

vol. 124



bluebook

paint defects
and
corrections



LAGOS
experience & solutions

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Introduction

Dear professional,

Equipos Lagos has been producing surface treatment and coating equipment for over 30 years. Professionals we have met along the more than 13,000 installations and over 7000 customers have shown us some of their knowledge, secrets and problems regarding the use of our equipment which has been the key to its continuous improvement.

From Lagos we have always wanted to be next to the person who works in our equipment to ensure a flawless finish. Our machines are designed for this purpose and to achieve maximum durability. Not surprisingly, we have the best resell prices, even after 15 or 20 years of use.

With this guide we wanted to step forward, helping with our knowledge those who have been our customers and have trusted in Lagos for their painting process and also those who don't know us yet, but share the same passion for perfection in their jobs.

We hope that our efforts could be useful for your continuous growth.

As always the Lagos whole team and myself are at your disposal to help you build your business and improve your future. Simply call us and we will be glad to help you.

Good refinishing!

Anxo Mourelle
CEO/PDG

Water blisters

Aspect



Small blisters on the surface of the paint that can be seen once it dries

Definition

Surface deformation due to the excess of water or moisture in the air while applying the paint.

Causes

- Humidity in compressed air.
- Moisture absorbed by the substrate.
- Condensation due to sudden changes in temperature.
- Paint Application in wet environments.
- Debris on the surface that act as a sponge absorbing moisture, resulting in blisters when heat is applied.
- Insufficient drying of the substrate or background of the surface before applying the paint.
- Water paint sanding or polyester base caulking, not leaving enough evaporation or drying time.
- Inadequate regulation of the application equipment.

Prevention

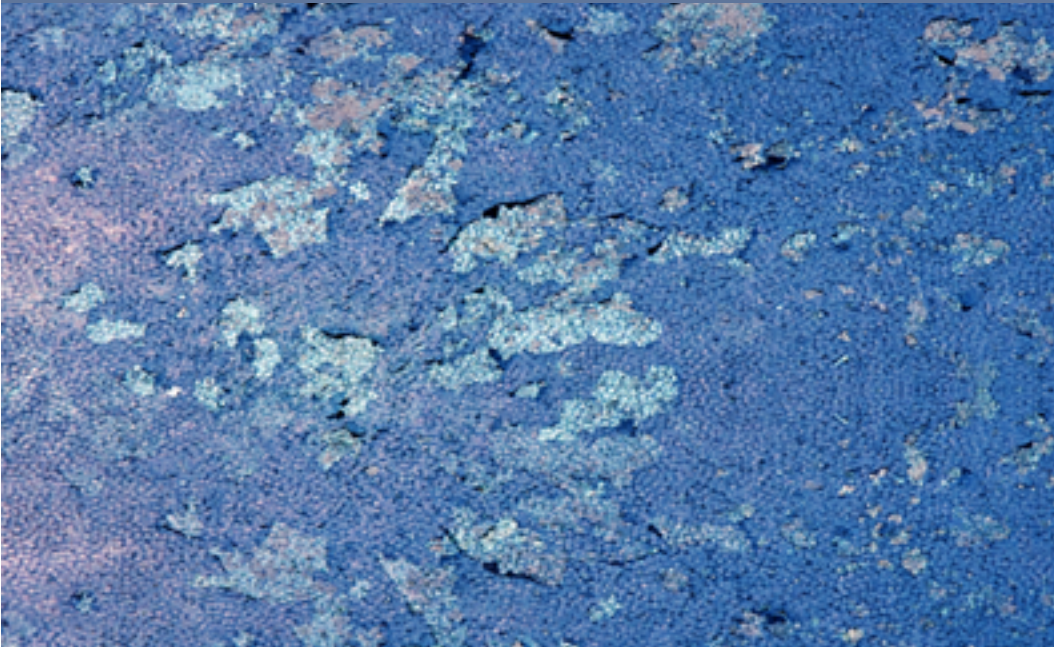
- Do not paint on wet surfaces or on very cold environments. Keep all materials in the cabin a few minutes before starting the painting process in order to warm the piece and reduce humidity. Adjust the temperature and humidity of the cabin according to the instruction manual provided by Lagos.
- Perform a complete sanding job on the caulk when dry, to avoid leaving air entrapped during the curing process.
- Verify the proper drying of the paint layer.
- Verify the absence of contaminants layer that is going to be painted
- Perform a preventive maintenance of the compressed air system as shown in the machine instructions.
- Leave the paint to rest from preparation to implementation.
- Adjust and regulate the application equipment. Assess the possibility of using a deareator.

Solution

Once the paint is dry, perform a sanding job in the area with blisters until you reach the bottom layer, seal it and repaint the topcoat.

