Overview

This bulletin provides basic procedures for installing 3M graphic films on trailers. Material covered includes recommended product combinations, application methods for several trailer types, and instructions on properly finishing film application to various types of rivets on trailers. Users should also refer to their products' product bulletins for specific details that may affect installation.

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Recommended Product Combinations

3M has a wide range of graphic products that can be used for trailer applications. The table below lists some of the more popular product combinations for use as full sheets or large cut out shapes. It does NOT account for small cut letters. Refer to the products' product bulletins for details on individual products when specifying product combinations for finished graphics.

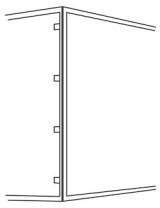
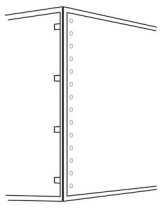
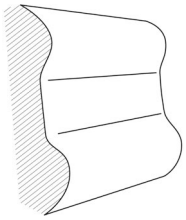
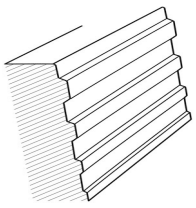
Product availability varies by region. Contact a local 3M sales representative or application engineer for details.

Base Film(s)	Inks	Graphic Protection	Graphic Construction Expectations and Limitations
IJ180Cv3-10; IJ180mC-10; LX480mC; IJ3552C; PL50mC; IJ680CR-10; IJ5100R	Digital-Latex	9760LX clearcoat	• SCPM-44X is required. • 9760LX may scratch during installation if a rivet brush is used. • 9760LX may micro-crack if premask is not removed at an 180° angle. • The surface of 9760LX may dull if it is scrubbed with alcohols or solvents. • 9760LX is more likely to be damaged by cleaners outside the 3 to 11 pH range.
		8518; 8519; 8520; 8428G; 8418; 8528; 8548G; 8549L; 8550M	• Eligible for longer 3M™ MCS™ Warranty compared to graphics with 9760LX. • Less prone to degradation from cleaners outside 3 to 11 pH compared to 9760LX. • Better removal expected compared to graphics with 9760LX. • May tent more compared to graphics with 9760LX around different rivet types. • Application tapes are not required for full sheeted graphics.
IJ180Cv3-10; IJ180mC-10; SV480mC; IJ3552C; IJ680CR-10; IJ5100R	Digital - Solvent	9740i clearcoat	• SCPM-44X is required. • Film edges may curl if not properly dried before installation. • 9740i may crack if overstretched in recessed areas.
		8518; 8519; 8520; 8428G; 8418; 8528; 8548G; 8549L; 8550M	• Eligible for longer 3M™ MCS™ Warranty compared to graphics made with 9740i. • Less prone to degradation from cleaners outside 3 to 11 pH compared to graphics made with 9740i. • Better removal expected compared to graphics made with 9740i. • May tent around different rivet types • Film edges may curl if not properly dried before installation. • Application tapes are not required for full sheeted graphics

Base Film(s)	Inks	Graphic Protection	Graphic Construction Expectations and Limitations
IJ180Cv3-10; IJ180mC-10; LX/SV480mC; IJ3552C; PL50mC; IJ680CR-10; IJ5100R	Digital - UV	9740i clear coat	• SCPM-44X is required. • Inks may crack if too much heat is used when applying graphics around rivets, complex curves, or deep contours. • Graphics made with 9740i may crack if overstretched in recessed areas.
		8518; 8519; 8520; 8428G; 8418; 8528; 8548G; 8549L; 8550M	• Eligible for longer 3M™ MCS™ Warranty compared to graphics made with 9740i. • Less prone to degradation from cleaners outside 3 to 11 pH compared to graphics made with 9740i. • Better removal expected compared to graphics made with 9740i. • Inks may crack if too much heat is used when applying graphics around rivets, complex curves, or deep contours. • Heat assisted lamination required. • Application tapes are not required for full sheeted graphics.
180mC-10; LX/SV480mC; 680CR-10	Screen Print - 9800 Ink Series	9740i clear coat	• SCPM-44X is required. • Inks may crack if too much heat is used when applying graphics around rivets, complex curves, or deep contours. • 9740i may crack if overstretched in recessed areas.
983 Conspicuity Tape	N/A	N/A	N/A

Substrates

Surface Types

Flat	Rivets	Simple Curves	Corrugations
			

Trailers may contain some or all these surface types shown in the chart above. Installers should be familiar with the products used to make the finished graphic prior to starting the installation. Refer to the products' product bulletins for details on the characteristics of the film and graphic protection options used.

