

# 4C4B (4-Coat4-Bake) Paint

## Refinishing Procedures

### 1. Featheredging (polishing damaged areas)

- 1. Damage to aluminum alloy base
- Sand the damaged area flat and smooth with a double action sander and #60 or #80 disc paper.
- Sand the boundary between the metal surface and undercoat with a double action sander and #180 or #280 disc paper. Try to sand a larger area than the damage.

#### NOTE:

- Make sure there is not height difference between the metal surface and undercoat.
- If double action sander is not available, use a rubber block and wrap sandpaper around it to sand the surface.

**⚠ WARNING** To prevent eye injury, wear goggles or safety glasses whenever sanding, cutting or grinding.

- 2. Damage to Undercoat
  - Intermediate coat 1
  - Intermediate coat 2
  - Top coat
  - Paint coat on replacement parts

Sand the damaged surface flat and smooth with a double action sander and #280 or #320 paper.

#### NOTE:

- If double action sander is not available, use a rubber pad and wet or dry sand the surface with #280, #320, #400 or #600 sandpaper.
- After sanding, check that the surface is flat and smooth.
- Perform the operations in Item 1-1 above for the areas where parts are welded to the body.

### 2. Preparation of aluminum alloy base surface

Remove all corrosion from the damaged area using #180 or #280 paper.

### 3. Air Blowing/Degreasing

Air blow the sanded area, then degrease with a wax and grease remover (for USA usage-DuPont 38125 Enamel Reducer).

#### ⚠ WARNING

- Do not use high air pressure: use only an approved, 210 kPa (2.1 kg/cm<sup>2</sup>, 30 psi) air nozzle.
- Wear goggles or safety glasses to prevent eye injury.

### 4. Treatment of aluminum alloy base

- Brush or spray a solution of chrome phosphate or washer primer to the exposed aluminum alloy base.
- Use the following materials to treat the aluminum alloy base:
  - KAR washer primer (Kansai Paint) (for usage-DuPont)
  - 110 active primer Agent (Nippon Paint)
  - G113 treatment (Isam Paint) (for USA usage-DuPont)

#### NOTE:

- Follow the manufacturer's instructions.
- Treat the aluminum alloy base surface, as much as possible, to provide a better bonding surface for the subsequent paint.

### 5. Application of Filler Drying Sanding

- Small cracks or pinholes in the aluminum alloy base should be repaired with a filler and sanded flat and smooth.

#### NOTE:

- Mix the filler to the hardener in the correct ratio.
- Follow the filler manufacturer's instructions.

#### ⚠ WARNING

**Body parts being dried with an industrial dryer can get hot enough to cause injury. Do not touch parts being dried.**

- Allow the filler to air dry for about 5-6 minutes, then force dry with an infrared lamp.

NOTE: Keep a 40-50 cm (16—20 in) from the filler while drying.

- Stop drying the filler if a white mark appears when the surface is scratched with your nail. Wet or dry sand the surface flat and smooth with a #280 or #320 paper.

## 6. Air Blowing/Degreasing

Air blow the surface to be repaired, then degrease with a wax and grease remover (for USA usage-DuPont 38125 Enamel Reducer).

NOTE: Also clean and degrease the surfaces where masking tape will be attached.

## 7. Masking

Mask the areas surrounding the damage to prevent overspray from the primer surfacer.

NOTE: Use masking tape and paper to cover the undamaged areas.

## 8. Application of Undercoating (Primer Surfacer)/Drying

### ⚠ WARNING

- Ventilate when spraying paint. Most paint contains substances that are harmful if inhaled or swallowed. Read the paint label before opening paint container.
- Avoid contact with skin. Wear an approved respirator, gloves, eye protection and appropriate clothing when painting.
- Paint is flammable. Store in a safe place, and keep it away from sparks, flames or cigarettes.
- Spray the primer surfacer over the filler and surface (use epoxy or urethane 2-part primer surfacer).  
Spray : 2-3 coats.
- Use the following materials:
  - 615S Primer Surfacer (DuPont)
  - Primer Surfacer EP (Akzo)
  - NPS735 Urethane Primer Surfacer (R-M)
- Let the primer surfacer air dry for 5-10 minutes, then force dry with a infrared lamp.

NOTE: Keep the dryer 40-50 cm (16~20 in) from the surface.

## 9. Application of Polishing Undercoat

- Remove the masking paper and tape.
- Check that the undercoat is dried thoroughly, then dry or wet sand the surface with a #280 or #320 paper.

NOTE:

- Use a rubber block and sand flat and smooth.
- Sand the entire surface to be refinished.

## 10. Air Blowing/Degreasing

### ⚠ WARNING

- Do not use high air pressure: use only an approved, 210 kPa (2.1 kg/cm<sup>2</sup>, 30 psi) air nozzle.
- Wear goggles or safety glasses to prevent eye injury.

Air blow all the surfaces, then degrease with a wax and grease remover (for USA usage-DuPont 38125 Enamel Reducer).

NOTE: Also degrease the surfaces where masking tape will be attached.

## 11. Masking

Mask the undamaged areas surrounding the damage to prevent overspraying of primer surfacer (intermediate coat).

NOTE: Use masking tape and paper to mask the body. A vinyl cover may also be used to effectively mask the body.

