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### [Repairing Chips & Scratches](#)

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## Repairing Chips & Scratches



### CHIPS & SCRATCHES

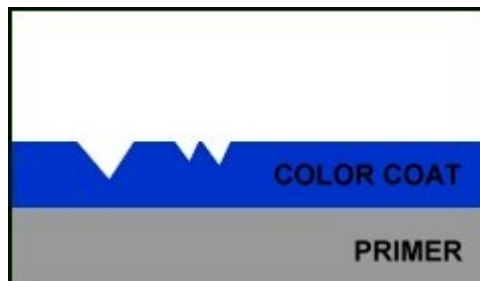
*"Touching up small nicks and scratches is well within the skill of most do-it-yourself car enthusiasts."*

You'd be hard pressed to find a car on the road that does not have paint chips and parking lot scratches. While good detailing practices can't prevent nicks and scratches, repairing them will restore your car's "like new" appearance. In this article, I discuss the methods I've used for years to repair chips and minor scratches.

### WHAT'S POSSIBLE & WHAT ISN'T

Touching up small nicks and scratches is well within the skill level of most do-it-yourself car enthusiasts. Some nicks can be quickly repaired with a small dab of touch-up paint, while others will require more time, effort and skill. It's important to know what you should and shouldn't tackle based on your knowledge of paint and tools.

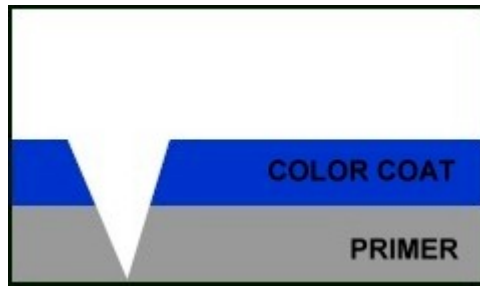
By far the easiest colors to repair are black and white. Black and white are very forgiving on shade variations. Conversely, metallic paints (those with metal flakes) can be quite difficult to match perfectly.



This is a medium scratch. You will be able to feel it with your fingernail, but it does not go through to the primer. The best way to fix this kind of scratch is to round down the edges using a medium grit rubbing compound and

bring back full gloss with a good polish.

Before you get started repairing nicks and scratches, you should know what to expect. Small nicks are easy to repair by filling the nick with paint, leveling the filled area, and buffing the repair area to blend and restore luster. Repairing small scratches, from a key or shopping cart, is similar, but more time consuming. Fixing a ding (a small dent which may or may not have a nick out of the paint) is not commonly possible by the do-it-yourselfer.



Deep scratches and chips that go through the color coat into the primer or down to the metal can only be repaired using touch-up paint.

Here are some other things you should know:

1. If you know your car's factory paint code, you can purchase an exact color match touch-up paint from your local dealer. If you don't know the factory paint code, look in your owner's manual for the location of the code, or ask your dealer. If you have a late model car, chances are you will find a color match at your local auto parts store.
2. Use a small artist's paint brush (#2 is ideal) or a round, wooden toothpick to apply the touch-up paint, not the fat brush included with the bottle of touch-up paint.
3. Always test the touch-up paint for color match in an inconspicuous area.
4. The area to be repaired must be perfectly clean and free of wax, rust and oils.
5. Don't attempt a touch-up if the temperature is below 60 degrees F.

Here's what you need to properly repair nicks and scratches:

1. Color matched touch-up paint
2. Automotive or metal primer
3. Citric acid based cleaner like P21S Total Auto Wash
4. Prep solvent (Prepsol) or denatured alcohol

5. Foam swabs (from electronics supply) or pop swabs containing alcohol
6. Meguiar's Unigrit Sanding Block and 1200 grit wet & dry sand paper
7. 3M medium grit hand rubbing compound
8. #2 Artist's paint brush and round toothpicks (wood)
9. Cotton terrycloth towels
10. New pencils with unused erasers
11. Rubber cement
12. Plastic cups
13. Blue masking tape (easy release type)
14. Large diameter paper hole punch (hand type)

### **PREPARATION PROCESS**

Before applying paint, you must prepare the chip to accept paint. Although paint may adhere for a while to a chip with rust, dirt or oil, eventually the repair will fail. The preparation process begins the day before you repair the paint chips and scratches.

The afternoon before starting your chip repairs, wash your car. After washing with your normal car wash, spray the areas you plan to repair with P21S Total Auto Wash, allow to sit for a minute, then scrub well with your sponge. P21S Total Auto Wash will remove all wax and oil from your paint. Dry your car thoroughly and put it away for the night.

After washing your car, make up several sanding pencils. Use a hole punch to punch out a few dots from the 1200 grit wet and dry paper. Apply the sandpaper dots to the end of your pencil eraser with rubber cement. Allow them to dry over night. You will use the sanding pencils to scuff-up and clean out nicks.

To make a chip ready for touch-up paint, you must make sure it does not have loose edges, clean it, and sand it. I use a toothpick to check the edges of a chip. If loose or lifted, I use the toothpick to knock off the loose paint. To clean, I like to use denatured alcohol or Prepsol and a foam swab. I pour a little bit into a plastic cup and use a foam swab to clean the chip and surrounding area.

