



Step-by-Step Instructions: Bottle

Touch up like a pro. ScratchesHappen has re-engineered the DIY repair process using color matched primers and professional tools for application and paint leveling. Our process creates a superior, highly invisible repair.

I. Introduction

These step-by-step instructions guide you through prep, painting, and polishing. We identify the key details needed for a perfect job. Scan Sections II and III to give yourself an overview of the process and paint, then get started in Section IV to achieve your pro finish.

Which Kit Do You Have? Check which kit you purchased below to confirm what’s included in yours. These instructions identify the kit and materials required for each step. If you purchased the Essential or Preferred kit, you may need to provide certain materials to perform a step.

The Complete kit

1. Test card
2. Base color(s)
3. Tack cloth
4. Precision applicator pack
5. Polishing compound
6. Color matched primer
7. Clear coat
8. Microfiber towel
9. Nitrile gloves



The Preferred kit

1. Test card
2. Base color(s)
3. Precision applicator pack
4. Color matched primer
5. Clear coat
6. Nitrile gloves



The Essential kit

1. Test card
2. Base color(s)
3. Precision applicator pack
4. Clear coat
5. Nitrile gloves



What tools will you need?

- Footstool [optional – to sit, e.g., near the repair and have a steady hand]
- Good overhead lighting if working in the garage
- Flashlight or handheld LED light source
- Watch or timer
- Paper towels
- Optional: small portable fan or hairdryer with a cool setting

1. II. DIY Overview

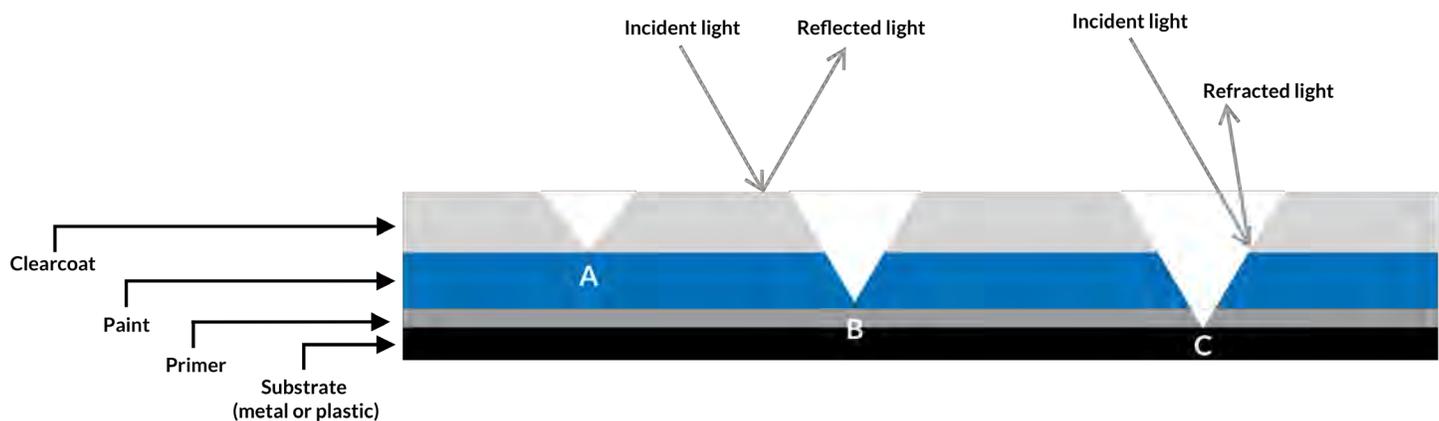
First, what is paint? More than just pigment, paint is an emulsion of solids and liquid that performs according to the chemical principles of its ingredients. Today, automobile paint finishes are chemically complex, multi-component, multi-layered finishes. The final finish is the art and science of all layers working together.

How bad is the damage? First, to determine which process is appropriate for your repair, use a good portable LED light (your phone flashlight is fine) to look closely at the damage. If you see bare metal or plastic, you need primer. If your scratch is deep, down to the primer but not through the primer, you still may want to use primer because it will do a good job filling the depth you need.

Creating invisible repairs. Aside from color match, the “invisible-ness” of your repair requires creating a level final surface so that reflected light does not get distorted by a chip or scratch that is lower or higher than the surrounding paint. The reflected vs. refracted light in Figure 1 below illustrates why you have to fill. You will need to either use primer as your first coat to fill in a deep blemish, or use multiple coats of base color to fill in. You always want to achieve a final clear coat application that is slightly higher than the surrounding paint, because the next step will be to polish it down (level it).

Three different depth scratches (A, B, C) are shown in Figure 1 below.