Substrate Material

Application surfaces on trailers can be painted metal substrates, powder-coated panels, stainless steel, reinforced plastic, an existing graphic, or some other composition. Always use the 3M™ Adhesion Test Kit to determine if the product choices will meet acceptable adhesion levels.

- Painted metal surfaces may contain ceramic coatings that need to be removed before installation.

NOTE

3M recommends removing ceramic coatings mechanically rather than chemically as the alkaline-based chemicals used are likely to also damage the trailer's paint.

- Stainless steel trailers should use recommended products like 3M™ Print Wrap Film IJ180mC-10SLS.
- 3M recommends using IJ180mC-10LSE on powder-coated panels as this film provides better adhesion to such substrates.
- Do NOT apply reflective films directly to stainless steel, as the graphic could prematurely deteriorate during maintenance. Use of a barrier layer such as IJ180Cv3 between the stainless steel and the reflective film may be acceptable.
- Reinforced plastic substrates should be tested for outgassing before application to help prevent trapped air bubbles occurring. Outgassing is especially likely when reflective films are applied.
- Applying a new graphic layer over existing 3M graphics can be done with some additional preparation of the substrate.
- 3M does NOT recommend applying any type of graphics to soft-sided or curtain trailers. Initial adhesion may appear to be acceptable but over time the graphics' adhesion will drop significantly. This will cause the graphics to curl and fall off of the soft-sided or curtain trailers.

Substrate Preparation

See 3M Instruction Bulletin Application: Substrate Selection and Preparation for details on cleaning specific substrates and any special application techniques that are required.

- All substrates must be considered contaminated and must be cleaned immediately prior to application of graphics. Dust and other contaminants can collect quickly on the substrate and prevent the film from adhering properly.
- If the substrate has dirt or loose paint on it, the film will adhere to that, rather than to the substrate itself. If the film does not make enough contact with a clean, dry substrate, it will not stick well, leading to premature graphic failure.
- When necessary, degrease the application surface using the 3M™ Surface Preparation System.
- Ensure the substrate, rivets, and seams are thoroughly dry before installing graphics. Film adheres poorly even to a properly cleaned substrate if it is still moist.

Temperature and Environment

Apply graphics when the air, film, and substrate temperatures are within the range specified in each product's product bulletin. If the temperature ranges of various components in the graphic construction vary, use the most conservative values. Applying film outside of the recommended temperature range may prevent the graphic from performing as expected.

Conditions Affecting Graphic Application

- Graphics applied above the maximum recommended application temperature may pre-adhere.
- Graphics constructed with Controltac™ films may lose their positionability feature when applied above the maximum recommended application temperature.
- The temperature of the substrate must be above the dew point to prevent moisture condensing on the surface.
- It may be difficult to keep the substrate dry in very humid conditions.
- Film becomes stiff and brittle when below the minimum recommended application temperature. Additionally, the film's adhesive cannot bond adequately with the substrate at these temperatures.
- Substrates may be heated in order to raise the surface temperature above the minimum specified. Use an appropriate portable heater or heat lamps. Always check to ensure that heat will not damage the substrate.

Tools

- Lint-free cloths
- Solvent cleaner (e.g. 3M™ General Purpose Adhesive Cleaner) if needed
- A mixture of 70% isopropyl alcohol and 30% water (IPA)
- 3M™ Surface Preparation System
- 3M™ Tape Primer 94
- Scotch™ Masking Tape, 2 in. (5.1 cm) wide, or magnets
- 3M™ Plastic Applicator PA-1 (Blue or Gold)
  - Adding a suede covering or other protective covering to the squeegee will reduce friction and help prevent scratches on the surface of the graphics.
  - The gold applicator is most commonly used. It is stiffer than the blue applicator, allowing for maximum application pressure. These squeegees should NOT be used with application tapes.
  - The blue applicator is used when more flexibility is needed. It is softer, and can mold around contours and corrugations.
- Pin, or 3M™ Air Release Tool 391X*
- 3M™ Power Grip Magic Pad Rivet Applicator CMP-1 ("CMP-1")
- 3M™ Power Grip Multi-Pin Rivet Air Release Tool MPP-1 ("MPP-1")
- RollePro™ foam application roller
- 3M™ Rivet Brush RBA-1 or RBA-3
- Cutting tools, such as a razor blade with a safety holder
- Industrial heat gun capable of attaining at least 500°F (260°C)

General Application Methods

Application of large sheets of graphics to trailers involves dry fitting the graphics to ensure they cover the entire trailer. There should be enough “bleed” in the graphics to allow the panels to slightly extend past the top and bottom of the trailer.

