

# INSTALLATION MISTAKES *(and how to avoid them)*

Some of the most common wraps mistakes are actually simple to rectify

BY JUSTIN PATE



Comparing buffers on squeegees—the white buffer is thicker and widely used while the red buffer (Flexifelt) is the thinner buffer that I prefer. It is widely used in Europe.



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## SQUEEGEE BUFFER TOO THICK

One of the biggest mistakes an installer makes is using a squeegee with a buffer that's too thick. There are lots of types of squeegee buffers available today, and in my opinion a majority of them are way too thick.



A thick buffer may seem like a good idea because of the perceived extra protective qualities, but a squeegee with a thick buffer is only really effective on flat areas. On any kind of curve, a thick buffer will push the film, and that will quickly cause the film to bunch up. Since vehicles are full of curves, this means that an installer is forced to resort to using a heat gun to soften out bunched-up film. This really slows down the installation process and often leads to overstretching.

Using a squeegee with a thin buffer is key to taking the film farther, creating speed and using less heat. I dramatize this whenever I teach wrap workshops. First I let the students start wrapping with their thick buffers. After awhile, I give them a thinner buffer and the difference is always dramatic. The students realize that the majority of problems they were having on vehicles wasn't due to poor technique or because of using the wrong media—it was simply because the buffer on their squeegees was too thick.

This may sound way too simple, but the majority of what an installer does on a vehicle is with a squeegee. From this perspective, using the right buffer is clearly essential and it helps turn the wrapping process into something that's fun and exciting rather than tedious and frustrating.



The knife you use for wraps installation can affect the quality of your installation. For vehicle graphic installations, it's best to use a multi-cartridge knife loaded with blades that feature a 30-degree angle.

## WRONG KNIFE SYNDROME

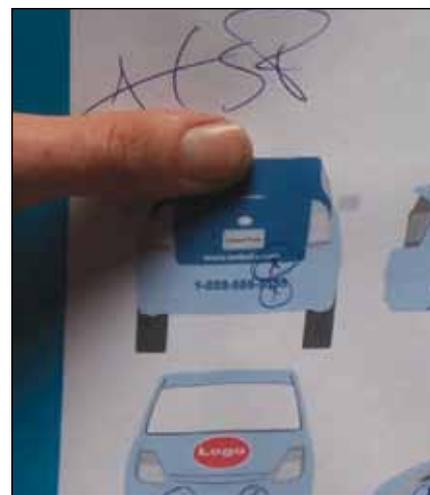
Making precise and mistake-free cuts is essential to achieving professional results. One of the biggest hurdles that keeps installers from reaching this point is using a single blade knife and a standard 45 degree angle tip.

The problem with this combination is that it tempts wraps installers into pushing a blade past dullness instead of going back to the tool bag for a replacement. The reason? The 45 degree angle tip is flat and dulls quickly, and since there's only one blade in the knife, replacements are inconvenient.

The best knife combination for vehicle graphic installations is to use a multi-cartridge knife loaded with blades that have a 30 degree angle. Blade replacement is done simply by snapping off a tip and sliding the cartridge to the next blade. An installer should always snap off the old blade before cutting in order to ensure a sharp tip. This means that 2-3 whole blades should be used per full vehicle wrap.

Using a multi-cartridge knife allows an installer to have a back-up blade ready and maintains the flow of the job.

The 30-degree tip is far superior to the standard 45-degree for car wrapping. The 30-degree blade stays sharper longer, make very precise cuts and is great for popping bubbles. My favorite multi-cartridge knife is the NT Cutter A-551P and for blades its Olfa Snap-off Art Blades. I like the NT Cutter AD 30-degree blades, but they don't fit properly in the A551P knife.



Use a pre-inspection sheet to document existing damage. The easiest way is to mark any scratches, dents, cracks, etc. on a printed vehicle outline. The client and installer should both sign this before wrapping begins.

## SKIPPED THE PRE-INSPECTION SHEET

When the vehicle is clean and the juices are flowing, an installer wants to start wrapping because that's when the fun begins. However, what often gets skipped over during this crucial little window is creating a pre-inspection sheet. A pre-inspection sheet is detailed documentation of any existing damage on the vehicle at the time it is wrapped. Failure to note damage on such a document will often result in post-installation problems.

The easiest way to document damage is to mark any scratches/dents/cracks etc. on a printed vehicle outline that the installer and client both sign and date. Pictures should also be taken, sent to the client and stored on a hard drive.

A pre-inspection sheet should be completed whether you are a certified installer or not. The reason is that when the graphics are removed and there is paint or clear coat failure, a case can be made if it was due to the film or if it was pre-existing damage. Failing to take five minutes to make a pre-inspection sheet is simply asking for hours of trouble down the road as it can lead to problems with the client or the manufacturers refusing to provide support (and rightfully so).