Next, I use a sanding pencil to clean out the chip and

rough-up the edges. Simply dip the sanding pencil into a cup of clean water, dab a few drops of water on the chip, and gently rotate the sanding pencil over the chip. Keep the area you sand as small as possible. Rotating the sanding pencil back and forth in your fingers 8-10 times should be enough to do the job. If the chip has exposed bare metal, or if you can see rust forming, use the edge of the pencil erasure to remove the rust. When you finish sanding the chip, dry it with a terrycloth towel and clean it again with Prepsol and a foam swab.

### **APPLYING TOUCH-UP PAINT**

Once the damaged areas are cleaned and prepared, you can begin the touch-up itself. If a chip exposed bare metal, you must primer the chip before the color touch-up. After mixing thoroughly, pour or spray a small amount of your primer into a plastic cup. Next, use a clean toothpick to apply the primer. I do this by dipping just the tip (2-3 mm) of the toothpick into the primer. If I get a blob, I wipe it back.

Next, I touch the tip of the toothpick to the center of the chip and allow the paint to flow off of the toothpick into the chip. You will be amazed how well the capillary action works. If you prefer, you can use the #2 artist's brush. Do not allow the primer to overflow the sides of the chip. Allow the primer to dry for 2-3 hours. You can speed dry the primer with a hair dryer after allowing it to air dry for one hour. Simply wave the hair dryer 3-4 inches over the primered chip for 30-40 seconds. Do not touch the chips with your hands, as the oils from your skin will prevent the color coat from adhering.

Now, mix your color-matched paint thoroughly and pour a small amount into a clean plastic cup. As with the primer, use a clean toothpick or #2 artist's brush to apply the color coat. Touch the toothpick or brush to the center of the chip and allow capillary action to pull the paint into the chip. Apply a small dab at a time and allow it to dry for 2-3 hours. You must repeat this process several times, so don't try to fill the chip in one pass. Apply several thin layers, and you will get much better results.

The color touch-up process is complete when you have applied enough coats to slightly overflow the chip onto the roughed up area surrounding the chip. Once you've filled the chip, allow it to dry for another 24 to 48 hours. The longer the better.

I'm often asked if it's necessary to apply a clear coat over chip repairs. I don't think it's necessary or adds any noticeable difference. If you get the proper touch-up paint from your dealer, it will match without using a clearcoat.

However, if you're a purist in pursuit of perfection, substitute a clearcoat for the last 2-3 coats.

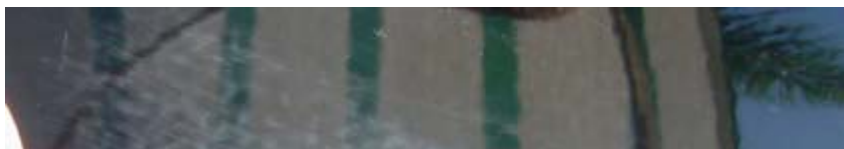


Here is a close-up picture of a scratch after being repaired with touch-up paint. The touch-up creates a raised surface. In order to perfect the repair, the raised touch-up paint must be leveled. I will use 1500 grit sand paper to level the repair. If you are new to wet sanding, use 2000 or 2500 grit paper. I recommend 3M brand paper or Meguiar's UniGrit.

### **LEVEL & BUFF**

Until you level or mill the paint repair down to the same plane as the original paint, all you'll have is an ugly looking blob. This is easily done using the Meguiar's Unigrit Sanding Block, which helps remove sags, runs and other isolated defects with surgical precision. Don't forget to soak it overnight before use, as the directions indicate.

To level your paint chips, use your finger to put a small dab of car shampoo on the chip repair for lubrication. Next, use the Unigrit Sanding Block or 3M sanding paper to mill the high spot off of the chip repair. I always pull the sanding block towards me. Never rub it back and forth or in a circle. When the block dries out, dip it into your bucket of water again. Keep the area well lubricated with water and shampoo. The sanding block will dull the paint. Don't fear, as your polish will easily restore the luster. When the surface looks level, dry it with a clean towel and inspect with your fingertips. If you can feel a high spot, it needs more work.





This picture shows the repair area after a couple of passes with 1500 grit wet & dry sand paper. The scratch touch-up is almost level, and you can clearly see the surface scratches (micro-marring) I put in the paint surface.

The final step is to buff out the repair with a good hand polish. I like to use 3M Perfect-It Rubbing Compound or Eagle One Scratch Remover (fine or medium grit compounds) followed by Meguiar's Hand Polish or 3M Perfect-It Swirl Remover. Apply the compound and polish to a clean foam applicator pad, rub into the paint area using a short back and forth motion (not in circles), then buff out with a clean terrycloth towel. Tada! The blemish is gone.



The next step is to compound and polish. I did fewer than 20 passes (strokes) with rubbing compound. It does not take much to remove surface scratches. To completely polish and restore the surface, I polished the area twice with 3M Perfect-It for Dark Cars.



As you can see, the repair and paint finish turned out to be quite beautiful. There are no visible surface marks in the paint, and the touch-up cannot be detected.

### **SUMMARY**

Learning to repair paint chips and scratches is not difficult. After buffing out a few scratches and filling a couple of chips, you will become comfortable with the process. The reward is a great looking car and a lot of money saved. Most paint shops won't bother with repairing chips because it's often faster for them to repaint an entire panel. If you keep up with repairing the chips and scratches, you can avoid repainting for a long time.

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