6

Paints

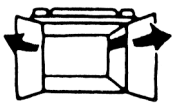
General Safety Precaution

- Most paints contain substances that are harmful if inhaled or swallowed.
- The fallowing precautions are important items in order to maintain safe painting work.

1. Wear an approved respirator, eye protection when painting.

2. Wear approved gloves, appropriate clothing when painting. Avoid contact with skin.

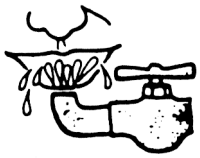
3. Spray paint only in a well ventilated area.



4. Read the paint label before opening the container.
Cover spilled paint with sand, or wipe it up at once.

5. If paint gets in your mouth or your skin, rinse or wash thoroughly with water. If paint gets in your eyes, flush with water and get prompt medical attention.

6. After the painting work is finished, wash face and gargle with water.



7. Paint is flammable. Store it in a safe place, and keep it away from sparks, flames, or cigarette.

Body Paint

General

The 3-coat·3-bake (3C·3B) paint finishes give the CR-V a deep gloss and stunning finish. This manual provides information on paint defect, repair, and refinishing. Throughout, the objective is to explain in a simple yet comprehensive manner the basic items you should know about paint repairs. Select the correct material for the defect and repaint or refinish in the correct manner as described in this manual.

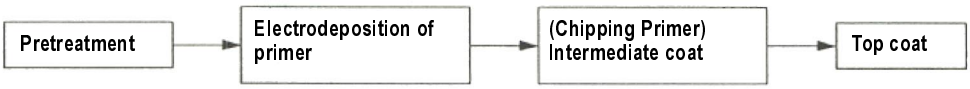
WARNING

- Most paints contain substances that are harmful if inhaled or swallowed. Read the paint label before opening the container.
- Spray paint only in a well ventilated area.
- Cover spilled paint with sand, or wipe it up at once.
- Wear an approved respirator, gloves, eye protection, and appropriate clothing when painting. Avoid contact with skin.
- If paint gets in your mouth or on your skin, rinse or wash thoroughly with water. If paint gets in your eyes, flush with water and get prompt medical attention.
- Paint is flammable. Store it in a safe place, and keep it away from sparks, flames, or cigarettes.

Basic Rules for Repairing a Paint Finish

To repair paint damage, always use the 2-part acylic urethane paints designated; polish and bake each of the three coats, as in production, to maintain the original film thickness, and to assure the same quality as the original finish.

Outline of Factory Painting Process:



Features in Each Work Process

1. Pretreatment and Electrodeposition

   In the pretreatment process, the entire body is degreased, cleaned, and coated with zinc phosphate by dipping. After the body has been cleaned with pure water, it is placed in an electrolytic bath of soluble primer (Cationic Electrodeposition).
   This produces a thorough corrosion inhibiting coating on the inner surface and corners of the body, pillars, sills, and panel joints.
   Chipping primer is then applied to the most susceptibles areas (see page 5-9).

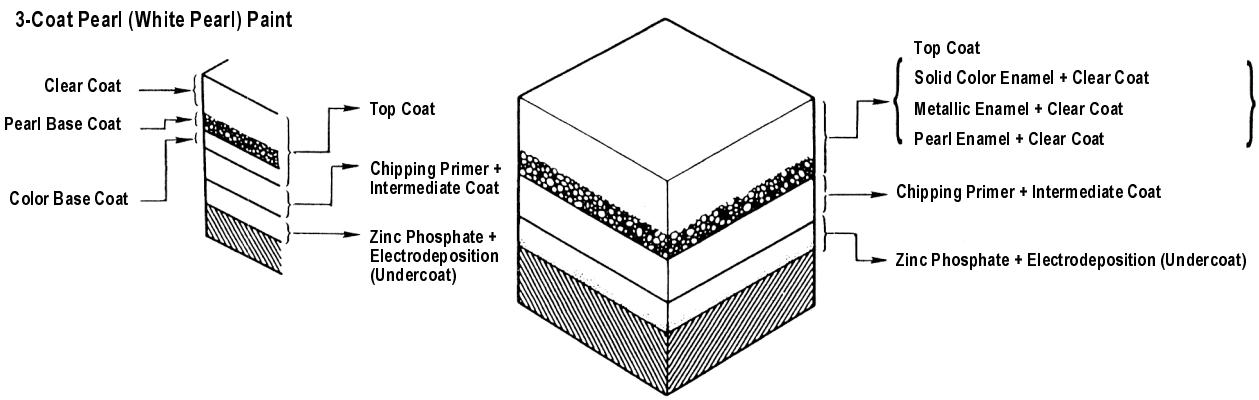
2. Intermediate coat

   The intermediate coat is applied to the prepared surface for further protection against damage.

3. Top Coat

   Enamel paint and either polyester or acrylic resin paint are used in the top coat for higher solidity, smoothness, brightness, and weather resistance.

Sectional View of Paint Coats:



Body Paint (cont'd)

Refinishing Processes

Paint damage can appear in any form. Before making a repair, check the damaged area carefully, and determine the best procedure for repairing the damage. The following shows you refinishing methods for various types of paint damage or defects.

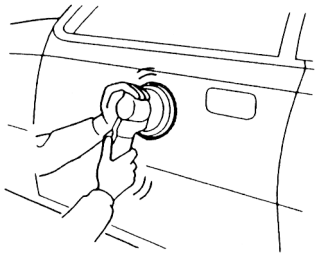
Processes	Procedures	Damage			Replacement Parts	
		To metal surface	To undercoat / intermediate coats	To top coat	Welded part	Single part
1. Preprocessing of painting	• Featheredging • Preparation of metal surface • Air blowing / degreasing	X			X	
2. Treatment of Metal Surface	• Filling / drying..... ..... (1) • Polishing • Air blowing / decreasing	X			X	
3. Undercoating	• Masking • Spraying primer surfacer • Drying • Polishing • Air blowing / degreasing	X	X		X	
4. Intermediate Coating	• Masking • Spraying top coat enamel or Spraying color base (3-coat pearl paint) • Drying • Polishing • Air blowing / degreasing	X	X		X	X
5. Top Coating	• Masking • Spraying top coat ename / clear coat or Spraying color base + pearl base + top coat clear (3-coat pearl paint) • Drying • Polishing / buffing	X	X	X	X	X

(1) = Indicates the best method depending on the degree of damage.