## CLEANED BUT NOT CLEAN

One of the first things I cover in my hands-on workshops is cleaning. I discuss how important it is and show the students how to clean a vehicle properly. Use a two-step cleaning process: place a squeegee in a paper towel to get hard-to-reach areas, and put extra attention on the critical areas. I then let them clean two or three vehicles depending on the class size. When they say they are finished, I take the group around each car to check their results. To their amazement, I always finish a check over with paper towels covered in dirt. This is when I hammer home the importance of cleaning and the need to be extra thorough.



The vehicle is truly clean only when a wipe down with a clean paper towel comes away clean.

The vehicle is truly clean only when a wipe down with a clean paper towel comes away clean. A perfectly clean vehicle is the key to durability and quality. Rushing the cleaning process or failing to be super thorough is an easy mistake that often leads to mediocre results.

## TOO COLD TO HOLD

One of the best things I did to raise the bar in terms of quality and durability was taking the time to gain a thorough knowledge of the properties of the film and, particularly, the adhesive. Once the film is applied to the vehicle it actually takes around 24 hours to reach optimal adhesion. The reason for this is that the adhesive is actually flowing into the application surface (the paint of a vehicle looks flat but under a microscope like the Grand Tetons. This flowing of the adhesive creates more surface area for it to bond to.



One of the big keys to achieving maximum adhesion and proper flow is temperature. Adhesive will stop flowing if it's below a certain temperature. This doesn't matter if the wrap has been on for a year but it is for a wrap that has just been completed. For example, if you finish wrapping a vehicle and throw it right out into the cold, this spells trouble for long-term durability.

My buddy Rich up in Alaska learned quite quickly, as you can imagine. Therefore, if the outside temperature is below 45-50 degrees (the exact temperature depends on the film/manufacturer) keep the vehicle inside the heated workspace overnight. If this isn't possible then warm the entire wrap up with a heat gun or a portable infrared light. Heating the wrap yourself is a great way to speed up the bonding process, get the client on the road and you on the way home with peace of mind.

CONTINUED



Using edge sealer on the edges of wheel wells and underneath the bumper will help prevent winter road salt and chemicals from reacting with adhesive, which leads to peeling.

### EDGE SEAL TO STOP THE PEEL

For the longest time I only used edge sealer to secure the edges of perforated window film. However, I noticed that during the winter months the edges on wheel wells and underneath the bumper would peel in spots—even if I knew that I had cleaned and installed the wrap properly.

I talked about this with fellow installers and the overall consensus was that the salt and chemicals that are used to melt the ice on the roads was eating at the adhesive. To keep this from happening, the idea was to apply a coat of edge seal on these critical areas. This protective layer worked like a charm. This led me to start applying a coat of edge seal to the bottom area of a vehicle as part of my post-install routine. Skipping this step is just asking for trouble.



Bunched film on the corners of bumpers often results in overstretching and frustration. The key to these corners on the bumper is to set the film up properly.



To avoid bunching on bumpers, have one installer hold the film away from the corner while other installer warms the film with a heat gun. Once the film is warm, one installer can pull the film around the corner horizontally while the other pulls the film away from the center at a 45-degree angle.

### BUNCHING ON THE BUMPERS

Bumpers are almost always the trickiest section on the vehicle to wrap. The main reason for this is that the film tends to bunch up dramatically on the corners. When the film bunches on the corners, it presents installers with an extremely difficult situation that often results in overstretching and frustration.

The key to these corners on the bumper is to set the film up properly. To achieve this, one installer holds the film away from the corner while the other installer warms the film with a heat gun. Once the film is warm enough, one installer pulls the film around the corner horizontally while the other installer pulls the film away from the center at a 45-degree angle.

By pulling away at a 45 degree angle and horizontally, the film flattens around the corners. This is key. If the film forms around the corners flat, it eliminates bunching, which makes the rest of the bumper feel like you're going downhill instead of climbing up a mountain.

SDG



Be especially careful when working with adhesive remover. Because it is an oil-based product, any residual drips that go un-cleaned will result in poor adhesion of the wrap.

### SNEAKY ADHESIVE REMOVER

Oil is the enemy of durability for car wraps. One sneaky way that oil can end up on the vehicle actually comes during the adhesive removal process. The focus for the installer during this process is taking off the adhesive but, what often happens is that the adhesive remover drips down onto a bumper or around an edge.

Adhesive removers generally contain an oil based product that means trouble if these sneaky drips are overlooked. The trick to keep this from happening is to place a paper towel under the adhesive area before spraying on the adhesive remover. The paper towel sops up the drips and keeps the focus area around the adhesive.