



Touch-Up Painting

Touch-up painting involves spot application of paint over a previously painted area to correct a soiled or damaged surface.

Best Practice for Achieving Optimum Touch-Up

- Use the same batch for touch-up as was used for the original application (ideally, set aside some of the original paint for later use).
- Do not over tint; use the proper tint base.
- When airless spray application is used, stay with paler colors if possible.
- Thoroughly shake or mix the paint prior to use.
- Intermix (box) the paint to insure color consistency if using more than one can or pail.
- Use the same application method for touch-up as was used for the original application.
- For best results when airless spray application is used, backroll and touch-up with a roller of the same nap length, rolling in the same direction as the backroll.
- Avoid over working the touch-up area.
- Touch-up under temperature and humidity conditions as close as possible to the conditions prevalent during the original application.
- Ensure initial paint application was sufficient to achieve complete hiding.
- Ensure surface was sealed adequately with an appropriate primer.
- Conduct touch-up application within as short a time as possible after the original application.
- Very low, 85 degree sheen, flat paints will give better touch-up in general.

Ensure that the surface is primed and top coated sufficiently to achieve complete hiding. Be sure that the product is adequately shaken and has not settled out. Touch-up is best with high reflectance colors where minimal tinting is used. Lower sheen generally provides better touch-up than higher gloss finishes. The best possible touch-up can be achieved by ensuring that the same equipment, conditions and application methods used during the initial application are followed - and most important, that the same batch is set aside for touch-up later. Touch-up should be performed as soon as possible after application.

Discussion

Generally flat paints touch-up better than paints with a higher sheen or gloss. Paints with a lower sheen minimize gloss and texture differences more than higher sheen finishes. This is especially true when viewing a painted surface at low angles of incidence such as a long corridor or where lighting is used to emphasize or highlight an area. This is due to the coarser pigments used to achieve the low sheen that works to diffuse incident light.

For a quality paint job, it is important that touch-up spots blend into the surrounding finish and be inconspicuous to normal viewing. Perfect touch-up would consist of the ability of paint to be spot repaired without showing **any** color or sheen differences. Unfortunately while perfect touch-up is not obtainable, understanding and addressing the many factors that can affect the touch-up characteristics of paint during application can provide optimum conditions for achieving a quality paint job.

The following discusses the factors that affect the touch-up characteristics of paints produced by all manufacturers. While it may not be practical to adhere to the tips provided in every situation, be aware that the touch-up characteristics of paint may be compromised if any of these factors exist and are not addressed properly.

The Paint

While every batch of paint is tightly controlled during manufacture, it is still important to use the same batch for touch-up as the one originally applied. Very minute color or sheen differences that would not be visible in normal applications are magnified appreciably in a touch-up situation where different viewing angles and angles of incident light accentuate these differences. Paint must be thoroughly mixed and excessive levels of colorant avoided to ensure good color development and acceptance. Additionally, intermixing (boxing) the paint to insure color consistency if more than one can or pail is being used is always a good practice. Finally, always leave some of the actual paint used in each area to touch-up with later.

Application Method

Touch-up with the same tools used for the original paint application, if possible. Texture variations caused by different application methods can cause apparent sheen or gloss differences. Additionally, the amount of shear force applied to a paint during application varies depending on whether it is brushed, rolled or airless sprayed. This can cause color differences because the amount of shear force affects color development of the paint. Due to the large amount of shear applied by atomization at the gun tip, airless spray application tends to develop a color the most, brush application next, while roller application develops it the least.

If the paint is airless spray applied, backrolling the initial application and touching up with a roller of the same nap length as was used to backroll and rolling in the same direction as the backroll will provide the best results. If airless spray applied paint is not backrolled, touch-up using a brush or foam applicator. Leaving some of the paint for touch-up that has passed through the tip can also be helpful since the color may have been affected by the atomization process. If touching up with a brush, feather the edges of the touch-up paint so as to blend it in with the surrounding areas. Avoid over brushing which can affect the color development of the paint.

Temperature and Humidity

Temperature measurements related to painting fall into three categories: ambient, surface and material. Ambient temperature is the temperature measurement of the surrounding air. Surface temperature is the temperature measurement of the substrate to which the paint will be applied. Material temperature is the temperature measurement of the paint being applied.

The ambient temperature in a room may be quite comfortable yet the surface temperature of the walls may be substantially lower. Additionally, depending on how paint arrives at a job site or how it has been stored, paint being applied may be at a different temperature than when it was first applied. Temperature and humidity variations can affect the degree of coalescence (film formation) of a latex paint film, causing color variations. If possible, touch-ups should be made under conditions as close as possible to the conditions prevalent during the original application.

Ideally, the building heating system should be maintained to keep all surfaces and materials on the job at room temperature. Salamander heaters, while effective at raising the ambient room temperature, may not be sufficient to uniformly bring the surface temperature up to normal. Additionally, their exhaust fumes may actually cause other difficulties. Paint and other materials should be stored in heated areas. Paint stored overnight in a truck may take many hours at room temperature to warm-up.

Film Thickness and Hiding

If the initial paint application was not sufficient to achieve complete hiding, the perceived color of the paint film may be influenced by the substrate color. The film build of a touch-up area is often heavier, thus achieving more complete hiding. The differences in film thickness between the initial paint application and the touch-up area may be perceived as a color variation. Another full coat of paint may be necessary to provide uniform opacity. Applying as thin a film as possible when touching up is often the best approach and in some instances, thinning the paint prior to touching up may be advantageous.

Surface Porosity

If an unusually porous substrate is not sealed properly prior to painting, a good portion of the vehicle of the applied paint will be absorbed into the surface. When attempting to touch up the painted surface a perceived color or sheen problem may be encountered. Application of an appropriate primer prior to application of the original coat of finish can help prevent this.

Time Frame

Touch-up application should be conducted within as short a time as possible after the original application. This is especially important in the case of exterior painting. Not only can the difference in ambient temperature and humidity conditions between when the paint was applied originally and when touching up was conducted pose a problem, but normal weathering and fading can also affect the touch-up process. Dirt or other airborne contaminants can exist in interior or exterior applications and can affect touch-up if present on the painted surface when touching up.

Enamels are more difficult to touch-up than flat paint finishes. This is due in part to the enamel's tendency to highlight surface imperfections. Alkyd or oil base enamels also have a higher initial sheen that may tend to level off over time. Thus, touch-ups conducted with alkyd or oil base enamels take time to match surrounding areas and may initially appear exaggerated.

Summary

Touch-up problems are an industry-wide concern. Once a touch-up problem develops, the only real solution may be the application of another full coat of paint. Since this involves extra labor and material costs, it's important that the potential causes of unsatisfactory touch-up be controlled as much as possible. Make sure that the above factors are considered before painting begins.