Preprocessing of Painting

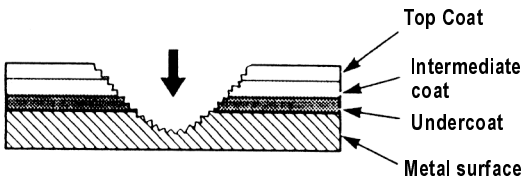
1. Featheredging

NOTE:
- The paint film damaged area should be sanded flat and smooth.
- If this is not done correctly the end results will not be acceptable.

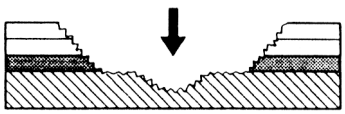


Damage to metal surface:
- Sand the damaged area flat and smooth.

Use the disc sander and #60~#80 disc paper.

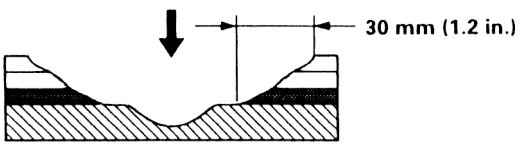


Use the double action sander and #60~#80 disc paper.



- Sand the area larger than the damaged area.

Use the double action sander and #180~#240 disc paper.

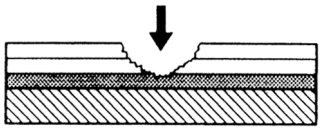


- If a double action sander is not available, use a rubber pad and wet or dry sandpaper.

Use the flexible block and #280, #340, #400, #600 sandpaper.

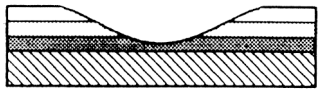
Damage to undercoat, intermediate coat and top coat:
- Sand the damage area flat and smooth

Use the double action sander and #180~#240~#320 disc paper.



2. Preparation of metal surface
- Remove all corrosion from the damaged area.

Use a product that removes corrosion.



3. Air blowing / degreasing

Use alcohol, wax, and grease remover.

Body Paint (cont'd)

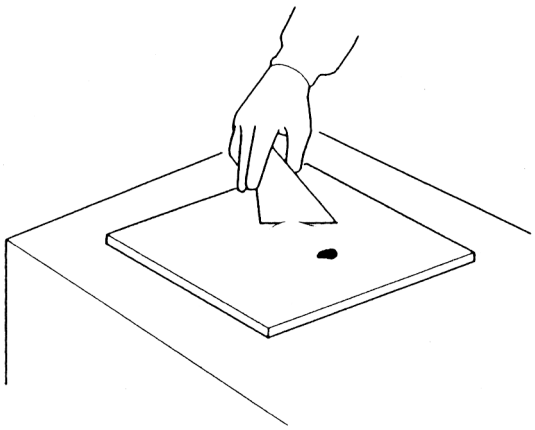
Treatment of Metal Surface

1. Filling / drying

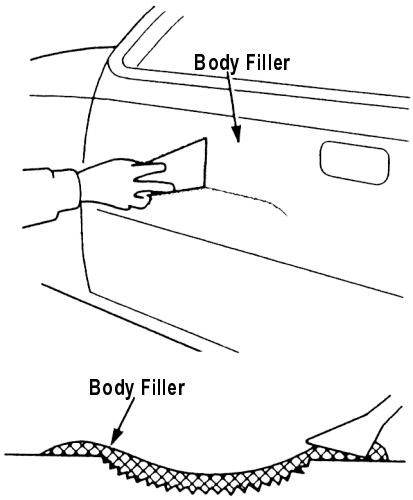
Small cracks or pinholes in the sheet metal should be repaired with a body filler and sanded flat and smooth.

- Use the 2-part polyester resin putty.
- Mix the putty with the hardener in the correct ratio.
- Follow the body filler manufacturer's instructions.

- Mix the body filler and hardener quickly.



- Apply the body filler in several thin coats, without air bubbles.
- Do not try to cover the surface with one heavy coat.
- Apply the body filler over the damaged area with a putty knife using light pressure.



- After applying the body filler, allow 5 to 6 minutes of normal drying time, then force dry it with infrared lamps or other industrial dryer at 122°F (0°C)~140°F (60°C).

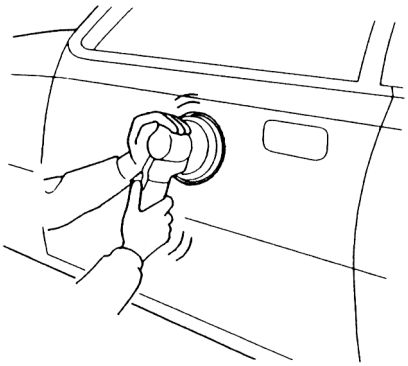
NOTE: Follow the body filler manufacturer's instructions for drying time.

2. Polishing

The body filler is dry a white mark appears when the surface is scratched with your finger nail.

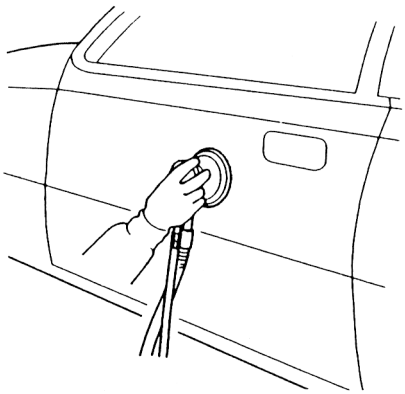
1 Throughly sand the body filler surface

Use the double action sander and #80~#120 disc paper



2 Sand the surface evenly, particularly the area that was filled.

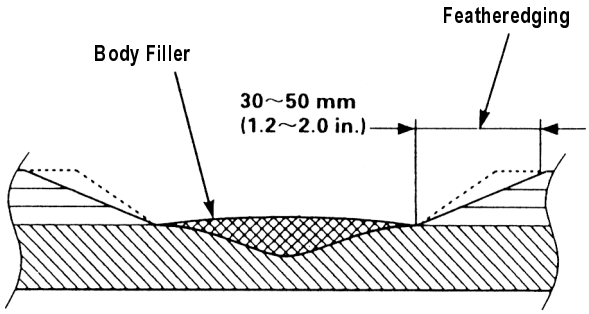
Use the flexible block and #120~#180 sandpaper.



3 Featheredge the paint coat.

Sand the body filler surface until the proper dimension are met.

Use the double action sander and #240~#320~#400 disc papers.



4. Air blowing / degreasing

Use the alcohol, wax and grease remover.

