



## One Piece, Full Roof Installation

**PLEASE READ COMPLETE INSTRUCTIONS PRIOR TO STARTING THE INSTALLATION**

***Application to be preformed by a professional installer***

*COOPER FLAGS* utilizes 3M Graphic films with Comply™ Performance for dry applications

### **What Is Comply Performance?**

Comply performance adds a unique characteristic to the film adhesive that enables faster application with very few air bubbles, whether it is applied by professional or amateur installers. Films with Comply performance have a network of microstructure air channels in the adhesive. These channels allow air to escape laterally beneath the film. An air bubble trapped under the film can be rubbed out easily and usually does not require making an air release hole with an air release tool or pin.

### **Understanding Levels Of Adhesion**

The amount of adhesion attained by films with Comply performance can be categorized in three levels: **Initial bond**, **functional bond** and **ultimate bond**. Although these films typically require less application pressure than conventional graphic films, the pressure must be sufficient for the film to bond properly to the application surface.

- Initial bond** occurs while you are applying the film to the application surface. At this time, there is only enough adhesion to hold the graphic to the application surface. In cooler temperatures, more pressure is needed during application.
- Functional bond** usually occurs within a few minutes of application at 60°F (16°C) or warmer. At this time, there is enough adhesive strength to allow the removal of premask or to transport a vehicle to which the film is applied. In cooler temperatures, the functional bond takes longer to achieve.
- Ultimate bond**, which is the maximum adhesive strength the film achieves, can take a few days depending on the substrate and temperature. A hotter environment takes a shorter time and a cooler environment takes a longer time.

## Tools and Materials

Applicator / Squeegee

Air Release Tool / pin

Masking Tape

Razor Blade / Cutting Knives

Mild detergent

(Such as joy, containing no lotions, soaps, oils, waxes or enzymes)

Spray Bottle

Lint-free clothes

Can of compressed air (removes dirt and moisture from tight areas)

Solvent for removing tar, wax, etc. from auto finishes. (Found at most auto parts stores)

## Surface Preparation:

All substrates must be considered contaminated. Clean surface immediately before applying graphic.

1. Prepare a solution of 1/3 teaspoon (2 ml) of concentrated detergent, containing no lotions, soaps, oils, waxes or enzymes, for each 1-quart (1 liter) of clean, cool water. After mixing the solution, pour some or all of it into a spray bottle. Thoroughly clean the area where graphics will be applied, paying attention to the areas where the rubber seal meets the roof. Wrapping a clean cloth around the squeegee and sliding the edge of the squeegee between the rubber and roof will ensure a clean edge when graphic is trimmed. Rinse with clean water.
2. Dry the surface thoroughly with a clean lint-free cloth. A heat gun or hair drier may be used to help accelerate drying.
3. If your vehicle has been waxed, to ensure proper adhesion you should remove the wax with a 3M solvent / adhesive remover that can be purchased at most automotive stores. Saturate a clean cloth with the solvent, and wipe entire area. Wipe with a clean lint-free cloth before the solvent evaporates. Make sure the surface is completely dry, use heat to dry any retained solvents. Make sure area under the rubber seal is dry.
4. A final cleaning with isopropyl alcohol will ensure any residue is removed; you must wipe the surface before it evaporates.

## Pre- Application Information:

### **THIS IS A DRY APPLICATION ONLY – DO NOT APPLY IT WET**

The use of any liquid will prevent the adhesive from properly adhering to the surface and will void all manufacturers' warranty.

Unscrew the antenna and then remove the base cover by twisting counter clockwise. Base is not removable on 2005 and later models.

Do not lay the graphics on the floor or other contaminated surfaces, it will pick up dirt on the back and transfer to your clean surface.

Grasping the edge of the graphic may transfer body oils and dirt to the adhesive. To minimize any problems with adhesion at those points, grasp the film as far into the graphic as possible with out wrinkling the film.

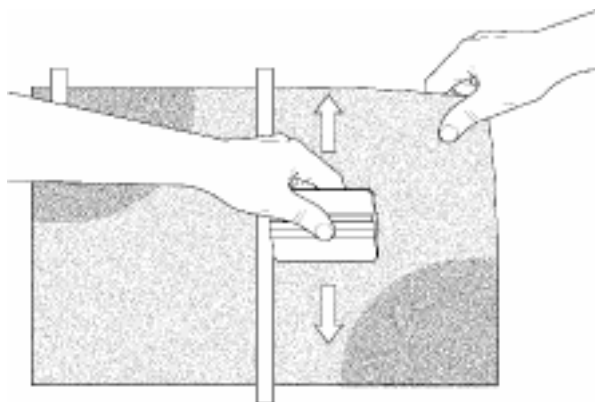
## Application sequence for applying one piece roof graphic:

Following directions on the package, apply 3M 94 Primer (small white vial) to the area where the roof meets the rubber seal along the sides and above the windshield. Apply primer to the metal surface right up to the edge of the rubber and allow to dry for 5 minute When properly applied, 3M 94 Primer will increase the longevity of your graphic.