Lack or loss of adherence

Aspect



The paint layer lifts easily like fish scales.

Definition

Absence or loss of attachment between the surface and the painted piece, which means that the paint comes off easily, especially on the edges of the surface.

Causes

- Incorrect preparation of the painted surface, presenting grease, dust, dirt or moisture.
- Incorrect surface sanding.
- Inadequate primer.

Prevention

- Prepare the surface correctly. Clean, degrease and / or sand.
- Consult the paint manufacturer about the adequate primer.
- Apply thin layers to ease the adhesion of the paint to the substrate.

Solution

Strip and sand the affected area until you reach the layer that presents the defect and repainting it.

Orange peel or loosening

Aspect



Rough or granular surface of the paint produced by bad stretching.

Definition

Surface deformation with paint dullness due to inadequate leveling and / or stretching of the paint.

Causes

- High viscosity paint.
- Too much distance between the spray gun and the painted piece.
- Painted part was too hot.
- Fast solvents.
- Insufficient amount of paint.
- Low humidity or high temperature in the cabin.

Prevention

- Increase the dilution of the paint to avoid high viscosity.
- Adjust the application equipment and its distance to the piece.
- Select a suitable solvent for the ambient conditions of the area.
- Adjust the temperature as indicated in the instructions manual delivered by Lagos and keep the material in the cabin for a few minutes before starting the painting process in order to warm the piece and the equipment.

Solution

If the defect barely noticeable, polishing the surface after fine sanding it. If it is severe, it will be necessary to sand and refinish the whole piece.

Crackings

Aspects



Pequeñas fisuras en la superficie de la pintura que alcanzan a una gran extensión.

Definition

Small cracks in the paint surface. They can expand to the whole piece.

Causes

- Incorrect preparation of the painted surface.
- Paint was applied on a humid, or not completely dry layer.
- Inadequate preparation of the paint.

Prevention

- Properly prepare the surface by cleaning, degreasing and / or sanding.
- Apply the paint according to the product specification sheet of the manufacturer (thickness, drying time, etc.).

Solution

Sand the affected area until the layer that presents the defect and repaint.

Silicones

Aspect



Small circular holes appearing on the paint surface.

Definition

Surface depression due to lack of bonding between layers, caused by the presence of contaminants such as oil, grease, or silicone polishes.

Causes

- Incorrect degreasing of the surface to be painted.
- Pollution of the work environment by the use of silicones, aerosols, etc.
- Traces of oil in the applied air.
- Contamination of the application equipment, paint, hose, measuring or mixing vessels, etc.

Prevention

- Thoroughly clean the substrate with degreaser, using clean rags.
- Perform preventive maintenance of the compressed air system as shown in the instruction manual. Use air filters.
- Clean all the elements that takes part in the preparation process: cups, measuring rules, etc.
- Check if it would be suitable to add anti-silicones, following manufacturer's instructions.

Solution

Sand the affected area until the layer that presents the defect and repaint.

Solvent bubbles or boilings

Aspect



Small circular blisters that appear in the surface layer during the drying process.

Definition

Bubbles solvent which hatch after drying the outer layer of paint.

Causes

- Inadequate regulation of the application equipment.
- Fast solvents.
- Thick layers of paint.
- Pollution in the work environment caused by the use of silicones, aerosols, etc.
- Ambient temperature too high.
- Short period of evaporation before drying.

Prevention

- Select a suitable solvent for the ambient conditions of the area.
- Adjust and regulate the application equipment.
- Apply the paint according to the product specification sheet of the manufacturer (thickness, time and drying temperature, etc.).
- Keep an adequate evaporation time before starting the drying process.
- Adjust the temperature of the cabin in drying mode as indicated in the Instruction Manual delivered by Lagos.

Solution

Sand the affected area until the layer that presents the defect and repaint.

Sink marks, collapses or depressions

Aspect



Zonas que presentan distintas texturas y brillo que aparecen una vez seca la pintura.

Definition

Areas with different textures or gloss that appear once the paint dries.

Causes

- Incorrect preparation and implementation of the filler.
- Inadequate preparation of the edges of the repaired area.

Prevention

- Always apply a filler as a basis for painting and decorating, following the product specification sheet of the manufacturer, especially with regard to evaporation and drying times.
- Apply the paint according to the provisions of the product specifications sheet of the manufacturer (thickness, time and drying temperature, etc.).
- Prepare and properly isolate the edges of the area to be repaired.

Solution

If the defect barely noticeable, polishing the surface after fine sanding it. If it is severe, it will be necessary to sand and refinish the whole piece.

Wrinklings

Aspect



Areas with wrinkles in the surface of the paint during application or drying.

Definition

Defect appears as wrinkles on the surface due to a layer shrinkage.

