Aluminum with steel inserts	Conversion and Cadmium	Conversion Cadmium	18, 21 1	*[1]
	Conversion and Chromium	Conversion Chromium	18, 21 5	
Ferrous up to 180 ksi *[2]	Cadmium and Chromium	Cadmium Chromium Both	1, 59 4, 9 2	*[3]
	Cadmium and Silver	Cadmium Both	1 3, 11, 12, 22	*[3]
	Chromium and Nickel	Chromium Both	4, 9 7	
	Silver and Nickel	Silver Nickel Both	3 6, 7 11, 12, 22	*[4]
	Nickel and Copper	Nickel Both	6, 7 11, 12, 22	
	Zinc-Nickel and Chromium	Zinc-Nickel Chromium Both	1 4, 9 2	*[3]
	Zinc-Nickel and Silver	Zinc-Nickel Both	1 3, 11, 12, 22	*[3]

Table 5: Stripping Solutions for Parts With More Than One Finish (Continued)

*[1] Mask or remove plated inserts.

*[2] For ferrous alloy parts heat treated above 180 ksi, use applicable solutions listed in Table 2. Or strip coatings by abrasive blasting per SOPM 20-30-03 or by grinding per SOPM 20-10-02.

*[3] Stainless steel only.

*[4] Mask silver.

B. General

(1) Unless specified below, all steel parts heat treated above 180 ksi (externally-threaded parts above 160 ksi) must be stress relieved per SOPM 20-10-02 before you strip them. Stress relief is not necessary for:

(a) Parts to be stripped in Solutions 1, 9, 22, or UU or XX (BAC5771 PSD 6-78).

(b) Parts to be stripped by abrasive blasting per SOPM 20-30-03.

(c) Unless specified by overhaul instructions, 300-series CRES, A286 steel, 15-5PH, 17-4PH, 17-7PH or other PH steels below 180 ksi and without external threads, 17-PH steel (CH-900 condition), nickel alloys.

(2) Put the parts fully into the processing solutions to prevent local effects, such as waterline attack.

(3) Use a simple immersion procedure, not the electrolytic process, to strip hollow or recessed parts.

(4) Refer to Paragraph 4.C. for the immersion procedure. Refer to Paragraph 4.D. for special procedures applicable to some immersion strippers. Refer to Paragraph 4.E. for the local stripping procedure, to be used when the immersion procedure cannot be used.

(5) Hydrogen embrittlement relief bake steel parts (but not those in Paragraph 4.B.(1) above) per Table 6 after you strip them, and before you plate them. Start the bake as quickly as possible and within 25 hours, after you stripped the parts. This bake is not necessary for parts stripped with Solutions 1, 9, 22, UU, XX (BAC5771 PSD 6-78), or by abrasive blast.

(6) When a stripping solution is not available, such as if the task is too small to prepare the solution, or if there are processing restrictions, you can strip the parts by one of these alternatives:

(a) Local stripping per Paragraph 4.E.

(b) Machining or grinding per SOPM 20-10-02.

(c) Abrasive cleaning per SOPM 20-30-03. MIL-P-6888 aluminum metal polish can be used to strip local areas on aluminum.

C. Immersion Stripping

(1) Remove all organic coatings per Paragraph 3..

(2) If the parts have much grease or oil on the, vapor degrease, emulsion clean, or manually solvent clean per SOPM 20-30-03.

(3) Alkaline clean per SOPM 20-30-03. This is optional when the inorganic finish is cadmium plate or chrome plate, or zinc-nickel plate; or an anodic or conversion coating on aluminum.

(4) Mask off or remove inserts of different metals, if necessary.

(5) Put the parts in the stripping solution. Use the shortest possible time necessary to remove the inorganic coating. Refer to Paragraph 4.D. below for special procedures applicable to some stripping solutions.

(6) After you remove cadmium-titanium plating, put the parts in a solution of 3-6% hydrochloric acid for 30 seconds maximum, unless the parts will be cadmium-titanium plated again.

(7) Rinse the parts in cold water. If necessary, remove unwanted matter with an air-water blast.

(8) If applicable, remove masks from the parts.

(9) For low alloy steel parts stripped in acid solution or to be immediately put into a plating bath, put the parts in a cyanide holding tank per BAC5625 or in Endox 214 per BAC5749 (Ref SOPM 20-30-03).

(10) Rinse the parts. Hot water can be used to help dry the parts.

(11) Dry all parts unless subsequent steps in your procedure will keep the parts wet.

(12) Bake parts for hydrogen embrittlement relief per Table 6, if applicable. This bake is not necessary if parts were stripped in Solutions 1, 9, 22, or UU or XX (BAC5771 PSD 6-78) or with an abrasive blast.

(13) Keep the parts clean. Apply the specified finish as quickly as possible.

Table 6: Bake Data for Stripped Parts

BASE METAL	HEAT TREATMENT	BAKE TEMPERATURE (°F)	BAKE TIME *[1]
Ferrous Alloys	Below 180 ksi	—	Not required
	180-220 ksi	350-400	3 hours minimum
	Above 220 ksi	350-400	12 hours minimum
Ferrous Alloys, Externally Threaded	Below 160 ksi	350-400	1 to 3 hours
	160-220 ksi	350-400	3 hour minimum
Ferrous Alloys, Nitrided	All Conditions	350-400	3 hour minimum
Ferrous Alloys, Carburized	All Conditions	250-300	5 to 8 hours
PH Steels	Below 180 ksi	—	Not required
	180-220 ksi	350-400	12 hours minimum
440 Series CRES, 52100	All Conditions	250-300	5 to 8 hours
300 Series CRES	All Conditions	—	Not required
Nickel based Alloys	All Conditions	—	Not required
Copper-Beryllium Alloys	All Conditions	350-400	3 hour minimum
All Other Copper Alloys	All Conditions	—	Not required

*[1] Parts must be baked within 24 hours after stripping. Unless shown differently in a plating specification, this time delay does not let you use one bake for the stripping and plating bakes during in-process plating corrections.

