



## TECHNICAL BULLETIN 6.02

### Removal of Vinyl Graphic Products

This bulletin details specific removal instructions for vinyl graphic products. Removal of vinyl graphic products with permanent adhesive, different film characteristics (e.g., cast vs. polyester) and the substrate surface (e.g., painted vs. unpainted) will combine to make each removal slightly different. These instructions will provide general removal methods. Always test a small area before commencing vinyl graphic removal to prevent substrate damage.

#### SUGGESTED REMOVAL TOOLS:

- J2 Jiffy Steamer P/N 7503-55
- Esteam™ Handheld Steamer P/N 7504-55
- Black & Decker Heat Gun P/N 9751-55
- Scotch Brite 4" Removal Disc P/N 7501-55
- Scotch Brite 6" Removal Disc P/N 7501-55
- Acti-sol (Citrus based adhesive remover) P/N 0664-55
- Plastic Squeegee P/N 088-55
- 1" Round Application Brush P/N 380-55
- Putty knife, Knife, or Razor blade

#### STEAMER METHOD:

Follow operating instructions provided with J2 Jiffy Steamer or Esteam™ Handheld Steamer.

1. Heat one edge of the vinyl graphic by holding the steamer approximately 1 to 2 inches away from the surface.
2. Heat vinyl graphic for approximately 30 to 60 seconds then loosen the vinyl graphic by pulling back slowly.
3. Proceed at a slow, steady pace while heating and pulling the vinyl graphic at less than 90° angle. This usually prevents the vinyl from breaking and will remove most of the adhesive from the substrate.
4. If the vinyl graphic becomes hard to pull, stop, heat the vinyl graphic, and proceed with removal.

#### HEAT GUN METHOD:

When using a heat gun use caution, damage to the substrate will occur if heat is concentrated in one area for more than 30 seconds.

1. Heat the entire vinyl graphic by holding the heat gun 6 to 12 inches away for the surface.
2. After heating the entire vinyl graphic for approximately 1 to 2 minutes, loosen one edge of the vinyl graphic by pulling back slowly.
3. Proceed at a slow, steady pace while heating and pulling the vinyl graphic at less than 90° angle. This usually prevents the vinyl from breaking and will remove most of the adhesive from the substrate.
4. If the vinyl graphic becomes hard to pull, stop, heat the vinyl graphic, and proceed with removal.

#### COLD PULL METHOD:

In many instances, it is merely a matter of picking or lifting an edge of a vinyl graphic and pulling to remove. Vinyl graphics that have been applied for extended period of time, this method is not recommended.

1. Temperature required for this method is 50° and above. The greater the ambient and surface temperature the better success you will achieve.
2. Using your fingernail, putty knife, knife or razor blade; carefully lift an edge of the vinyl graphic. Use caution while doing this not to damage the substrate.
3. Once an edge has been lifted, grasp the vinyl graphic with your fingers and pull the decal away from the substrate.
4. Minimizing the angle of pull will reduce the adhesive left on the substrate. Typically a 45° or less angle will meet this requirement. Removal angle greater than 45° will result in more adhesive left on the substrate.

#### SCOTCH BRITE REMOVAL DISC METHOD:

The removal disc is used primarily for removing vinyl pinstriping and adhesive residue. The discs are faster and cleaner than solvent or chemical adhesive removers are. Safe for most painted surfaces like acrylic enamel and urethane paints. *Not recommended for acrylic lacquer paints.*

1. Recommended tools that will work with the 4-inch and 6-inch removal disc.

##### Air Tools:

- Astro-Straight Shaft Model No. AP523
- Chicago Pneumatic Air Drill Model No. 788
- Desoutter-Straight Shaft Model 383
- Dotco Air Drill Model No. 15C2992-01
- Dynabrade Tool-Straight Shaft Model No. 51059
- Florida Pneumatic--Straight Shaft Model No. 4251
- Ingersoll Rand-Straight Shaft Model 5LK1
- Sioux Tool-Straight Line Model 2L1300 A.P.
- Viking-Straight Shaft Model No. V-316

##### Electric Tools:

- Black & Decker Model No. 6040
- Milwaukee Tool Model No. 0141-1

2. Properly tighten holder in collet or chuck of portable tool. Twist disc assembly into Roloc™ Holder. Be certain assembly is securely tightened.
3. With tool running, bring outer edges of discs into contact with vinyl pinstripe or adhesive residue to be removed Light contact pressure is all that is needed.
4. Guide the tool so that the tool is working counter to the directional rotation of the disc.

##### - CAUTION:

Always use protective eyewear and/or face shield as recommended ANSI Standard Z87.1.

- DO NOT EXCEED MOS. (Maximum Operating Speed) 4,500 RPM spindle speed. Required operating speed 2,00-3,00 SFPM (Surface Feet Per Minute) when disc is in contact with the work surface.

##### - REQUIRED SPEED:

4-inch Discs-2,500-3,000 RPMs    6-inch Discs-1,300-1,900 RPMs

#### CHEMICAL REMOVAL METHOD:

Most chemical vinyl and adhesive removers are compatible with aluminum, fiberglass, and OEM painted surfaces. Before using any chemical products, read container label and MSDS.

9. Make certain that the surface temperature is at least 50°F (10°C) and no warmer than 85°F (29°C) before application of chemical product.
10. Check for possible paint damage.
  - a. Apply chemical remover to a small area of your painted surface.
  - b. Allow remover to dry for at least 15 minutes.
  - c. Remove the chemical remover from the surface.
  - d. Check for paint damage. If any occurs, the remover product is **NOT RECOMMENDED**.
11. Clean the surface and vinyl graphic with detergent and water. Dry the surface thoroughly before proceeding.
12. To minimize cleanup of chemical removers, one of the following two methods should be used:
  - a. Mask the surface around vinyl graphic and make a "drip trough" with masking tape or cardboard to prevent residue dripping onto surface around vinyl graphic.
  - b. Spray the surface around the edge of the vinyl graphic with a commercially available release agent, such as a vegetable cooking spray, and form a "drip trough" with masking tape or cardboard along bottom to prevent residue dripping onto the surface below vinyl graphic. Release agent sprayed on vinyl graphic will need removed before chemical removers are used.

1. Apply chemical remover according to label instructions.
2. Allow chemical remover to dry a least 15 minutes.
3. Test for removability by grasping a corner of the vinyl graphic and pulling from the surface at less than a 90° angle using gentle and moderate force.
4. The vinyl graphic should stretch like rubber while being removed. If vinyl seems brittle, stop and apply a second coat of chemical remover. Allow it to dry then proceed with the removal.
5. When the vinyl graphic is completely removed, pull off the masking tape but leave the drip trough.
6. Apply chemical adhesive remover onto any adhesive residue remaining.
7. Remove the adhesive by scraping with a plastic squeegee or rivet brush. Once loosened, wipe residue with a cloth saturated with adhesive remover. Repeat these steps if necessary.
8. Remove the drip trough. Clean the entire surface with an Acti-sol™ saturated cloth, followed by washing the surface with detergent and water. Dry the surface. Failure to properly clean and remove all adhesive the remover will adversely affect the adhesion of new vinyl graphics applied to the surface.

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For technical assistance relating to specific application questions or Sharpline's product line,  
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