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# 4C4B (4-Coat4-Bake) Paint

## Refinishing Procedures (cont'd)

### 12. Application of Intermediate Coat 1 (Primer surfacer is used for this purpose) spraying/drying

#### ⚠ WARNING

- Ventilate when spraying paint. Most paint contains substances that are harmful if inhaled or swallowed. Read the paint label before opening paint container.
- Avoid contact with skin. Wear an approved respirator, gloves, eye protection and appropriate clothing when painting.
- Paint is flammable. Store in a safe place, and keep it away from sparks, flames or cigarettes.
- Spray either 2-part epoxy or urethane primer surfacer to polished primed surface as intermediate coat.
- Let the paint coat air dry for 5-10 minutes, then force dry with an infrared lamp.

NOTE: Keep the dryer 40-50 cm (16-20 in) from the surface.

For replacement parts:

Spray intermediate coat 2 on over the surface.

NOTE:

- For the back faces, you may start with Step 16 "Application of Intermediate Coat 2."
- Top coat enamel is used for this purpose

### 13. Polishing of Intermediate Coat 1

Check that the undercoat is dried thoroughly, then dry or wet sand the surface with a #400 or #600 paper.

NOTE: Use a rubber block and sand flat and smooth, covering entire surface.

### 14. Air Blowing/Degreasing

#### ⚠ WARNING

- Do not use high air pressure; use only an approved, 210kPa (2.1 kg/cm<sup>2</sup>, 30 psi) air nozzle.
- Wear goggles or safety glasses to prevent eye injury.

Air blow all the surface, then degrease with a wax and grease remover (for USA usage-DuPont 38125 Enamel Reducer).

### 15. Masking

Check the masking paper (Step 11) for tears or fouling, and repair or reinforce as necessary.

### 16. Application of Intermediate Coat 2 (same color as enamel) top coat spraying/drying

#### ⚠ WARNING

- Ventilate when spraying paint. Most paint contains substances that are harmful if inhaled or swallowed. Read the paint label before opening paint container.
- Avoid contact with skin. Wear an approved respirator, gloves, eye protection and appropriate clothing when painting.
- Paint is flammable. Store in a safe place, and keep it away from sparks, flames or cigarettes.
- Use the same color paint as the top coat, and spray it over the surface until the intermediate coat (primer surfacer) is fully covered.
- Spray the paint slightly thicker than normal to allow for loss during subsequent polishing.
- Super ponacle II (R-M)
- Super Centari (Du Pont)
- Auto cryl (Akzo)

### 17. Polishing of Intermediate Coat 2

- Check that the paint coat has been dried thoroughly, then dry or wet sand the surface with a #600, #800, or #1000 paper.

NOTE: Use a rubber block and sand flat and smooth, being careful not to expose the intermediate coat 1.

#### Polishing of Top Coat (if damaged):

- Use the same technique described above.

#### ⚠ WARNING

- Do not use high air pressure; use only an approved, 210kPa (2.1 kg/cm<sup>2</sup>, 30 psi) air nozzle.
- Wear goggles or safety glasses to prevent eye injury.

## 18. Air Blowing/Degreasing

- Air blow the entire surface, then degrease with a wax and grease remover (for USA usage-DuPont 38125 Enamel Reducer).
- For shading or spot painting, polish the area with a polishing compound. Sand with a #2000 paper to give a better bonding surface for the subsequent paint.

## 19. Masking

- Remove all existing masking papers, then mask with new papers.
- Use a heat resistant type masking tape (SCOTCH TAPE) where tape is attached directly to the body.
- Use brown paper or masking roll paper to cover.

### NOTE:

- Mask the area surrounding the damage sufficiently to prevent overspray. It is also a good practice to use a vinyl cover to protect other areas.
- Protect resin parts with aluminum foil under the brown paper or masking paper to prevent damage to due to heat during baking.

## 20. Application of Top Coat Spraying/drying

NOTE: Black painting of roof panel.

- Prior to putting the car in the painting booth, thoroughly clean the interior and spray water over the floor. Be careful about air-blow dust and dirt.

### WARNING

- **Do not use high air pressure; use only an approved, 210kPa (2.1 kg/cm<sup>2</sup>, 30 psi) air nozzle.**
- **Wear goggles or safety glasses to prevent eye injury.**
- Air dry and degrease the surface before spraying the paint. Also clean the surface with a tack cloth.

### WARNING

- **Ventilate when spraying paint. Most paint contains substances that are harmful if inhaled or swallowed. Read the paint label before opening paint container.**
- **Avoid contact with skin. Wear an approved respirator, gloves, eye protection and appropriate clothing when painting.**
- **Paint is flammable. Store in a safe place, and keep it away from sparks, flames or cigarettes.**
- Spray color matched top coat over the prepared surface. Apply 2-3 coats in two directions until the intermediate coat 2 is fully covered.

NOTE: For application of the top coat, refer to Step 1 6 "Application of Intermediate Coat 2."

Solid color: Color enamel + color clear coat

Metallic color: Metallic enamel + clear coat

Pearl color: Pearl enamel + clear coat

### WARNING

**Body parts being dried with an industrial dryer can get hot enough to cause injury. Do not touch parts being dried.**

- After spraying, allow the paint to settle for about 10 minutes, then force dry with an infrared lamp.

NOTE: Follow the paint manufacturer's instructions.

## 21. Polishing/buffing

- Let the paint dry gradually, then polish the surface carefully using a polishing compound and sponge buff.
- To remove lint or dirt, wet sand the surface with #2000 paper or finer first, then polish with compound.

NOTE: Polish all roughness caused by sanding thoroughly. To do this, first polish with very fine compound, then with ultra fine compound.

- After polishing, remove the masking paper and tape and wash the entire vehicle thoroughly.