D. Special Procures for Some Immersion Strippers

(1) Solution 3 (Caustic-cyanide) – Make the parts anodic at 2 volts maximum.

(2) Solution 4 (Electrolytic Cleaner) – Make the parts anodic at 40-60 amperes per square foot (ASF).

(3) Solution 5 (Chromium Plate Etch) – Make the parts anodic at 25-50 ASF.

(4) Solution 6 (Sulfuric Acid - Magnesium Sulfate) – Make the parts anodic at 25-50 ASF.

(5) Solution 7 (Sulfuric Acid) – Make the parts anodic at 2 volts until no current flows.

(6) Solution 9 (Sodium Hydroxide – Sodium Carbonate) – Make the parts anodic at 4-6 volts. Or, when nickel or nickel alloy base metal is masked with a nonconductive material for local stripping, make the part anodic at 4-5 volts and examine the part frequently.

(7) Solution 21 (Tec 838-F)

(a) Put the parts in the solution for 20-30 minutes. Then rinse.

(b) Scrub off loosened coating with a fiber brush, air-water blast, Scotch-Brite sheet, or disk wet with water.

(c) Put the parts back in the solution again if necessary to remove remaining coating. Examine them each 10-15 minutes. Do not keep the parts in longer than a total of 120 minutes.

NOTE: A scrub is usually necessary to help removal of cured colored conversion coatings, and is better than to try to remove the coating by one long soak.

(8) Solution 24 (Amchem 4, 6, or 7) – Use the same procedure as for Solution 21.

(9) Solution 32 (10:1 Nitric-Hydrofluoric Acid) – Soak the parts for 30 seconds maximum. Rinse fully. Do not dry. Continue immediately with subsequent procedures. Do not let the parts dry.

(10) Solution 36 (Tri-Acid Etchant) – Use the same procedure as for Solution 21, but do not let the parts stay in longer than a total of 60 minutes.

(11) Solution 37 (Smut-Go #4) – Use the same procedure as for Solution 21.

(12) Solution 48 (Deoxidizer No. 2 or 2L) – Use the same procedure as for Solution 21.

(13) Solution 56 (Aldox V) – Use the same procedure as for Solution 21, but use a soak time of only 5-10 minutes and a maximum total time of 40 minutes (cold solution) or 40 minutes (hot solution).

(14) Solution 58 (Solutions per BAC5786) – Refer to BAC5786 for details.

(15) Solution PP (BAC5771 PSD 6-78) (Oakite Deoxidizer 231) and Solution QQ (BAC5771 PSD 6-78) (Deoxalume 2300) – Use the same procedure as for Solution 21, but use a soak time of only 5-10 minutes and a maximum total time of 30 minutes.

(16) Solution RR (BAC5771 PSD 6-78) (Cufix E) – Make parts anodic at 25-35 asf (25 asf is best). Be sure to bake the stripped parts per SOPM 20-10-02.

(17) Solution XX (BAC5771 PSD 6-78) (Sodium Carbonate-Tartaric Acid) – Make parts anodic at 4-6 volts.

(18) Solution YY (BAC5771 PSD 6-78) (Kolene Molten Salts)

(a) Abrasive clean per BAC5748 Type 2, Class 1 or 2.

(b) Dry the parts before you put them in the salt bath, or the wet parts could splash the molten salt.

(c) Put the parts in the salt bath, but for no longer than a total of 12 hours.

(d) Quench and rinse the parts in clean, cold running water for a minimum of 10 minutes.

(e) Abrasive clean, as necessary, per BAC5748 Type 2, Class 1 or 2 to remove remaining contamination.

(19) Solution ZZ (BAC5771 PSD 6-78) (GMC 800)

(a) Soak the parts for 20-30 minutes, then rinse.

(b) Abrasive clean, as necessary, per BAC5748 Type 2, Class 2 or 5 to remove the loosened coating.

(c) Do Paragraph 4.D.(19)(a) and Paragraph 4.D.(19)(b) until the remaining coating is removed. The total soak time must be less than 120 minutes.

E. Local Stripping

CAUTION: DO NOT USE THE PROCEDURE IF SOLUTIONS COULD BECOME CAUGHT INSIDE THE PARTS.

(1) Remove all organic coatings per Paragraph 3..

(2) Vapor degrease or solvent clean or manually clean per SOPM 20-30-03.

(3) Mask off areas that will not be stripped.

(4) Apply stripping solution by spray, brush, swab. Or put the parts into the solution momentarily. Immersion strippers that can be used at room temperature, and manual stripping solutions are satisfactory for local stripping. Keep the solution on the surfaces the minimum possible time necessary to remove the coating.

(5) Fully rinse with a good flow of water.

(6) Remove masks. Rinse again.

(7) Dry all parts unless subsequent procedures will keep the parts wet.

(8) Bake the parts per Table 6, if necessary.

(9) Keep the parts clean. Apply the specified finish as quickly as possible.