Typically, graphics will cover the trailer substrate and will NOT extend to the bare metal frame of the trailer. The frame of the trailer is usually fitted with reflective conspicuity tape.

Always adjust the graphics to optimize brand messaging, starting in the rear of the trailer and working towards the front. This is essential because proper overlaps of graphic panels help minimize edge lifting during graphic maintenance.

Flat, Flat with Rivet Trailers

1. Clean the substrate using appropriate cleaners and techniques. See 3M Instruction Bulletin Application: Substrate Selection and Preparation for details.
2. Set the first panel to the rear of the trailer, holding it in place with masking tape or magnets.
3. Starting at the top of the film panel, remove as much liner as is comfortable and tack the film into position at the top of the trailer frame.
4. Remove the entire liner and tack the film to the bottom of the trailer frame. Alternatively, installers may gradually remove the liner as they squeegee the film to the substrate. (See Step 5.)

   NOTE

   Removing the entire liner at this stage only works with products that have Controltac™ and Comply™ features in their liner. Check the product bulletin for details.

5. Squeegee the film to the substrate. Work from the center of the graphic out to each edge, and from the top of the graphic to the bottom, in order to allow air to escape from under the film.
6. Take into consideration which rivet finishing method will be used, as this will affect the technique for applying the film to flat areas as well. See the “Rivets” section on page 7 for details.
7. Remove any application tape at an 180° angle.

   NOTE

   Failure to remove application tape at an 180° angle may cause micro-cracking in graphics with a 9760LX clearcoat and may cause appearance issues during maintenance.

8. Finish the rivets. See the “Rivets” section on page 7 for details.
9. Cut all seams on the trailer.

   NOTE

   Failure to cut seams will result in film cracking during maintenance.

10. Repeat Steps 1 through 9 with subsequent panels, moving toward the front of the trailer, until the entire graphic is applied to the trailer.
11. Re-squeegee all edges after completing the entire graphic installation.

Horizontal Corrugated with Rivet Trailers

NOTE

Maintain as consistent an installation process as possible to help ensure proper panel matching.

1. Clean the substrate using appropriate cleaners and techniques. See 3M Instruction Bulletin Application: Substrate Selection and Preparation for details.
   - Installers must wrap the film around corrugations. Do NOT bridge the film from one corrugation to the next and then use heat to push the film into the flat area. The film will tent in the valleys and cause premature graphic failure.
   - The profile of a standard corrugation has flat areas alternating with raised, rounded areas. Figure 1 identifies the parts of the profile.
2. Use masking tape or magnets to set the first panel to the rear of the trailer so the top edge is on a flat surface.
3. Use the edge of the squeegee to bead the upper valley. See Figure 2.
4. Apply the film to the top of the corrugation with the corner of the squeegee. See Figure 3.

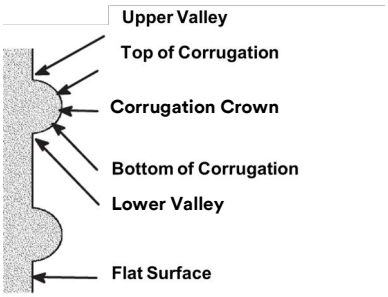


Figure 1. Profile of a Standard Corrugation

Figure 2. Bead the upper valley.

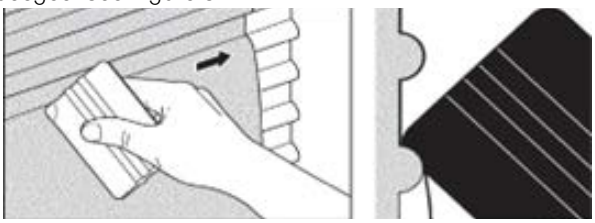


Figure 3. Squeegee the crown of the corrugation.