Causes

- Unsuitable solvents.
- Non-uniform drying (excess of thickness, insufficient evaporation time, no suitable catalyst, etc.).
- Chosed paint not compatible with the base coat.

Prevention

- Select a suitable solvent conditions painted.
- Prepare and apply paint and the base coat in accordance with the provisions of the manufacturer instruction manual (thickness, time and drying temperature, etc.).
- Apply a surface treatment according to the manufacturer's specifications using compatible products. If in doubt use a suitable sealant primer.

Solution

Carefully sand the affected area and refinish the piece.

Blurrings

Aspect



Areas with dullness and a whitish veil.

Definition

Defect appears as dullness due to humidity condensation by a rapid evaporation of solvents, that cools the surface and produces condensation.

Causes

- Using too fast or not suitable solvents.
- High relative humidity in the paint booth.
- Lack of air exchange during the drying process at room temperature.

- Inadequate preparation of the paint.
- Paint layers too thick.
- Presence of moisture in the applied air.

Prevention

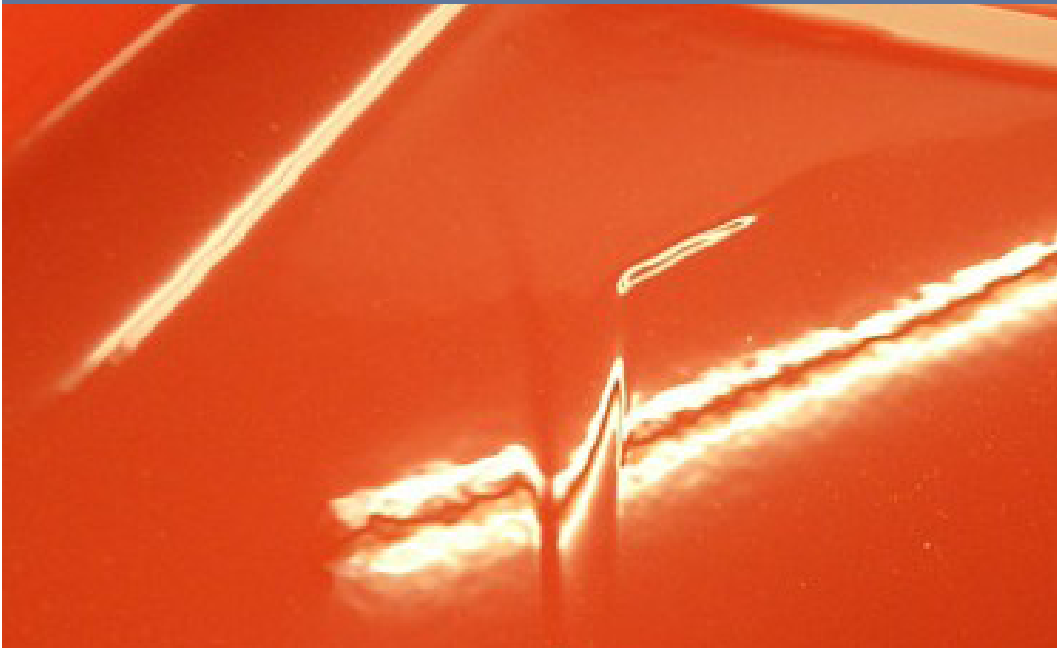
- Select a suitable solvent for the paint conditions.
- If drying is conducted at room temperature, keep the cabin ventilation on, so that air turnover and moisture is reduced to suitable working ranges. In any case it is recommended to use the drying cycle of the cabin.
- Prepare and apply paint in accordance with the provisions of the manufacturer instructions (thickness, time and drying temperature, etc.).
- Perform preventive maintenance of the compressed air system indicated in the instruction manual, and use air filters.

Solution

If the defect is barely noticeable, polishing the surface after fine sanding it. If it is severe, it will be necessary to sand and refinish the whole piece.

Saggings

Aspect



Areas with drops or runoffs of painting that usually appear in vertical or steeply sloping surfaces.

Definition

Defect appearing as drops or runoff due to the high fluidity of the paint.

Causes

- Low viscosity due to excess of solvent.
- Layer too thick or product applied by hand.
- Low ambient temperatures.
- Inadequate regulation of the application (low air pressure, excessive airflow or close application distance).
- Inadequate evaporation time between layers.
- Unsuitable solvents (too heavy).

Prevention

- Increase the application viscosity (less dilution of the paint).
- Apply several thin coats rather than a single thick layer.
- Adjust and regulate the application equipment (increase air pressure, reduce airflow and increase the distance of application).
- Select a suitable and lighter solvent.
- Apply the paint according to the manufacturer instructions (thickness, evaporation times, etc.).
- Set the working temperature according to the instructions of the instruction manual delivered by Lagos and maintain the material in the cabin for a few minutes before starting the painting process in order to warm the piece.