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

Undercoating

1. Masking

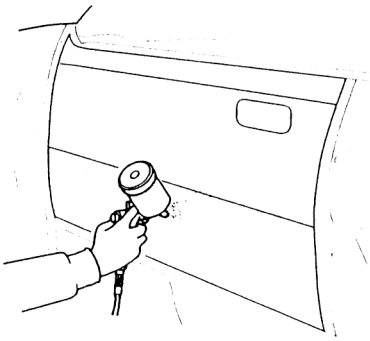
Mask the area surrounding the damage to prevent over spray from the primer surfacer.

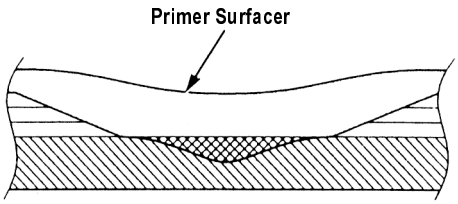
Use the masking tape and paper.

2. Spraying the primer surfacer

- Spray the primer surfacer over a wider area than the body filler and the exposed surface of the paint film.
- Spray 2 to 3 coats to get 30 microns of thickness.

• Use the 2-part urethane primer surfacer and a spray gun. • Mix the primer surfacer with the additive and solvent, and in the correct ratio. • Follow the primer surfacer manufacturer's instructions.





3. Drying

After spraying primer surfacer, allow for 5 to 10 minutes of normal drying time, then force dry it with infrared lamps or other industriel dryer.

NOTE: Follow the primer surfacer manufacturer's instruction for drying time.

(cont'd)

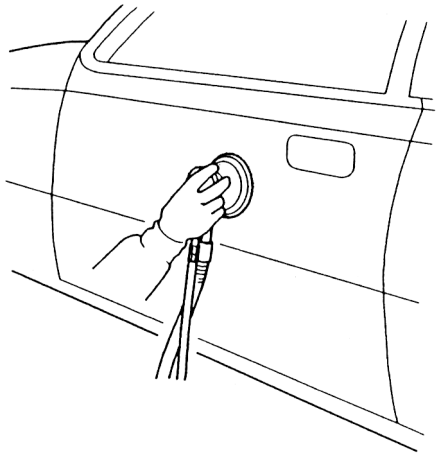
Body Paint (cont'd)

Undercoating (cont'd)

4. Polishing

Check that the primer surfacer has dried thoroughly, then sand the primer surfacer.

Use the double action sander and #320~#400~#600 disc papers.



5. Air blowing / degreasing

Use the alcohol, wax and grease remover.

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

Intermediate Coating

1. Masking

Mask the area surrounding the damage to prevent over spray from the intermediate coat.

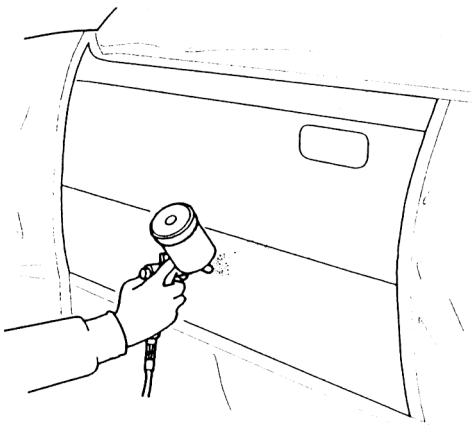
Use masking tape and paper.

2. Spraying top coat enamel

Spray the top coat enamel over the surface until the primer surfacer is fully covered.

NOTE: For the 3-coat pearl paint, spray the color base over the surface.

• Use the 2-part polyester urethane top coat enamel and a spray gun. • Mix the top coat enamel with the additive and solvent, and in the correct ratio. • Follow the top coat manufacturer's instructions.



3. Drying

After spraying top coat enamel or color base (3-coat pearl paint), allow for 5 to 10 minutes of normal drying time, then force dry it with infrared lamps or other industrial dryer.

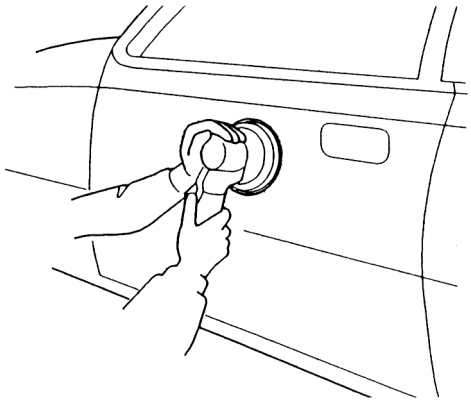
NOTE: Follow the top coat manufacturer's instruction for drying time.

4. Polishing

Check that the top coat enamel has dried thoroughly, then sand the top coat enamel.

Use the double action sander and #600~#800 disc papers.

NOTE: Be careful not to polish down to the primer surfacer.



When the painting repair (gradation) is almost done, polish the area that will be top coated.

Use the #2000 sandpaper and compound.

5. Air blowing / degreasing

Use alcohol, wax, and grease remover.

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

NOTE: See page 6-11 and page 6-12 for the painting repair (gradation) of the 3-coat pearl paint.

Top Coating

1. Masking

Mask the area surrounding the damage to prevent over spray from the top coat.

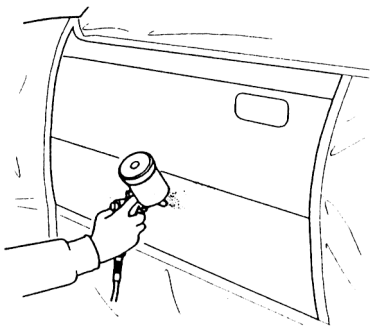
Use masking tape and paper.

2. Spraying top coat enamel / clear coat

Spray 2 to 3 double coat until the intermediate coat is fully covered.

NOTE: See page 6-11 and page 6-12 for the painting repair (gradation) of the 3-coat pearl paint.

• Use the 2-part polyester urethane top coat enamel and spray gun. • Mix the top coat enamel with the additive and solvent, and in the correct ratio. • Follow the top coat manufacturer's instructions.



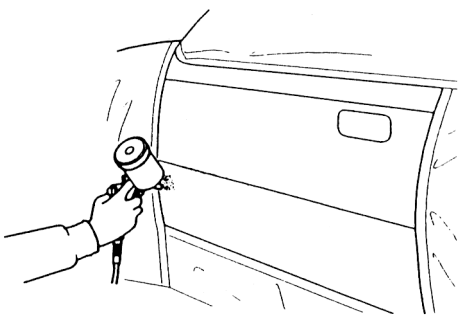
Drying

After spraying the top coat enamel, allow it to air dry, then force dry it with infrared lamps or other industrial dryer.