5. Squeegee the film along the crown of the corrugation using the edge of the squeegee. Use enough pressure to make the squeegee curl around the corrugation crown. This makes the film drape under the corrugation without pre-adhering it to the flat surface below. See Figure 4.
6. Apply the film to the bottom of the corrugation with the corner of the squeegee. See Figure 5.
7. Use the edge of the squeegee to bead the lower valley.

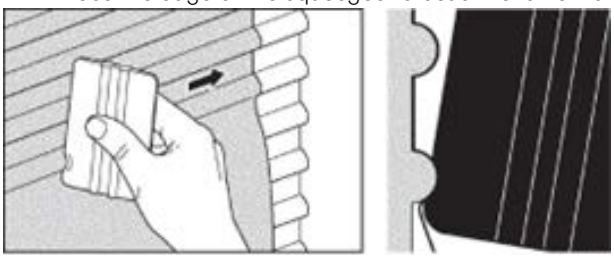


Figure 4. Squeegee the bottom of the corrugation.

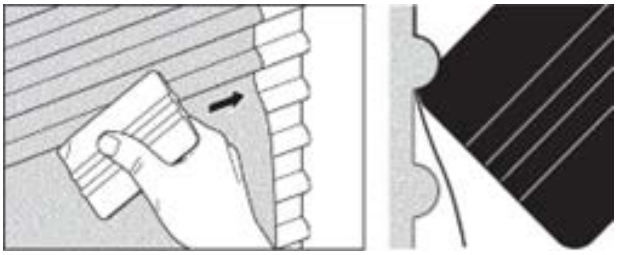


Figure 5. Squeegee the bottom of the corrugation.

8. Repeat Steps 3 through 7 on each individual corrugation under the graphic panel.
9. Remove any application tape at an 180° angle. Start at the upper left corner of the graphic and work toward the bottom right corner, rolling the application tape back on itself.

NOTE

Failure to remove application tape at an 180° angle may cause micro-cracking in graphics with a 9760LX clearcoat, and may cause appearance issues during maintenance.

10. Re-squeegee all areas where the application tape was in place.
11. Finish the rivets. See the "Rivets" section on page 7 for details.

NOTE

Rivet Method #1 will NOT work on surfaces with horizontal corrugations.

12. Cut all graphic seams on the trailer.

NOTE

Failure to cut seams will result in film cracking during maintenance.

13. Repeat the Steps 1 through 12 for subsequent graphic panels until the entire graphic is applied to the trailer.
14. Re-squeegee all graphic edges after completing the graphic installation.

Vertical Corrugated Panels

1. Clean the substrate using appropriate cleaners and techniques. See 3M Instruction Bulletin Application: Substrate Selection and Preparation for details.
2. Apply the first panel to the rear of the trailer using masking tape or magnets to create a vertical hinge. See Figure 6.
3. Apply the film using the technique described in the "Horizontal Corrugated with Rivet Trailers" section on page 5.

NOTE

The film must conform to the vertical recesses.

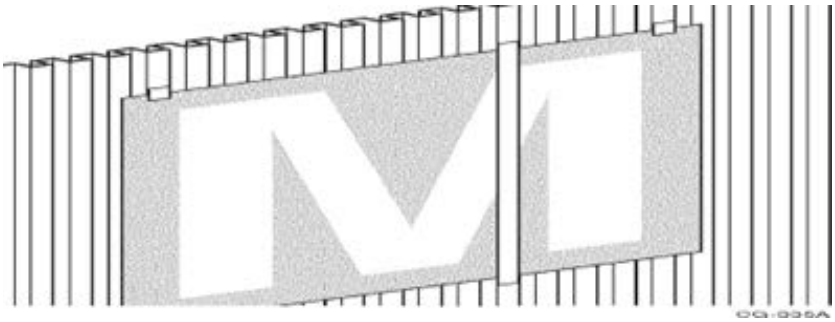


Figure 6. Vertical Hinge

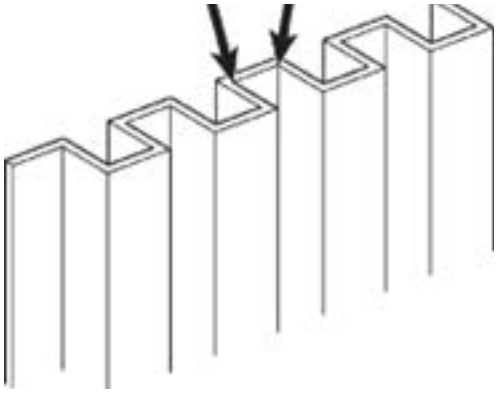


Figure 7. Location to Cut Film

4. Cut the film in the vertical recesses at the two inside corners when the angle is greater 60 degrees. See Figure 7.
5. Re-squeegee the edges around the perimeter of the graphics.