Figure 1: Types of Scratches



A, B, or C? Given your assessment of the depth of the damage (A, B, or C), apply your paint, including primer, base color and clear coat as appropriate, to the test card to understand how many coats are needed to achieve the finish you want.

What is the test card for? The test card is for you to practice with your paint. Getting a feel for the opacity and film thickness will greatly improve your handling of the paint. The pros do this. Learn how the paint acts, how much paint to use on each type of applicator, and how each coating looks. This is part of the art of the repair. The color you purchased should match your car's paint color.

Handling the paint jars and applicators

- Shake the jar well before each use.
- Unscrew the cap.
- Remove excess paint from the applicator by gently stroking the applicator tip on the jar's inside lip.
- When touching up your car's paint, put down a bit of cardboard or a double layer of paper towels to lay out your applicators/brushes near your work area.

Test the clear coat for dripping/running. Determine if your surface is horizontal, vertical, or sloping. Some angles can promote dripping or running in the clear coat. Practice the clear coat on the test card and hold the test card right up next to the car (but not touching) near the repair area to determine if the clear coat will run. If it does, practice again with a less heavy layer so that the clear coat does not run. You are aiming for a layer that is somewhere up to 50% heavier than that for base color but not so much that it runs.

What part of the card should I paint on? The test card has multiple test squares that you can use, and each area on the test card is at the perimeter of the card, so we recommend that you apply your test right up to the edge of the card. That way, when it is dry, you can hold it next to your car and have a seamless edge between the test color and your car color.

Which applicator do I use? In our testing, the toothpick and the micro-dabbers are best used for small chips, not scratches or large chips. A small chip is generally just a millimeter or two in diameter, about the size of the head the micro-dabbers that we've provided. The micro-dabber is great for placing a drop of paint onto the chip. For scratches and larger chips, you will need to apply paint to a larger area, and this involves dragging the applicator across the blemish. The small brushes we've provided are perfect for this. A gentle touch with a brush will leave a smoother finish. The dabbers are NOT good for scratches because they don't hold enough paint, and they drag the little paint that they hold and create an uneven surface. The brushes are better suited to smoothing the paint out over the length of a scratch or large chip.

Holding the applicators. People have various ways of holding a brush or applicator. Do what feels most comfortable and steady for you. Most people will hold the brush/applicator like a razor. The advantage is your hand does not cast a shadow over your work area.

Loading the applicator with paint. Too much paint on the applicator tip will diminish your control over how much paint you lay down. Try to have enough paint that the applicator tip/bristles appear saturated but not so much paint that a ball of paint is ready to drop off. Choose the applicator that appears most suited to the job; toothpick, dabber, or ultrabrush. There are two different size dabbers, 1mm and 2mm included. 4 brushes, and toothpicks for the smallest of chips.

Precision Applicators



See "Which applicator do I use?" at the left to choose the right one.

III. Understanding Paint

Drying temperature. The optimal drying temperature is 65 to 75 degrees Fahrenheit. Your drying times will be affected by temperatures above or below this range. Low temperature will slow drying times.

Humidity. High humidity will slow drying times, and may cause fish-eye if there is too much moisture in the air. Wait for lower humidity. Note: “fisheye” looks like a water drop in the paint.

Sunlight/rain. Avoid working in direct sunlight or working on surfaces that have been sitting in direct sunlight. Likewise, avoid working on rainy days.

Layering paint. Each new layer of paint acts like a solvent on the previous layer, and the new wet paint can slightly deform or even reduce the thickness of the layer you’ve already applied. This just means you want to work gently.

Adhesion between primer + base color + clearcoat. Each of these types of coatings has a nice porous paint surface when freshly dried, but the porousness disappears as the surface hardens. The porousness helps the next coating adhere properly via chemical bonds. So, when you transition from primer to base color or from base color to clear coat, if you wait more than 24 hours, the dried coating will not accept the wet coating correctly. If more than 24 hours does pass, simply apply another light layer of the previous coating, letting it dry less than 24 hours before transitioning to the new coating.

Exact color match. As you are adding coats of paint, the color will not appear to be a color match until it has dried. Waterborne paint can have a slight blue cast to it when wet, which disappears as the solvents evaporate (in about 5 minutes). Then, an exact color match won’t happen until the clear coat is applied and it is completely dry.

Tri-coat colors. Some colors require an additional color during application to achieve the exact color match. This includes many pearl whites and some red colors. For these colors, you will receive two different colors in your kit (identified as a tri-coat color kit): the base color and a mid-coat color.

See the next page for the Six Step Process >

Did you know?