NOTE: Follow the top coat manufacturer's instructions for drying time.

Spraying clear coat

Spray the top coat clear evenly over the surface of the top coat enamel. Do not try to cover the surface with one heavy coat.



(cont'd)

Body Paint (cont'd)

Top Coating (cont'd)

Drying

After spraying the clear coat, allow it to dry for 10 minutes, then force dry it with infrared lamps or other industrial dryer.

NOTE: Follow the top coat manufacturer's instructions for drying times.

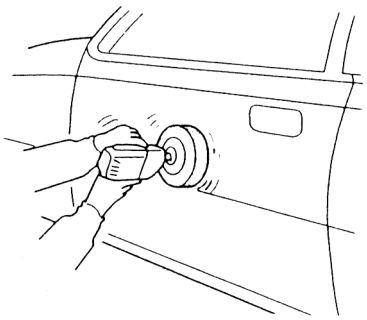
3. Polishing / buffing

Check that the clear coat has dried thoroughly.

The clear coat is cooled.

1 Any adhesion or roughness on the top coat should be wet sanded and repaired.

Use the #1200~#2000 and crystal block.



2 Polish any roughness caused by sanding.

NOTE: Clean the top coat surface frequently so you don't damage the clear coat with the polishing particles.

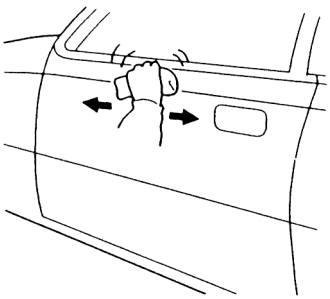
Use a buffing towel, buffing wool, and compound.

3 Finishes up with buffing.

NOTE:

- Do not use a power buffer.
- Don't polish too much; use light hand pressure.

Use the buffing sponge, fine compound, very fine compound, then ultra fine compound.



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

3-coat Pearl (White Pearl) Paint

Coating Procedures

Refer to page 6-5, page 6-6, page 6-7 and page 6-8 for the previous procedures from the intermediate coat.

1. Spraying color base.

Spray the color-matched color base over the surface until the primer surface is fully covered.

- Use the acrylic urethane color base.
- On pearl paint: the color of the color base will determine the final color of the paint repair.

2. Drying

After spraying color base, allow for 5 to 10 minutes of normal drying time, then force dry it with infrared lamps or other industrial dryer.

NOTE: Follow the color base manufacturer's instruction for drying time.

3. Polishing

Check that the color base has dried thoroughly, then dry or wet sand the color base.

Use the flexible block and #600, #800, #1000 sandpapers.

NOTE: Be careful not to polish down to the primer surfacer.

When the painting repair (gradation) is almost done, polish the area that will be top coated.

Use the #2000 sandpaper and compound.

4. Air blowing / degreasing

Use alcohol, wax, and grease remover.

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

5. Masking

- Remove all existing masking tape, then mask with new ones.
- 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.

- Use a heat-resistant masking tape where it is attached directly to body.
- Use brown paper or masking roll paper.

NOTE: Protect the plastic parts with aluminum foil under the brown paper or masking paper to prevent damage to due to heat during baking.

6. Air blowing

Thoroughly clean the interior, and spray water over the floor. Be careful about blowing dust and dirt.

Use the alcohol, wax, and tack cloth.

7. Spraying color base/pearl base/clear coat spray the color-matched color base over the prepared surface.

Use the acrylic urethane color base and a spray gun.

Spray the color-matched pearl base 2~3 double coat over the surface until the color base is fully covered.

Use the acrylic urethane pearl base and a spray gun.

Spraying clear coat

Spray the top coat clear evenly over the surface of the pearl base. Do not try to cover the surface with one heavy coat.

8. Drying

After spraying the clear coat, allow it to dry for 10 minutes, then force dry it with infrared lamps or other industrial dryer.

NOTE: Follow the paint manufacturer's instructions for drying times.

(cont'd)

3-coat Pearl (White Pearl) Paint (cont'd)

Coating Procedures (cont'd)

9. Polishing / buffing

Check the clear coat has dried thoroughly.

The clear coat is cooled.

1 Any adhesion or roughness on the top coat Should be wet sand and repaired.

Use the #2000 and crystal block.

2 Polish all roughness caused by sanding.

NOTE : Clear the top coat surface frequently so you don't damage the clear coat with the polishing particles.

Use a buffing towel, buffing wool, and compound.

3 Finishes up with buffing.

NOTE:

- Do not use a power buffer.
- Don't polish too much; use light hand pressure.

Use the buffing sponge, fine compound, very fine compound, then Wtra fine compound

4 After buffing, remove the masking paper and tape, and thoroughly wash the entire vehicle.

Painting Repair (Gradation)

Repair of 3-coat pearl paint coat requires different procedure from that of metallic paint coats.

Determination of color:

1. Sand the damaged paint coat until the intermediate coat appears.

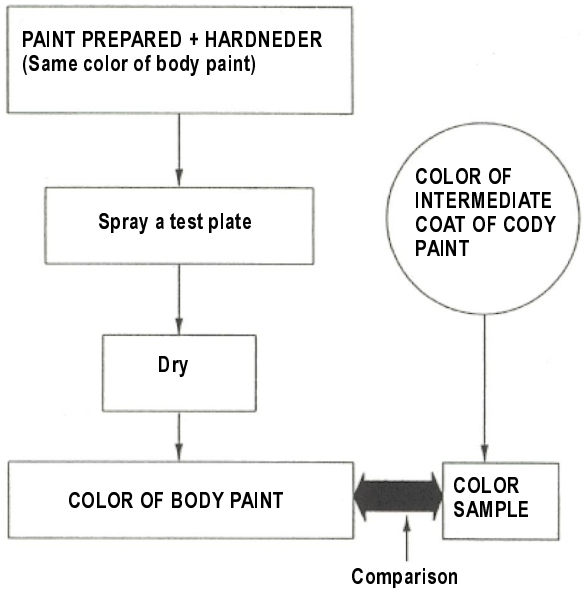
Use the #800~#1000 sandpaper.

2. Polish the exposed paint coat, then compare is color with the color sample provided.

Use the ultra fine compound.

3. Prepare a paint based on the color sample selected according to the instructions.

4. After preparing, check that the paint prepared matches the color sample selected in step 2 above.



NOTE : On pearl paint, the color of the intermediate coat will determine the final color of the paint repair.

Mixing (Reference):

The prepared paint should be mixed with thinner and hardner as follows.