Conspicuity

Follow the Regulation FMVSS108 Compliant Conspicuity Application Guidance for placement of 3M™ Diamond Grade™ Conspicuity Markings Series 983.

Post-Heating

1. After installation is complete, apply heat to the graphic to reduce the internal stress in the vinyl film.
   a. Adjust the heat source so the film temperature reaches 200°F to 225°F (93°C to 107°C).
   b. Move the heat source slowly across the stretched film surface.
   c. For the best performance, press stretched film while the vinyl is still hot. This helps fully wet-out the adhesive onto the substrate and reduces the risk of lifting.
2. Strive for bubble-free applications. Although puncturing air bubbles improves the appearance of the graphic, it can contribute to premature graphic failure if the film is torn or cut rather than neatly punctured.
   When removing bubbles is necessary:
   a. Reheat film (especially in any recessed areas and deep channels) with a heat gun. This can help detect overlooked air bubbles.
   b. Puncture any remaining air bubbles with the 3M™ Air Release Tool 391X or a pin.
   c. Firmly push any trapped air out the puncture hole with a squeegee

⚠ **CAUTION**

The 3M™ Air Release Tool 391X has a sharp point.

3. Re-squeegee all edges and overlaps to ensure good adhesion before releasing the vehicle for use.

Post-Application Conditions

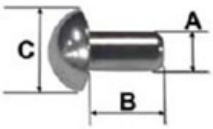
Keep the trailer temperature above 60°F (16°C) for a minimum of 12 hours. This strengthens the graphic's bond to the substrate.

Maintenance

Refer to 3M Instruction Bulletin Maintenance.

Rivets

Trailers can have many different types, styles, and layouts of rivets. As such, there are many ways to apply film to rivets.

Rivet Type	Example Image	Rivet Finishing Method	Primer or Adhesion Promoter
Etched Aluminum Rivet		Method 1	None
Aluminum Pan Etch Rivet		Method 1, Method 2, or Method 3	Adhesion Promoter 111 or Primer 94 can be beneficial if the film is not conforming around rivets as expected.
Aluminum Round Head		Method 1	Adhesion Promoter 111 or Primer 94 can be beneficial if the film is not conforming around rivets as expected.
Aluminum Post (Reverse rivets)		Method 4	None
Low Surface Energy Plastic		Method 5	Use of Adhesion Promoter 111 or 3M Primer 94 is recommended.
FRP Large Rivet Heads		Method 4	None

Method 1: RollePro Vinyl Applicator

This method works well for closely bunched sets of rivets both vertically and horizontally. This method does NOT work with reverse rivets. Reverse rivets need to be cut out.

1. Apply the film to flat areas of the trailer until you reach the column of rivets.
2. Bridge the film over the row of rivets. The film should NOT contact the rivet heads.
3. Secure the film to the other side of the row of rivets.
4. Repeat Steps 1 through 3 until the graphic is applied to all flat areas of the trailer surface.
5. Heat the bridged area of the film over a single row of rivets using a torch or heat gun.
6. When the film is still warm use the RollePro™ Vinyl Applicator to conform the film around the rivets. Do NOT close off areas for the air to escape. Doing so will trap a large amount of air.
7. Continue to heat and apply the film until the film has conformed around the rows of rivets.
8. Repeat Steps 5 through 7 for each row of rivets.
9. Post-heat the rivets to 200°F to 225°F (93.2°C to 107.2°C) for optimum performance around the rivets.

Method 2: Rivet Brush

This method works best for rivets that are spaced out across the trailer.

