

Blending Procedures

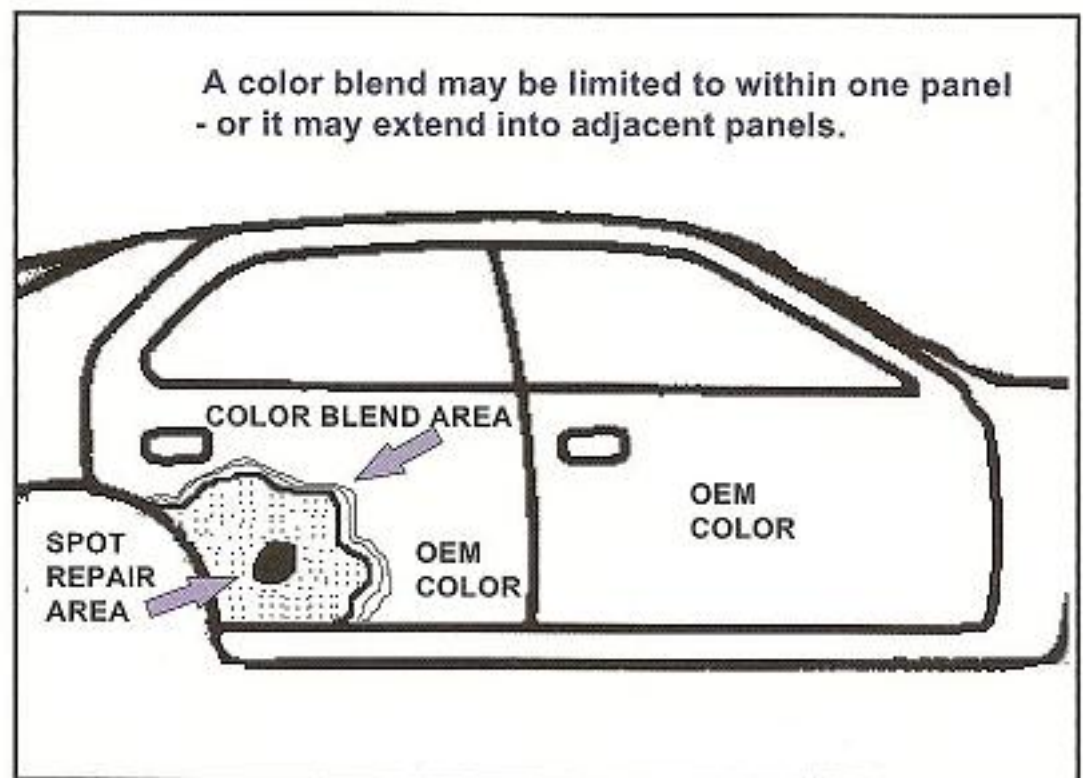
"Color Blending"

Blending is: A "method of spraying color onto a vehicle in such a way that the edge of the sprayed color "disappears" into the surrounding area, rather than stopping at a hard breakline such as a door gap or molding".

Why blend?

In most cases, a color is blended to create an "illusion" of a perfect match or an "invisible repair".

Not to deceive anyone, but to make the repair so invisible that even someone who knows it is there can't see it.



Because of the color variances or "color drift" in the typical OEM finish, obtaining a "butt" match (panel to panel) would be **due almost exclusively to luck**. PPG has excellent factory and intermix color matches but since we are trying to match such a broad range of OEM paint variables, **blending is a necessity**. Consider the following list of appearance factors that a technician faces when matching an OEM finish:

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Assessing the Situation

It's important to note that, when we talk about the "repair area" for a damaged panel, we are just talking about the area of damage itself. We need to consider the area that will be covered by the new primer coat we apply during the course of the repair. As the primed area will in most cases be several times larger than the damaged area, it's important to allow for this, or you can seriously underestimate the time and materials that it will take to do the job.