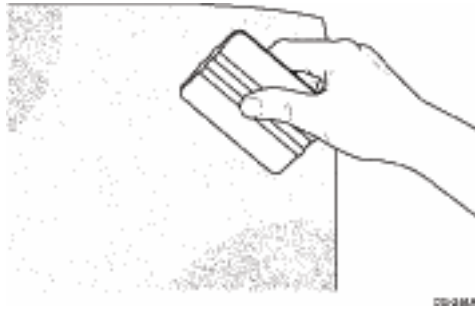
1. Position the graphic on the clean roof; the proper position for flags is for viewing from the driver's side of the car.
2. Once you have the graphic in the desired position, cut a hole for the antenna mount starting with the small raised bump on the top. For 2005 and 2006 cut a slit from the hole to about ½ in from the front of the mount, and then a ½ inch horizontal cut, making a T, to prevent it from continuing. Now do the same for the rear of the mount, but be very careful not to over cut it, you can always cut more later, if you need to. Final trimming will be done later.
3. Carefully fold the back half of graphic over and onto the front half. Be very careful not to cause wrinkles or creases. It is best to have a helper for this step, step #4, and step #10
4. Flick a corner of the film with your finger or bend the corner to separate the liner from the adhesive. The procedure for removing the liner, whether just a small part of it or the entire liner is to pull it away from the graphic at a 180 degree angle with a smooth continuous motion. Remove the liner back to the fold, cut it off and discard.

**Note:** Always remove the liner from the graphic rather than the graphic from the liner. This method helps minimize stretching or wrinkling of the graphic.

5. Bring the graphic back into position on the rear section of the roof. Check alignment of the hole cut for the antenna and make adjustments as needed.
6. Check position again making sure the graphic is laying flat. Set the graphic by making a pass with the squeegee at the point (just before) where the liner was removed (indicated by the line in the illustration). Squeegee using light pressure to where the roof starts to curve down on either side.
7. Make sure rear section is flat and in position. Lift and straighten vinyl as needed. Carefully lift the vinyl off of and away from the antenna mount allowing it to drop down around the base as you squeegee closer to and around the mount.
8. Starting Squeegee the graphic at the set point using moderately firm, *overlapping* strokes, making sure the applicator is flat with the substrate along the entire length of the stroke. Lift and straighten vinyl as needed. Note: Pull the squeegee rather than pushing it. Pushing can stretch the graphic.



9. Pull the film away where you tacked it with your thumb and then squeegee that area; this prevents wrinkles.



10. Raise the front section and remove the liner starting at the cut line. Lift and straighten vinyl as needed to get everything in to position, flat and smooth. Repeat Step # 8
11. Continue to squeegee the graphic down towards the edges, if the graphic starts to bunch up or ruffle, lift and lightly apply tension as you work the vinyl. This is most important when forming the vinyl around the front corners. If necessary apply just enough heat to help soften and relax the vinyl. Using your free hand, hold and work the vinyl while continuing to squeegee, with the application of heat and squeegee technique, you will be able to work the ruffles all the way out past the roofs edge into the excess vinyl to be cut away.
12. Using the edge of the squeegee, define the edge of the rubber seal where it meets the roof. You may have to pop the vinyl up around the edge and hold it out while you tuck it to the rubber. (be careful not to pop it off the surface once you have made contact with the primer) Using a **sharp blade** and **light pressure**, remove the excess vinyl from the side rubber seal by cutting it approximately 1/8 of an inch onto the rubber seal, be very careful not to cut your seal. Now carefully tuck the vinyl down behind the seal. Repeat this step for the windshield but leaving ¼ of an inch to tuck behind the rubber. Be very careful around the rubber corner caps, you can pull the caps out carefully, where it meets the windshield rubber, to help tuck it in. If you leave too much excess, it will be very difficult to get it behind the rubber.
13. Define the edge of the roof at the rear of the graphics and carefully follow the edge of the roofline to remove the excess vinyl.
14. Trim around antenna mount by releasing the excess vinyl from the sides of the mount and tucking it to the rubber seal. Carefully cut the excess vinyl away and reinstall antenna.

Always perform this **CRITICAL** final step.

**Final Squeegeeing** is one of the most important factors in **Preventing Premature Graphic Failure** due to edge lifting.

- Wait at least several minutes after the application to allow the adhesion to build to the functional bond level.
- Re-squeegee all graphic edges and seams using firm pressure. Use a squeegee with a soft cloth.

**Note:** Re-squeegeeing the edges before the adhesive has reached the functional bond level can create large bubbles under the graphic or cause wrinkles.

If there are air bubbles in your installed graphic, they can be removed easily. Just apply pressure to the middle of the bubble with your thumb and rub out toward the bubble edges. The air will disperse along the adhesive channels. There is no need to make air release holes unless the air bubble is extremely large. In that case, use an air release tool and remove the air.