1. Use a squeegee to apply the film over individual rivets.
2. Remove any application tape at an 180° angle. Do NOT pull the application tape straight out from the trailer surface.
3. Use a 3M™ 391X Air Release Tool or the MPP-1 to puncture four to eight holes around the rivet.
4. Use the rivet brush to brush in a circular motion around the outer edges of the air release holes. See Figure 8.
5. Continue brushing in narrower and narrower circles until the brush is directly over the rivet. This conforms the film to the rivet. See Figure 9.
6. Apply heat to the rivets and use the rivet brush to conform the film tightly around the rivets.
7. Post-heat the rivets to 200°F to 225°F (93.2°C to 107.2°C) for optimum performance around the rivets.

NOTE

If the graphic surface scratches, try using a squeegee instead of a rivet brush, or use Method 3.

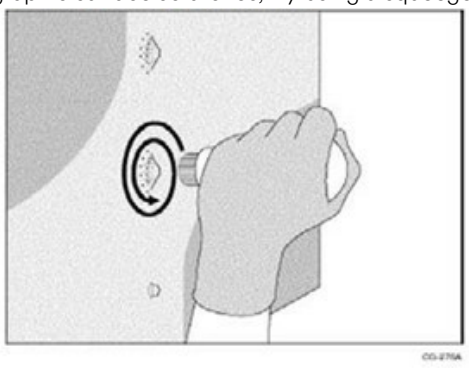


Figure 8. Start brushing in a larger circle.

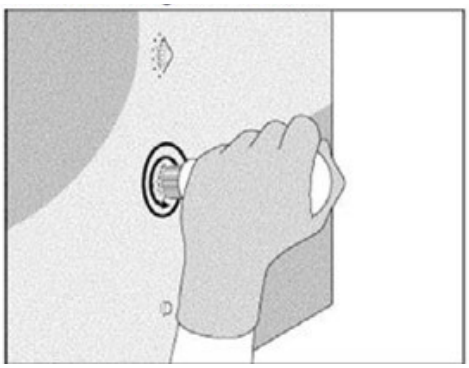


Figure 9. Finish brushing in a smaller circle.

Method 3: 3M™ Power Grip Magic Pad Rivet Applicator CMP-1

This method works for rivets that are spaced out across the trailer. It should also be used if Method 2 causes scratches on the graphic. The MPP-1 makes multiple holes around a rivet with a single strike, while the CMP-1 can be used to conform warm vinyl film around small contoured shapes, such as rivets. The CMP-1 works best with film with Comply™ adhesive. Check the film's product bulletin for details.

1. Apply the film using the appropriate method described earlier in this document.
2. Remove any application tape at an 180° angle. Do NOT pull the application tape straight out from the trailer surface.
3. Remove and retain the black cover of the MPP-1.
4. Grip the MPP-1 as shown and strike the area around the rivet once. Do NOT twist the tool. See Figure 10.
5. Use fingers or a squeegee to conform the film around the rivet.

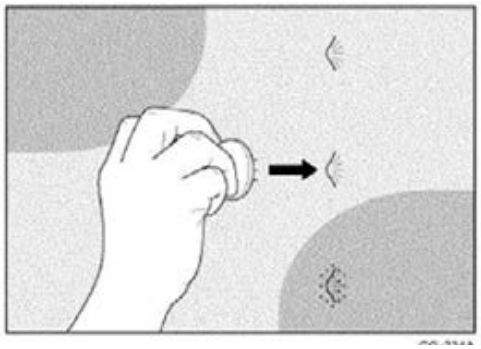


Figure 10. Using MPP-1

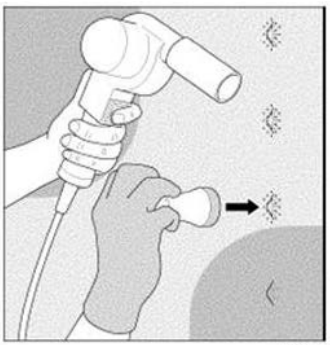


Figure 11. Heating Rivets and Using MPP-1

6. Heat one rivet at a time with a heat gun or torch.
7. When the vinyl around a rivet is warm and limp, firmly press the CMP-1 directly over the rivet and hold for one or two seconds to mold the film around the rivet. Do NOT twist the tool. See Figure 11.
8. Use a rivet brush or squeegee to further conform the film around the rivets, if necessary.
9. Repeat Steps 4 through 8 for all other rivets.
10. Post-heat the rivets to 200°F to 225°F (93.2°C to 107.2°C) for optimum performance around the rivets.