Following example: 2-part polyester urethane paint

PAINT Ⓐ (Color base)

Thinner with hardner function	100 ~ 130 %
Prepared paint	100

PAINT Ⓑ (Pearl base)

Thinner with hardner function	100 ~ 130 %
Top coat (pearl base)	100

The above paints and materials or their equivalents should be used.

NOTE: Follow the paint manufacturer's instructions when mixing the paint and other materials.

Refinishing procedures:

⚠ 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.

1. To prepare the first coat (paint Ⓒ) add a 1 part of paint Ⓐ to 1 part of paint Ⓑ and stir well.

PAINT Ⓒ =	PAINT Ⓐ		PAINT Ⓑ
	1	:	1

2. Pour the mixture through a filter, then spray 2-3 light coats over the damaged surface.

   NOTE: Spray the mixture until the intermediate coat is thoroughly covered.

3. Prepare paint Ⓓ for gradation by mixing 1 part of paint Ⓒ with 19 parts of the paint Ⓑ. Stir the mixture well.

PAINT Ⓓ =	PAINT Ⓒ		PAINT Ⓑ
	1	:	19

4. Pour the mixture through a filter, then spray 2-3 light coats the filtered mixture over paint Ⓒ, starting at the center, then working toward the edge.

   NOTE:

   - Check that the painted coat matches the color of the body paint while spraying.
   - Application of the mixture will determine the final color of the paint repair. Do not spray the mixture excessively as this may alter the final color of the repair.

(cont'd)

3-coat Pearl (White Pearl) Paint (cont’d)

Painting Repair (Gradation) (cont'd)

5. Prepare paint Ⓔ of top coat by mixing 1 part of the pearl base with 1 part of the paint Ⓑ. Stir the mixture well.

PAINT Ⓔ =

Pearl base		PAINT Ⓑ
1	:	19

6. Apply 1-2 light coats of paint Ⓑ over the repaired surface.

7. For the final top coat, add 0 ~ 20% thinner to a 5 : 1 mixture of the clear paint and hardener.

CLEAR PAINT		HARDENER
5	:	1

\+ THINNER 0 ~ 20%

8. Spray 2-3 light final top coats over the damaged area.

9. Apply the clear coat gradation around the final top coat.

Plastic Parts Paint

Features of Plastic Material

- Check each of the plastic parts of solvent resistance and heat resistance temperatures before you do any repair work.
- Select the repair material according to materials of the plastic parts.

Standard Symbol	Name	Heat Resistance Temperature °C (°F)	Solvent Resistance	Note
AAS	Acrylonigtrile acrylic styrene	80 (176)	A small amount of alcohol is acceptable for a short time. (Degreasing)	An organic solvent such as gasoline is not recommended. An aroma product is not recommended.
ABS	Acrylonitrile butadiene styrene	80 (176)	A small amount of alcohol is acceptable for a short time. (Degreasing)	An organic solvent such as gasoline is not recommended. An aroma product is not recommended.
AES	Acrylonitrile ethylene styrene	80 (176)	A small amount of alcohol is acceptable for a short time. (Degreasing)	An organic solvent such as gasoline is not recommended. An aroma product is not recommended.
A/EPDM/S	Acrylonitrile / ethylene propylene diene rubber / styrene	80 (176)	A small amount of alcohol is acceptable for a short time. (Degreasing)	An organic solvent such as gasoline is not recommended. An aroma product is not recommended.
ASA	Acrylonitrile styrene acrylate	80 (176)	A small amount of alcohol is acceptable for a short time. (Degreasing)	An organic solvent such as gasoline is not recommended. An aroma product is not recommended.
CAB	Cellulose acetate butylate	80 (176)	A small amount of alcohol is acceptable for a short time. (Degreasing)	An organic solvent such as gasoline is not recommended. An aroma product is not recommended.
E/VAC	Ethylene-vinyl acetate	80 (176)	A small amount of alcohol and gasoline are acceptable for a short time. (Degreasing)	Soaking with an organic solvent such as gasoline and alcohol is not recommended.
PA	Polyamide plastics	80 (176)	Alcohol and gasoline are acceptable.	Battery acid (sulfuric acid) is not recommended.
PBT	Polybutylene terephtalate	160 (320)	Alcohol and gasoline are acceptable.	Solvent is not recommended.
PC	Polycarbonate	120 (248)	A small amount of alcohol is acceptable for a short time.	Brake fluid, and wax and grease remover not recommended
PE	Polyethylene	80 (176)	Alcohol and gasoline are acceptable.	Solvent is not recommended.
PF	Phenol form aldehyde	80 (176)	A small amount of alcohol is acceptable for a short time. (Degreasing)	Soaking with an organic solvent such as gasoline and alcohol is not recommended.
PMMA	Polymethyl methacrylate	80 (176)	A small amount of alcohol is acceptable for a short time. (Degreasing)	Soaking with an organic solvent such as gasoline and alcohol is not recommended. Wash remover off with water thoroughly.
POM	Polyoxymethylene polyacetal	100 (212)	Alcohol and gasoline are acceptable.	Solvent is not recommended.

(cont'd)

Plastic Parts Paint (cont'd)

Features of Plastic Material (cont'd)

Standard Symbol	Name	Heat Resistance Temperature °C (°F)	Solvent Resistance	Note
PP	Polypropylene	80 (176)	Alcohol and gasoline are acceptable.	Solvent is not recommended.
PPO (PPE)	Polyphenylene oxide	100 (212)	A small amount of alcohol is acceptable for a short time.	Soaking with an organic solvent such as gasoline and alcohol is not recommended.
PS	Polystyrene	60 (140)	A small amount of alcohol is acceptable for a short time.	Soaking with an organic solvent such as gasoline and alcohol is not recommended.
PUR	Polyurethane	80 (176)	A small amount of alcohol is acceptable for a short time. (Degreasing)	Soaking with an organic solvent such as gasoline and alcohol is not recommended.
PVC	Polyvinyl chloride	80 (176)	A small amount of alcohol and gasoline are acceptable for a short time. (Degreasing)	Soaking with an organic solvent such as gasoline and alcohol is not recommended.
SAN	Styrene acylonitrile	80 (176)	Wiping alcohol off in a short time can be allowed.	Soaking with an organic solvent such as gasoline and alcohol is not recommended.
SMC	Sheet molding compound	180 (356)	Alcohol and gasoline are acceptable	Solvent is not recommended.
TPE	Thermoplastic polyester elastomer	80 (176)	Alcohol is acceptable and wiping gasoline for a short time can be allowed. (Degreasing)	Soaking with an organic solvent such as gasoline and alcohol is not recommended. Wash remover off with water thoroughly.
TPS	Thermoplastic styrene elastomer	80 (176)	A small amount of alcohol and gasoline are acceptable for a short time. (Degreasing)	Soaking with an organic solvent such as gasoline and alcohol is not recommended. Wash remover off with water thoroughly.
TPO	Thermoplastic olefin / elastomer	80 (176)	Alcohol is acceptable and wiping gasoline for a short time can be allowed. (Degreasing)	Soaking with an organic solvent such as gasoline and alcohol is not recommended. Wash remover off with water thoroughly.
TPU	Thermoplastic / urethane / elastomer	80 (176)	A small amount of alcohol and gasoline are acceptable for a short time. (Degreasing)	Soaking with an organic solvent such as gasoline and alcohol is not recommended. Wash remover off with water thoroughly.
UP	Polyester	110 (230)	Alcohol and gasoline are acceptable.	Alkali is not recommended.