Solution

If the defect barely noticeable, polishing the surface after fine sanding it. If it is severe, it will be necessary to sand and refinish the whole piece.

Lack of cover or transparencies

Aspect



Areas where the lower layers of paint can be seen.

Definition

Defect appears as transparencies where the background color can be distinguished. It may be due to insufficient covering the paint or a colored background finish achieved with a "transparent" paint on a colored background.

Causes

- Low application viscosity due to excessive solvent.
- Insufficient layer or product applied by hand.
- Background color is not uniform.
- Painting with low covering power.

Prevention

- Increase the application viscosity (less dilution of the paint).
- Adjust and regulate the application equipment and prepare and apply paint in accordance with the manufacturer instructions (thickness, dilution, etc.).

Solutions

Sand and repaint the affected area. If the background finish was done with a combination of products, apply a first coat of color or dye the background.

Dirt, dust or particles

Aspect



Dirt or dust depositing on the wet paint and sticking to it.

Definition

Particles adhering to the paint are of different sizes and are occluded in it.

Causes

- Insufficient cleaning of the surface to be painted.
- Spray booth is too dirty.
- Presence of contaminants or dirt in the paint.
- Presence of contaminants or debris in the air or application equipment.

Prevention

- Perform a thorough cleaning of the surface. Use dust trap cloths.
- Perform preventive maintenance of the spray booth according to the indications in the manual delivered by Lagos, specially regarding cleaning and replacing filters.
- Use filters or paint strainers to remove impurities.
- Perform maintenance of the compressed air and application equipment according to the guidelines of the instruction manual.
- Use specific clothing for the finishing job. It has to be different from the one used in the sanding process.

Solution

If the defect barely noticeable, polishing the surface after fine sanding it. If it is severe, it will be necessary to sand and refinish the whole piece.

Bleedings

Aspect



Areas with variations of the refinishing colour.

Definition

The tone variations are due to the existence undercoats soluble pigments in the paint, and it usually has reddish or yellowish colours. It usually occurs when patching the piece with polyester filler.

Causes

- Excess of peroxide in the preparation of polyester fillers which react to subsequent coatings.
- Pigment migrates from the lower layers to the topcoat, thanks to the solvent.

Prevention

- Prepare the mixture of polyester fillers according to the provisions of the manufacturer.
- Use a sealer on background layers to prevent migration of pigments.

Solution

Sand until reaching the paint layer that caused the problem and apply a sealer, then repaint the piece.

Dry sprays or aerosols

Aspect



Areas with lack of gloss and with a grainy look. In some cases it is rough to the touch.

Definition

This defect is produced by paint particles that have small amounts of solvents. The particles reach the surface like some kind of dust and sticks to the last layer.

Causes

- Excessive paint viscosity.
- High application pressure .
- Elevated application distance.
- Fast solvents.
- High ambient temperature.

Prevention

- Prepare and apply paint in accordance with the provisions of the manufacturer.
- Select a suitable solvent for the ambient conditions of the area.
- Adjust the distance between the gun and the support.
- Adjust the temperature of the cabin for the painting stage as indicated in the instruction manual shipped by Lagos.

Solution

If the defect barely noticeable, polishing the surface after fine sanding it. If it is severe, it will be necessary to sand and refinish the whole piece.

Water spots

Aspect



Areas with whitish circular marks on the surface of the paint.

Definition

Areas with circular white borders that appear after drying the paint. They are produced by contact with water when the paint was not being sufficiently dried / cured.

Causes

- Exposure of the painted piece to a humid environment.
- Water splashing or rain drops on the uncured surface.

Prevention

- Comply with the paint drying instructions before exposing the piece outdoors. Keep the piece in the cabin after drying to temper it gradually.
- If the paint is not yet completely hardened, dry the support if there is presence of drops.

Solution

If the defect barely noticeable, polishing the surface after fine sanding it. If it is severe, it will be necessary to sand and refinish the whole piece.

Sanding marks

Aspect



Areas with striations or grooves in the paint.

Definition

Marks appearing in painting due to a prior rough sanding job (putty or filler), not covered / filled by the paint applied.

Causes

- Lack of drying or hardening of the sanded surface.
- Inappropriate choice of abrasive grain.
- Insufficient amount of product to cover and fill the sanding marks.
- Poor preparation of the undercoats.

Prevention

- Respect the drying time of the putty or filler indicated by the manufacturer before sanding.
- Select the appropriate abrasive grain according to the paint.
- Refine the sanded surfaces in order to apply the right amount of product to cover or fill the marks.

Solution

Perform a superficial sanding and repaint the piece.

Contact us for any information.
We will be glad to help you.

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