You can ask Alexa or Siri what the humidity and temperature is in your location.

“Hey Siri, what is the current humidity?”



IV. Easy 6 Step Repair Process

Step 1: Preparation

Good preparation of the surface is essential for a successful paint finish.

1. If the scratch or chip has rough, ragged edges when you run your finger over it, use the polishing compound to removed the rough edges. Polishing compound on the microfiber towel, with finger pressure, will remove the rough edge and any loose flakes of paint, either of which will create an uneven finish.
2. Clean (degrease) the area to be repaired with soap and water. We recommend some Dawn dishwashing detergent (or similar). Wash the paint around your scratch with warm soapy water, rinse and pat dry with a soft towel.
3. Because scratches are below the surface of the finish, moisture can hide in the scratch. You need to dry the area to be painted thoroughly so if you're working in an area that is hard to dry, (high humidity, deep scratch) use a hairdryer held 18-24 inches from the paint's surface to ensure dryness.
4. Next use the included tack cloth to remove any small bits of fiber or particulate that was not removed by the cleaning in Step 2. Use your finger to apply pressure through the tack cloth to loosen anything trapped in the blemish.

Step 2: Primer

Primer may be needed; it depends on the depth of the scratch, and whether the original factory primer was scratched through. Note that the color match relies on the primer tint. Your ScratchesHappen kit includes a tint that is appropriate for your color formula. This is part of the science of the repair. If your scratch is very light, and does not go through the primer, then you can skip this step.

1. Apply your primer over the entire area you are planning to paint, making sure any exposed substrate (the metal or plastic under the paint) is lightly coated.
2. Let the first layer dry 10-15 minutes. Then, apply 1 or 2 more light coats of primer (depending on your level of damage, either B or C from Figure 1). In total, 2-3 coats should cover the area properly.
3. Allow 10-15 minutes drying time between coats.
4. Let the last coat of primer dry at least 30 min. You may use a hairdryer on cool setting or a fan to speed up the drying time Don't blow directly on the paint; instead blow the air across the paint at an oblique angle. You want to move the air over the paint, not deform it with too much direct air flow.
5. Remember. You must apply the first layer of base color (Step 3) at least 30 min after but not more that 24 hours after applying the last primer coat.

Required for this step: Complete kit

You will need to have a tack cloth, polish compound and a polish cloth to do this step.

To buy accessories, visit:

<https://scratcheshappen.com/shop/accessories>

Required for this step: Complete or Preferred kit

You will need to have primer to do this step.

To buy accessories, visit:

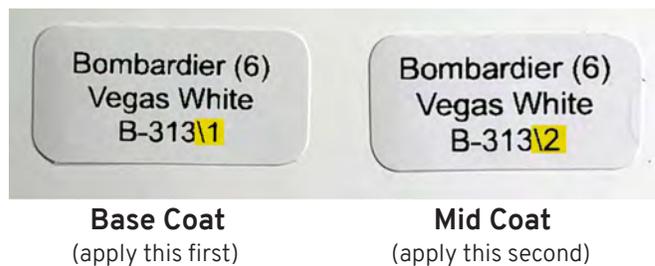
<https://scratcheshappen.com/shop/accessories>

Step 3: Base color

1. Apply the base color in an even, light coat, using the appropriate applicator.
2. Allow 10-15 minutes between coats for paint to dry.
3. Plan on 3-4 light coats depending on the level of damage (B or C from Figure 1). Be careful not to apply too much paint to the surface and avoid overlapping on to the existing finish. Several light coats are preferable to one thick coat.
4. You will know that the paint is dry when it reaches a matte finish (the glossiness disappears).
5. You can use a small fan or hair dryer to speed drying. Be sure to set the hair dryer on the cool setting. Hold the fan 18-24" inches from the area, off to the side, so the air is blowing across the painted area. Don't place it too close to the paint because the force of the air could create an uneven surface.
6. Remember. You must apply the first layer of clear coat (Step 5) at least 30 min after but not more that 24 hours after applying the last base color coat.

Tri-coat colors. For these colors, you received two different paint jars in your kit (identified as a tri-coat color kit). The label on each jar (see the example below) will indicate which color to use first.

Example Paint Labels for Tri Coat Paints



1. Apply 3-4 light base coats first, waiting 10-15 minutes between coats. Wait a couple hours to dry completely before polishing away any excess base coat paint.
2. Apply 2-3 mid coats waiting 10-15 minutes between mid coats. Wait a couple hours to dry completely before polishing away any excess mid coat paint.
3. From this point on, the process is the same as for regular base colors.