Use of the Repair Material (reference)

NOTE: Follow the materials manufacturer's instructions.

The use of a special polyester putty for PP bumper is described here:

1. Filler

Mixing Ration :

Putty	Hardener
100	2 to 3

↓

Hardening starts immediately after mixing.
Available time: 6 to 9 minutes / 20°C (68°F)

↓

Almost hard: 15 minutes

↓

Completely hard: More than 30 minutes

Drying Time:

Air dry 20°C (68°F)	3 hours
Force dry 60°C (140°F)	30 minutes

2. Sanding filler

Spray bumper primer (see page 6-19) on the area where the PP material was used.

3. Primer surfacer

The primer surfacer is used to protect the PP resin surface and fill cavities of flaws befort the intermediate coat and top coat.

Use the 2-component type primer surfacer (grey).

Mixing Ratio:

Primer Surfacer	Hardener
10	1

↑

30~60% is diluted with thinner.

4. Intermediate coat and top coat

Use the 2-part polyester urethane top coat.
Top coat is also used for an intermediate coat.

Mixing Ratio:

NOTE: Be sure to mix the correct amount of the hardener and softener.

Top coat	Softener
10	1

↓

Top coat + Softener	Hardener
10	1

↑

30~60% is diluted with thinner.

NOTE: Use a spray gun to apply the paint. Do not use a brush.

Drying time:

Air dry 20°C (68°F)	6~10 minutes Touching by the finger.
Almost hard	12~14 hours
Completely hard	96 hours

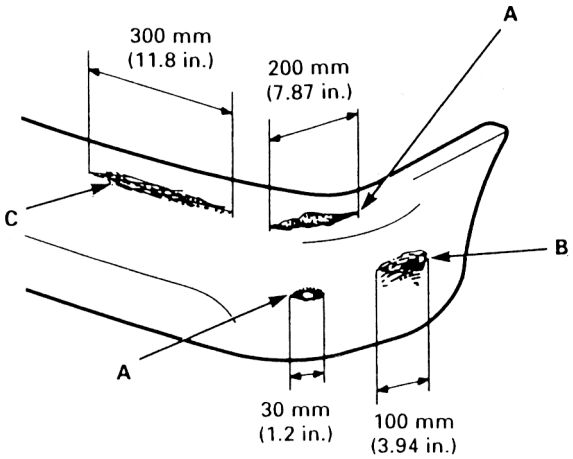
Force dry the intermediate coat and top coat.

NOTE: Mix only an amount that can be used before it hardens.

Plastic Parts Paint (cont'd)

Refinishing Processes

- The following shows refinishing methods to various types of paint damage or defects.
- Be careful not to deform and damage the parts when force drying.



A: Hole / Deep Gouge
B: Deep Abrasion about 3 mm (0.12 in.).
C: Shallow Scratch about 1 mm (0.04 in.).

Processes	Procedures	PP		Other Plastics		
		Damage		Damage		
				B		
		A / B	C	ABS/PC	Nylon/ Polyester	C
1. Prepare for painting	• Sanding • Air blowing / degreasing	X	X	X	X	X
2. Undercoating	• Spraying primer	X			X	
	• Drying	X			X	
	• Filling / Sanding	X		X	X	
	• Air blowing / degreasing	X		X	X	
	• Spraying primer surface	X	X	X	X	X
	• Drying	X	X	X	X	X
	• Sanding	X	X	X	X	X
	• Air blowing / degreasing	X	X	X	X	X
3. Intermediate Coating	• Masking • Spraying top coat enamel • Drying • Polishing • Air blowing / degreasing	X	X			
4. Top Coating	• Masking • Spraying top coat enamel/clear coat • Drying • Polishing / Buffing	X	X	X	X	X

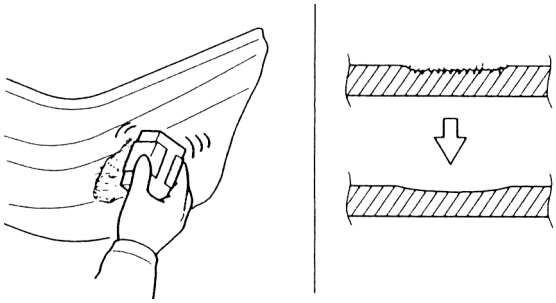
Preprocessing of Painting

1. Sanding

Sand the damage area flat and smooth.

Shallow Scratch:

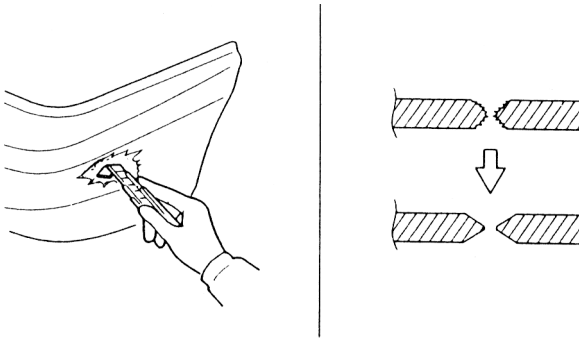
Use a flexible block and #240~#400~#600 sandpaper



Hole / Deep Gouge:

Cut out and make any torn or burred area flat.

Use a knife, flexible block and #180~#240 sandpapers.



2. Air blowing / degreasing

Clean the damaged area thoroughly.

Use alcohol, and wax and grease remover.