Method 4: Cutting Around Rivets

This method works best for aluminum posts. reverse rivets, and some cases where a thick graphic construction is used. An example would be calendered films with overlaminates. Failure to cut the graphics over rivets in such cases may cause some lifting and the graphic may crack and come loose during maintenance.

1. Cut around rivets under any of the following circumstances (see Figure 12):
   - Stainless steel substrates.
   - Film that does NOT extend 0.5 in. (1.3 cm) or more beyond the rivet edge. (i.e. whenever a film edge would be applied on or near the rivet.)
   - Rivets higher than 0.5 in. (1.3 cm)
   - Reverse rivets, where the rivet head is on the inside and the film goes over the exposed shank end.
   - 3M™ Scotchlite™ Diamond Grade™ sheeting (conspicuity tape).
   - If the base film is greater than 2 mil (0.05 mm) thick and rivets are closer than:
     - 1.5 in. (3.8 cm) for single row.
     - 3 in. (7.7 cm) for double row.
2. Remove the circles of film from the tops of the rivets, if desired.
3. Secure the film edges around the rivet using a circular motion with the rivet brush.

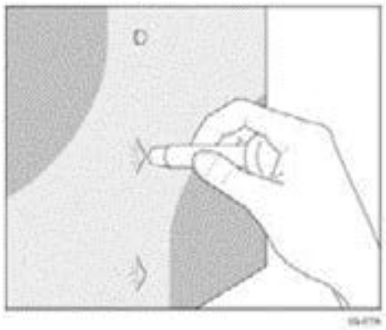


Figure 12. Using a Film-Cutting Tool on Rivets

Cutting Around Bolts

1. Apply the graphic over the bolt in the same manner as a rivet.
2. Cut an X through the film directly over the bolt. See Figure 13.
3. Secure the film edges around the rivet using a rivet brush held at a 45° angle.
4. Carefully cut the film around the bolt at a 90° angle or with a film-cutting tool.
5. Re-secure the film around the rivet.

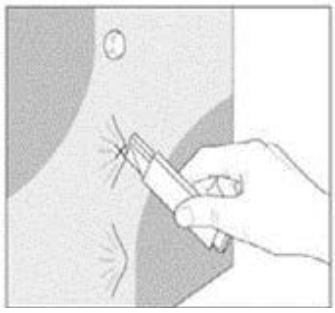


Figure 13. Cutting Around Bolts

Method 5: Plastic Rivet Finishing

Flame treating changes the molecular structure of the substrate. It oxidizes a very thin layer of the substrate allowing the adhesive to wet the surface and make a good bond.

1. Clean substrate so that is free of dirt and oil.
2. Touch the tip of the flame's outer blue envelope (not the inner, yellow or red cone) to the substrate for 1 second. Longer exposure can deform or soften the material. Flame treating is NOT heat treating.
3. Apply 3M™ Adhesion Promoter 111 or 3M™ Primer 94 to each rivet.
4. Wait 5 minutes after Step 3 to apply graphics.
5. Apply the film to the substrate within 1 hour after flame treating and applying the adhesion promoter or primer. Waiting longer than that results in the flame treating effect ending and the primer or promoter having cured to the point that it no longer aids film adhesion. Only flame treat and prime areas that can be installed within an hour.
6. Follow "Method 2: Rivet Brush" on page 8.
7. Post-heat the rivets to 200°F to 225°F (93.2°C to 107.2°C) for optimum performance around the rivets.

Doors

There are two common door types on trailers. Swing doors open from the middle and swing out to the left and right side while roll-up doors roll up from the bottom to the top and have seams in them. Use the 3M™ Adhesion Test kit to determine the best product solution. See the "Substrate Material" section on page 2 for details on all substrate types and expectations.

Swing Out Doors

1. Clean the doors following the information in the "Substrate Preparation" section on page 3.
2. Apply the film to the flat areas of the trailer doors.
3. Cut the film around all hinges and other attachments.
4. Trim the graphic 1/4 in. (0.6 cm) back from all edges.
5. Edge seal all graphic edges for optimum performance.

Roll-Up Doors

Film applied to roll-up doors must be cut at all door fold seams. This requires two cuts at each seam to remove thin strips of film. Common reasons for graphic failure (edge lifting) at these seams are (1) dirty door fold seams, (2) film extending over the seam, and (3) film that is not securely adhered to the substrate.

