SECTION 18

PAINT

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NOTE

This section contains standard factory materials listing and area of application. For paint number and color, refer to Aircraft Trim Plate and Parts Catalog. In all cases determine the type of paint on the aircraft as some types of paint are not compatible. Materials may be obtained from the Cessna Supply Division.

NOTE

Do not paint pitot tube, gas caps, or aileron gap seals. Also do not paint antenna covers which were not painted at the factory.

IMRON MODIFIED URETHANE

MATERIAL	NO/TYPE	AREA OF APPLICATION
PAINT	IMRON ENAMEL	Used as corrosion proof topcoat
	IMRON 192S Activator	Catalyst for Imron Enamel
PRIMER	WASH PRIMER P60G2	Used to prime aircraft for Imron Enamel
REDUCER/ THINNER	IMRON Y8485S Reducer	Used to thin Imron Enamel
	Catalyst Reducer R7K44	Used to reduce P60G2

REQUIRED MATERIALS

MATERIAL	NO/TYPE	AREA OF APPLICATION
STRIPPER	Strypeeze Stripper	Used to strip primer overspray
CLEANER	Technical Materials Form Tech AC Cleaner	Used to clean aircraft exterior, plexiglas windows and to remove grease, bug stains, etc.
	Klad Polish	Used to clean aluminum finish
	808 Polishing Compound	Used to rub out overspray
SOLVENT	(MEK) Methyl Ethyl Ketone	Used to tack aircraft prior to topcoat
CLOTH	HEX Wiping Cloth	Used with solvent to clean aircraft exterior
FILLER	White Streak	Used to fill small dents
MASKING	Class A Solvent Proof Paper	Used to mask areas not to be painted
	Tape Y218	Used for masking small areas
	Tape Y231	Used for masking small areas

18-1. FACILITY. Painting facilities must include the ability to maintain environmental control to a minimum temperature of 65°F., and a positive pressure inside to preclude the possibility of foreign material damage. All paint equipment must be clean, and accurate measuring containers available for mixing protective coatings. Modified Urethane has a pot life of four to eight hours, depending on ambient temperature and relative humidity. Use of approved respirators while painting is a must, for personal safety. All solvent containers should be grounded to prevent static build-up. Catalyst materials are toxic, therefore, breathing fumes or allowing contact with skin can cause serious irritation. Material stock should be rotated to allow use of older materials first, because its useful life is limited. All supplies should be stored in an area where temperature is higher than 50°F., but lower than 90°F. Storage at 90°F. is allowable for no more than sixty days providing it is returned to room temperature for mixing and use.

Modified urethane paint requires a minimum of seven days to cure under normal conditions. if humidity and temperature are lower, curing time will be extended to a maximum of 14 days. During the curing period, indiscriminate use of masking tape, abrasive polishes, or cleaners can cause damage to finish. Desirable curing temperature for modified urethane is 60°F. for a resulting satisfactory finish.

18-2. CLEAN UP.

a. Inspect airplane for any surface defects, such as dents or unsatisfactory previous repairs, and correct according to Paragraph 18-9.

b. Wipe excess sealer from around windows and skin laps using TM-AC solvent. Mask windows, ABS parts, and any other areas not to be primed, with 3M tape and Class A Solvent Proof Paper. Care must be exercised to avoid cuts, scratches or gouges by metal objects to all plexiglass surfaces, because cuts and scratches may contribute to crazing and failure of plexiglass windows. Do not use Methyl Ethyl Ketone (MEK) on windows.

c. Methyl Ethyl Ketone (MEK) solvent should be used for final cleaning of airplanes prior to painting. The wiping cloths shall be contaminant and lint free HEX. Saturate cloth in the solvent and wring out so it does not drip. Wipe the airplane surface with the solvent saturated cloth in one hand, and immediately dry with a clean cloth in the other hand. It is important to wipe dry solvent before it evaporates.

When an airplane has paint or zinc chromate overspray on the exterior, stripper may be used to remove the overspray. The stripper may be applied by brush and will require a few minutes to soften the overspray. Heavy coatings may require more than one application of the stripper. Use extreme care to prevent stripper from running into faying surfaces on corrosion proofed airplanes. After surfaces of the overspray, clean the airplane with Methyl Ethyl Ketone (MEK) solvent in the prescribed manner.

WARNING

Use explosion proof containers for storing wash solvents and other flammable materials.

18-3. PRE-PRIMING.

a. Aircraft will receive Sherwin-Williams Wash Primer P60G2, DuPont Imron Enamel for overall color and stripes. Mix one part P60G2 primer with one and one half R7K44 catalyst reducer by volume. Mix only in stainless steel or lined containers. After mixing, allow thirty (30) minutes set time for primer before spraying. Pot life of mixed primer is six hours, therefore, all mixed material must be discarded at this time limit. Pot pressure for spraying should be approximately 10 ± 1 psi. Air pressure should be 40 to 50 psi at the gun. Blow loose contaminant from airplane surface with a jet of clean, dry air. Check all tapes to insure adhesion. Cover flap tracks and nose gear strut and tape wheels and shimmy dampener rod ends. ABS parts and other pre-primed parts do not receive wash primer.