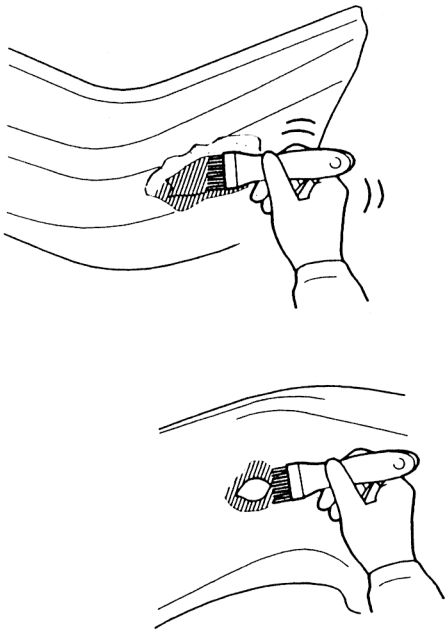
Undercoating

1. Spraying primer

Primer is used to fill cavities in the putty and primer surfacer.

- Spray primer on the exposed area.
- Spray the 2 to 3 coats of primer on 2 to 3 coats over the area you applied putty.
- Apply primer to the back of the bumper if the damage is a tear or hole.

• Bumper primer • Warm the primer if the ambient temperature is below 50°F (10°C). • Follow the bumper primer manufacturer's instructions. • Use a spray gun and a brush.



Drying

NOTE: Take care not to let the heat lamp deform the bumper during the drying process.

Dry the bumper primer thoroughly with an infrared dryer or other suitable method.

Drying Time:

Air dry 20°C (68°F)	20 minutes
Force dry 60°C (140°F)	10 minutes

(cont'd)

Plastic Parts Paint (cont'd)

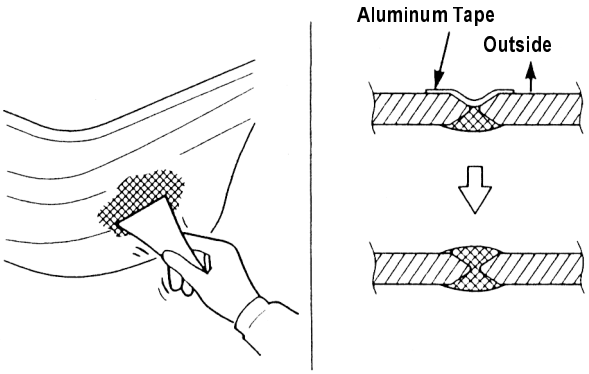
Undercoating (cont'd)

2. Filling / Sanding

Apply putty to repair any holes or deep gouges.

- Apply the putty on the damaged area in 2 to 3 steps.
- Glue aluminium tape on the outside of the bumper, and apply putty from the other side of the bumper.
- Remove the aluminium tape after the putty dries, apply putty from the outside, and fill the hole.

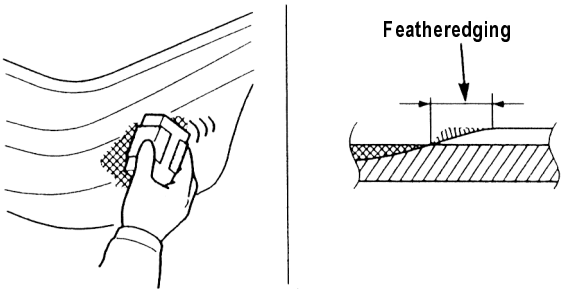
Use a special polyester putty (Reference) and a putty knife.



3. Sanding

Sand the surface evenly, particularly at the area where the PP material and putty meet.

Use a flexible block and #240~#400~#600 sandpaper.



4. Air blowing / degreasing

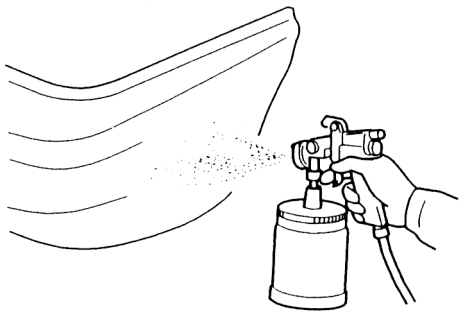
Use alcohol, a tack cloth, and wax and grease remover.

5. Spraying primer surfacer

NOTE: Spray the bumper primer (see page 5-13) on the area where the PP material was exposed and around the putty.

- Spray the primer surface wider then the putty and painted surfaces of bumper primer.
- Spray 2 to 3 coats to get 20 tot 30 microns of thickness.

• Use the 2-component type primer surface (gray) and a spray gun. • Follow the materials manufacturer's instructions.



Drying

NOTE: Take care not to let the heat lamp deform the bumper during the drying process.

6. Sanding

After drying, wet sand the area of the intermediate coat.

Use the #600 sandpaper. NOTE: Do not use #600 or less.

7. Air blowing / degreasing

Use alcohol, a tack cloth, and wax and grease remover.

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

Intermediate Coating

NOTE: You must do this procedure on the PP parts of the bumper and side sill panel.

1. Masking

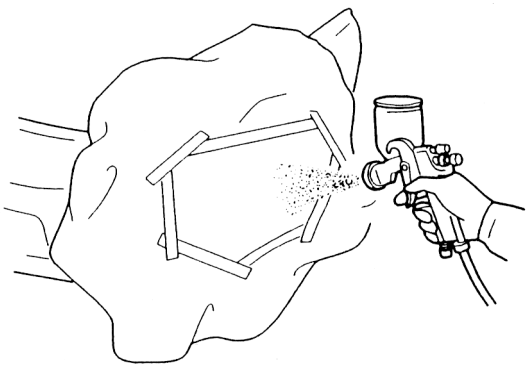
Mask the area surrounding the damage to protect is from the intermediate coat overspray.

Use masking tape and paper.

2. Spraying the top coat enamel

- Spray the top coat enamel over the surface until the primer surfacer is fully covered.
- Spray 2 to 3 coats to get 15 to 25 microns of thickness.

• Use the 2-part polyester urethane top coat enamel and a spray gun. • Mix the top coat enamel with the additive and solvent in the correct ratio. • Follow the top coat manufacturer's instructions.



Drying

NOTE: Take care not to let the heat lamp deform the bumper during the drying process.

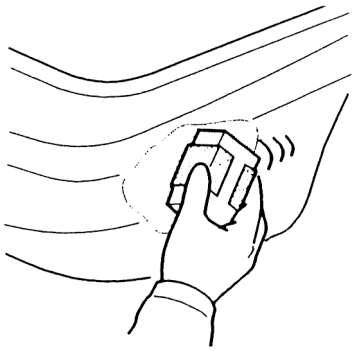
After spraying top coat enamel, allow for 5 to 10 minutes of normal drying, then force dry it with infrared lamps or other industrial dryer.