Bearing that in mind, here are some things you should consider when deciding how far you should continue to blend a repair finish:

- Mentally divide the panel being worked on into thirds (both lengthwise and heightwise). If a metallic or pearl color repair extends into more than two of those thirds, then you should continue the blend into the next panel.
- If the finish being used is a solid-color basecoat/clearcoat, the blend can, in most cases, be restricted to the panel being repaired.
- If a panel is being replaced, rather than repaired, then the color should be blended into the surrounding panels regardless of the color being used.

Paint

With today's new paint systems, we run into a lot of difficulties getting paints to match. Today we may have as many as 10 different variations of one specific paint code. So even if we have the right paint code and/or variation we may still have to blend. It is very rare that we are able to panel paint any color. When you bring the paint code into your local paint store, it would be a good idea to bring in either a sample, like a gas door, or the whole car. We have paint chips on most all of the recognized color variations and can lay them against your paint sample to help you with your color blending. These color variations are only available in the premium line of paint. The time and expense of color matching is what you are paying for in the premium line of paint. They tend to match and blend better. Sometimes, using a primer tinted closer to the paint color will help.

Blending

Once you have your paint, you need to look at your car to determine the best way to blend. Sometimes, it is better to paint more of the car in order to hide the blend. Remember, the idea of blending is to fool the eye so that you cannot see the color transition. Look for body lines, trim pieces, skinner panels such as above the wheels or quarters.

Now we need to prep all the panels. We would like to blend the color coat, but I would like to see you clear coat entire panels. For example, if you are blending into door, I would like to see you clear the entire door. This makes the blend harder to see and doesn't make you try to blend clear, this sometimes leaves behind a dusty halo. Therefore, we will wet sand the entire surface to be painted or cleared with 600-800 grit paper. Enough to take the shine off the car. By now you should have finished any other body work that needed to be done. Follow this with another wipe down of wax & grease remover. We would then like to see you use sealer to give you a uniform coat for your color. Many times some colors will show different colors on top of the filler work, primer, or old paint unless it has sealer.

We can now start painting. Starting from the furthest away from the blend, slowly introduce color into the blend. Reaching out further with each coat. Each pass with the paint gun should stop at a different spot on the panel angling out so that the eye can not see a consistent line to follow. Here is the only spot that we would like to see you break your wrist with the paint gun by rolling the paint out at the end. This will make the stopping line very obscure.

When we talk about blending, we're talking about color only. The entire panel (or panels) should be clearcoated to ensure maximum durability of the repair.

Clearcoating

Clearcoating should be done in two steps:

Step 1: Apply clearcoat over the basecoat, including the blended basecoat area, and allow time to flash.

Step 2: Apply a second coat over the entire panel.

Now when you clear the entire panel, you should not see the dividing line between old and new paint.

Right the First Time

Care in preparation, giving the attention to properly spraying everything out, and then properly applying and blending the finish are all worth it when the result is what everyone expects: a repair job that is invisible, and a vehicle that has been restored to the same condition it was in before the collision—if not better.

Understanding the Variables

Even if you've mixed up a perfect match for the vehicle being repaired, a number of application factors can still affect your final color. They include:

| Factor | Lighter | Darker |
|-----------------|----------------|---------------|
| Paint Feed | Decrease | Increase |
| Air Pressure | Increase | Decrease |
| Fan Width | Open Up | Close Down |
| Gun Distance | Farther Away | Closer |
| Gun Speed | Faster | Slower |
| Flash Time | Increase | Decrease |
| Thinning Ratio | Overthin | Underthin |
| Thinner Type | Fast | Slow |
| Fluid Tip Size | Smaller | Larger |
| Air Temperature | Warm Up | Cool Down |
| Humidity | Low | High |
| Air Movement | Increase | Decrease |

The graphic below illustrate a typical blending scenario:

When a spot repair is close to an adjacent panel, blend the color into it. If an entire panel is painted, blend into the major panels on all sides of it. Clearcoat all panels involved in a base/clear system. For a single stage color, step it out a couple of times, use a blending solvent on the edges, and polish it when dry.