WARNING

AIRCRAFT SHOULD BE GROUNDED PRIOR TO PAINTING TO PREVENT STATIC ELECTRICITY BUILD-UP AND DISCHARGE.

18-4. PRIMING.

a. Apply primer in one wet even coat. Dry film thickness to be .0003 to .0005 inches. Do not topcoat until sufficiently cured. When scratching with firm pressure of the fingernail does not penetrate the coating, the primer is cured. Primer should be topcoated within four hours after application.

18-5. PREPAINTING.

a. Thoroughly mix the required amount of Imron with Imron 192S Activator in a three to one ratio. Imron should be sprayed immediately, because there is no induction time. Imron shall be thinned with Y8485S Imron Reducer to obtain a spraying viscosity of 18 to 22 seconds on a No. 2 Zahn Cup. Viscosity should be checked after four hours, and adjusted if necessary.

b. When applying modified urethane finishes, the painter should wear an approved respirator, which has a dust filter and organic vapor cartridge, or an air supplied respirator. All modified urethane finishes contain some isocyanate, which may cause irritation to the respiratory tract or an allergic reaction. Individuals may become sensitized to isocyanates.

c. The pot life of the mixture is approximately 6-8 hours at 75°F. Pot pressure should be approximately 12 psi during application. Air pressure at the gun should be 40 to 50 psi.

d. Scuff sand the primer only where runs or dirt particles are evident. Minor roughness or grit may be removed by rubbing the surface with brown Kraft paper which has been thoroughly wrinkled. Unmask ABS and other preprimed parts and check tapes. Clean surface with a jet of low pressure-dry air.

18-6. PAINTING ALL-OVER WHITE OR COLOR.

a. Complete painting of the plane should be done with 2 or 3 wet, even coats. Dry coats will not reflow, and will leave a grainy appearance.

b. Allow 5 minute period for the finish to flash off before moving aircraft to the oven.

c. Move to the force dry oven and dry for approximately 1 1/2 hours at 120°F to 140°F.

d. Dry film thickness of the overall color should be between 1.3 and 2.0 mils. Films in excess of 3.0 mils are not desirable.

18-7. MASKING FOR STRIPES.

a. Remove airplane from the oven. Allow airplane to cool to room temperature before masking.

b. Mask stripe area using 3M Tape Y231 or 3M Tape Y218 and Class A solvent proof paper. Double tape all skin laps to prevent blow by.

c. Airplanes which will have a stripe only configuration shall be masked, cleaned, and primed, in stripe area only.

d. If the base coat is not over 72 hours old, the stripe area does not require sanding. If sanding is necessary because of age or to remove surface defects, use #400 or #600 sandpaper. Course paper will leave sand marks which will decrease gloss and depth of gloss of the finish. The use of power sanders should be held to a minimum; but if used, exercise care to preclude sanding through the white base coat. Wipe surface to be striped with a tack cloth and check all tapes.

e. Stripe colors to be Imron Enamel, mixed as directed in paragraph 18-5.

f. Painting of the stripe should be done with 2 or 3 wet-even coats. Dry coats will not reflow, and will leave a grainy appearance. Stripes may be force dried or air dried. Film thickness of a stripe is approximtely 1.0 mil.

g. Do not remove masking tape and paper until the paint has dried to a "dry to touch" condition. Care should be exercised in removal of the masking to prevent damage to the finish.

h. Modified urethane finishes are sensitive to moisture, therefore, should be stored out of rain until cured.

18-8. TOUCH-UP.

When necessary to touch up or refinish an area, the defect should be sanded with #400 and followed by #600 sandpaper. Avoid, if possible, sanding through the primer. If the primer is penetrated over an area 1/2 inch square or larger, repriming is necessary. Avoid spraying primer on the adjacent paint as much as possible. Since urethane finishes cannot be "spotted in", repairs should be in sections extending to skin tape or stripe lines.

a. Dry overspray and rough areas may be compounded out with DuPont #808 rubbing compound.
b. Grease, bug stains, etc., may be removed from painted surfaces with DX440 Wax and Grease Remover or Imperial Cleaner. Klad Polish may be used on bare aluminum to remove stains, oxides, etc.
c. Rework areas, where paint or primer removal is required, may be stripped with Strypeeze Paint Remover. All traces of stripper must be removed before refinishing.

18-9. REPAIR OF DENTS.

a. To repair dents, use White Streak Filler or equivalent. Mix White Streak in the correct proportion as recommended by the manufacturer.
b. Do not apply White Streak Filler over paint. All paint shall be removed in the repair area and the aluminum surface sanded lightly to increase adhesion. Apply the White Streak to a level slightly above the surrounding skin. After drying for 10-15 minutes. sand the filler flush with the skin surface, using care to feather the edges.

18-10. REFINISHING ENGINE MOUNTS. After completing a repair as directed in Section 17, refinish with P/N CES1054-215, Heat Resistant Enamel, Black. Degrease and scuff sand or grit blast entire area to bare metal. Spray enamel to a dry film thickness of 0.001" to 0.0013." and cure at 250°F for 15 minutes. Part can be handled as soon as it cools to touch.