Step 4: Polish to remove overpaint

Before you clear the paint, you want to remove the additional touch-up paint that exceeded the boundary of the blemish. It is inevitable that a little paint will flow beyond the chip or scratch, and now is the time to remove it using polishing compound.

1. Use the included polishing compound and microfiber towel to remove the extra paint around the blemish
2. Take your time when polishing with the compound. You want to apply heavier pressure with one finger in the area where you want to remove the paint. Focus the pressure on any extra paint

Questions?

See the FAQ at <https://help.scratcheshappen.com>

Required for this step: Complete kit

You will need to have polish compound and a polish cloth to do this step.

To buy accessories, visit:

<https://scratcheshappen.com/shop/accessories>

that is outside of the blemish. This is what polishing compound is designed to do, and you may notice your paint color staining the microfiber towel – that is normal and it means you are removing some touchup paint. At this stage of the repair, the paint that is inside the scratch or chip is either level with or slightly lower than the surrounding finish. This is correct, as it will be built up in the next stage with clear coat.

3. Don't start out with super aggressive pressure. Slowly build up the pressure as you watch the paint slowly be removed. Check on your progress with a good light; you should see the overpaint residue being removed, and the remaining paint closely following the contour of the defect.

TIP: wrap the polish towel around a wooden block to get a corner edge that allows you to apply more precise pressure at the edge of the repair, so you don't remove the paint from inside the chip, just the edge.

4. Continue to add compound to the towel. You want a decent slurry of compound. The compound has tiny abrasive particles in it, so you need some liquid compound for it to work. If it gets too dry, add a little more.
5. If you remove the material properly and it levels out, you may still notice your scratch/chip isn't fully filled in. If it looks too low, just put another coat of paint on, and repeat the process until you have a good repair. Then you will apply clear coat, and do one last polish to level that.

Step 5: Clear coat

For automobile finishes, the clear coat should be applied in a heavier coat (up to 30-50% more per layer). When you apply the clear coat, it should look clean and glossy. After the base color has dried – at least 30 min, you should apply the clear coat.

1. Apply the heavier and even coat that you tested on the card and determined would not run (for slopes) – up to 30-50% heavier than the base color/primer coats.
2. Let the first clear coat layer dry for 5-10 min.
3. Now apply a second layer of clear coat, using the same even layer you determined would not run. Visually inspect this layer to see that your coverage is even and thorough. It should appear clear and glossy as it dries.
4. Let this layer dry for 5-10 min.
5. If needed (for thorough, even coverage) apply one more clear coat layer. Your final application of clear coat should appear slightly higher than the surrounding paint, because the next step is to polish it down (level it).
6. For all layers of clear coat, allow 5-10 min of drying time in between layers, and not more than 24 hours of drying time between clear coat layers.

Cleaning up afterward:

Note: Applicators can be rinsed and washed with a little light soapy water and re-used!

- Before screwing on the lid, wipe off the inside of the lid and jar to facilitate reopening the jar for the next repair job.
- Be sure to tighten the lid. Store the jar upright in the kit box with the other jars and applicators in a cool, dry place out of the reach of children.
- Wash the applicators in warm soapy water with Dawn (or similar) detergent and let dry laid flat on dry paper towels.
- Wash hands in warm soapy water.
- Dispose of paper towels and rags in regular garbage.

Required for this step:

Any kit

You will need to have clear coat to do this step.

To buy accessories, visit:

<https://scratchshappen.com/shop/accessories>

Step 6: Final polish to level.

Clear coat must dry for at least 48 hours before using polishing compound. Polishing compound will correct inconsistencies in the surface.

1. Use the included polishing compound and microfiber towel to level the clear coat.
2. Take your time when polishing with the compound. You want to apply heavier pressure with one finger in the area where you want to lower the raised clear coat, and feather it out to meet the factory paint.
3. Focus the pressure on the middle of the repair first, then feather out to the edges.
4. Don't start out with super aggressive pressure. Slowly build up the pressure and check the height often by running your fingers over the repair to feel the height. Visually check the repair with a good light to see your progress and how invisible it is becoming.
5. Continue to add compound to the towel. You want a decent slurry of compound. The compound has tiny abrasive particles in it, so you need some liquid compound for it to work. If it gets too dry, add a little more.
6. Stop when you've reached a point where the repair is hard to see, and the the level of the repair is the same or as close as possible to the surrounding finish.
7. You are done!

Contact Us

If you have any questions or feedback for us, please don't hesitate to reach out to support@scratcheshappen.com.

To buy accessories, visit:

<https://scratcheshappen.com/shop/accessories>

Required for this step:

Complete kit

You will need to have polish compound and a polish cloth to do this step.