3. Polishing

Check the top coat enamel has dried thoroughly, then sand the top coat enamel.

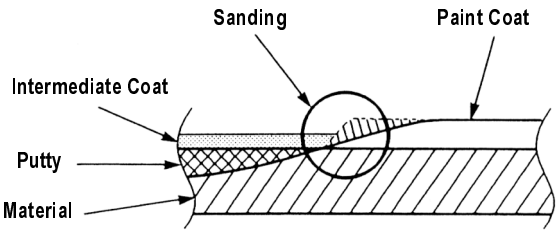
Use a flexible block and #600~#800~#1000 sandpaper.

NOTE: Be careful not to sand down to the primer surfacer.



When the painting repair is almost complete, polish the top coat.

Use a flexible block and #1500 sandpaper and compound.



4. Air blowing / degreasing

Use alcohol, a tack cloth, and wax and grease remover.

Clean and degrease the surfaces where the masking tape will be attached.

Plastic Parts Paint (cont'd)

Top Coating

1. Masking

Mask the area surrounding the damage to protect it from the top coat overspray.

Use masking tape and paper.

2. Spraying top coat enamel /clear coat

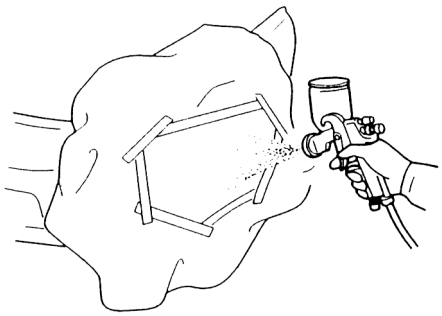
Spray 2 to 3 coats in double coat until the intermediate coat is fully covered.

NOTE:

- Do not cover the surface with one heavy coat.
- Apply several thin coats.

• Use the 2-part polyester urethane top coat enamel and a spray gun. • Mix the top coat enamel with the additive and solvent in the correct ratio. • Follow the top coat manufacturer's instructions.

After spraying the top coat enamel, allow for 5 tot 10 minutes drying time before you spray the clear coat.



Drying

NOTE: Take care not to let the heat lamp deform the bumper during the drying process.

After spraying the clear coat, allow for 5 to 10 minutes drying time before you force dry it with infrared lamps of other industrial dryer.

3. Polishing / buffing

- Check that the clear coat has dried thoroughly.
- Wet sand to remove any imperfections.

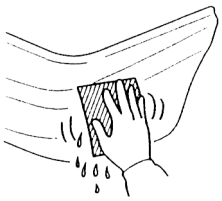
Use a flexible block, soap, and #2000 sandpaper.

- Using a buffer and compound, remove any polishing marks made from the sandpaper.

Use a buffing sponge, and buffing wool and compounds.

Finish up with buffing:

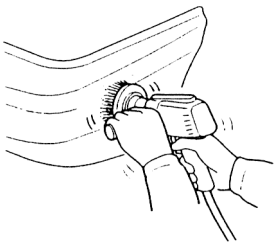
1 Wet sands with #2000 sandpaper and soapy water.



2 Remove moisture using compressed air.

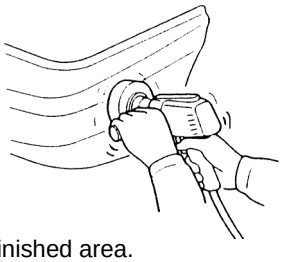
3 Finish using fine compound and very fine compound. Do not polish with a electric polisher.

NOTE: Polish lightly.



4 Check the finished area at an angle, and make sure there are no polishing marks.

5 Polish with ultra fine compound and a buffing sponge.



6 Wax the finished area.

Glossary

All paint	Painting of complete surface.
Compressed air	Use compressed air to blow away dust and debris.
Block paint	Painting a section only, such as a door.
Clear paint (clear coat)	Clear paint without dye (pigment).
Double coat	Application of two paint coats.
Dry coat	Paint which left the spray gun and dried partially before it reached the surface, thereby making the painted surface rough. Dry coating is caused by too little paint being fed, too high an air pressure, too much distance between the painted surface and the gun, or moving the gun too fast.
Dry film	Paint which has dried completely.
Dust coat	Paint is applied thinner than the dry coat. Painted surface becomes rough.
ED painting	Electrostatic discharge painting.
Enamel	Finishing paint pigmented with dye.
Featheredging	Smoothing out the edges of painted surface.
Flash off	Evaporation of the paint solvent. (Flash off time is the period between paint coat applications.)
Ford cup	A type of viscosity meter.
Gun stroke	Movement of the paint gun.
Hardener	Hardening agent of two-liquid type paint or fillers. Polycyanates and oxides are used for hardeners.
Heat-hardening acrylic resin paint	Composed of acrylic resin and meramine resin and hardener (forms a paint film) by baking.

(cont'd)

Glossary (cont'd)

Lacquer	A type of paint that uses cellulose nitrate or other chemicals and dries by evaporation of its solvent agent.
Meramine resin	Used as component for aminoalkyd resin paint and heat-hardening acrylic resin paint.
Metallic-base paint	Paint with aluminium powder for metallic tone.
Mist coat	Painting for fade-in sections. A small amount of paint may be dissolved with slow-evaporating thinner, or thinner alone may be applied with low pressure. 150-200kPa (1.5-2.0kgf/cm², 21.3-28.4 psi)
Mixing scale	Color mixing device.
Overlap	Blending of spray patterns.
Overspray	Spraying other than the area that needs painting.
Paddle	A tool to mix paint.
Paint dust	Dust of paint formed by spraying.
Paper dispenser	A paper posting device (masker) that combines tape and paper.
Scrapes	Traces of scratches.
Scuffing	Particles on the painted surface are lightly polished with fine emery paper (#600 or over).
Set (setting)	Evaporation time of solvent in the paint, before drying the layer forcefully or by baking. (May be considered the same as flash-off time).
Single coat	Application of paint in single layer.
Spot paint	Painting of small section, such as for touch-up.
Undercoat	Undercoat paint (such as primer and surface). May be applied to lower section of car for noise prevention and rustproofing.

Wet coat	Paint is applied with an excess of solvent, thereby producing a painted surface that is smooth, glossy and has a wet look.
Wet film	Paint which has not dried completely.
Wet on wet	Application of the next coat of paint before the previous layer has dried completely.
Wool bonnet	Wool grinder for compound polishing.