1. Clean the door following the information in the "Substrate Preparation" section on page 3 and ensure the inside of the door seam is washed clean and then dried. Lift the door enough to thoroughly clean the top and bottom lips of the panels. See Figure 14.
2. Apply the film to the flat areas of the trailer doors.
3. Cut around all hinges and other attachments.
4. Trim the graphic back 1/4 in. (0.6 cm) from all edges.
5. Trim along both edges of the door fold seams, holding the cutting tool at a 45° angle. See Figure 15.
6. Remove the thin strip of film.
7. Edge seal all graphic edges for optimum performance.

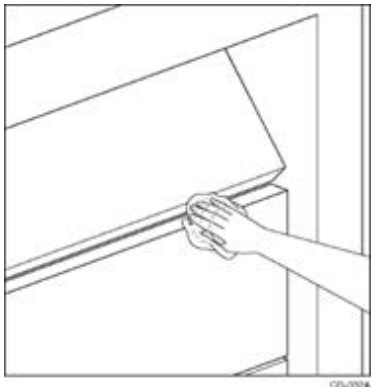


Figure 14. Cleaning the Door Fold Seams

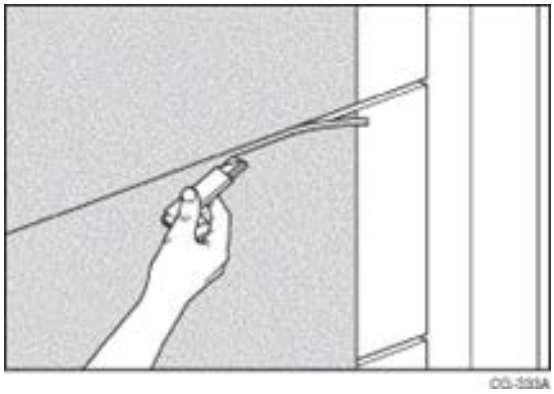


Figure 15. Cutting Film at the Door Fold Seams

8. For each panel of the door:
   a. Separate the panels by moving them as far apart as possible.
   b. Heat the panel edges.
   c. Squeegee the graphic edges on the panel, starting in the center and working out to each edge.

Rub Rails

Rub rails may be present on a trailer to prevent damage to the trailer during maintenance.

1. Apply the film to the flat area of the rub rail.
2. Work the film in and around the curved part of the rub rail. Relief cut and drop the film when necessary. Do NOT overstretch the film in this area.
3. Secure the film to any rivets or fasteners using the appropriate methods described earlier in this document.

3M Related Literature

Read the most current 3M product and instruction bulletins before starting any job.

The information in 3M product and instruction bulletins is subject to change. Current bulletins are available at 3M.com/graphics. The techniques described in these bulletins are required when applying a 3M warranted graphic, but are also practical recommendations when using promotional materials for non-warranted graphics. Additional bulletins may be needed as indicated in the 3M Related Literature sections of the product bulletins of all 3M components used.

- 3M Instruction Bulletin Application: Substrate Selection and Preparation
- 3M Instruction Bulletin Maintenance
- Regulation FMVSS108 Compliant Conspicuity Application Guidance

Health and Safety

Tools and Equipment Usage

When using any equipment, always follow the manufacturer's instructions for safe operation.

Chemicals

When handling any chemical products, read the manufacturers' container labels and the Safety Data Sheets (SDS) for important health, safety, and environmental information.

Follow this link to obtain SDS sheets for 3M products.

Follow this link to obtain information about substances of very high concern (SVHC) for EU products.

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Country, state, or regional volatile organic compound (VOC) regulations may prohibit the use of certain chemicals with VOCs in graphic arts coatings and printing operations. Check with local environmental authorities to determine whether use of this product may be restricted or prohibited.

⚠ **CAUTION**

Ergonomics

Any activity performed for a long period of time in an awkward position or with a high amount of force is potentially a risk for causing musculoskeletal strain, pain or injury. When applying or removing graphics, follow these practices to improve comfort and avoid injury:

- Alternate your tasks during the application.
- Schedule regular breaks.
- Perform stretches or do exercises to improve circulation.
- Avoid awkward reaching.

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