

Application

Special Considerations for Complex Contours of Automobiles, Vans and Buses

General Information

- This bulletin is specifically for the application of films used for complex contours of automobiles, vans and buses.
- Be sure you obtain and use the most current supporting product and instruction bulletins referenced in this bulletin.
- Make sure each applicator reads this bulletin before beginning.
- Follow each step in the order given. Do not take short cuts.

Complete the 3M Graphics Pre-installation Inspection Record

3M requires that a properly executed and signed Pre-installation Inspection Record be completed before any 3M graphics are applied. This record, which identifies any potential problem areas, is mandatory if a warranty claim is made in the future. Make a copy of the appropriate record, located at the end of this document, for each vehicle.

3M recommends graphics manufacturers clearly define mutual obligations between the vehicle graphics operating companies and themselves and strongly suggests that graphics manufacturers seek written limitations of claims or liabilities on individual vehicles for unsound paint.

Recommended Films

Covering complex curves and contours requires special techniques, including heating and stretching the film. The specific characteristics of a film, as well as whether the shape is concave or convex, determine how well the film holds to the curved substrate.

We recommend 3M changeable graphic films that are designed for short term application and easy removal. Changeable films have lower adhesion, usually in the range of 2 to 5 pounds per inch (0.4 to 0.9 kg/cm) peel-back adhesion, which allows graphics to be removed easily without the aid of heat or chemicals.

Film, including film with changeable adhesive as used in vehicle graphics, has a memory for its original shape. Consequently, stretching the film does result in some shrinkage as it attempts to return to its original dimensions. As it shrinks, you can expect minor tenting and lifting. Heating the film helps void its memory, which reduces tenting and lifting. This is discussed more later in the bulletin.

Films with the Comply™ Performance feature allow air to move laterally through the adhesive, for a faster and easier application. You can identify films with this feature by the texture on the liner.

Refer to the film's Product Bulletin for recommended overlaminates, construction, processing and warranty details.

Recommended Film by Imaging Method ³		
Screen Printing	Electrostatic Imaging	Piezo Ink Jet Printing
LONG TERM GRAPHIC APPLICATIONS (more than one year)		
3M™ Controltac™ Plus Graphic Film		
180	8620	IJ180 or RG180 ¹
3M™ Controltac™ Plus Graphic Film with Comply™ Performance		
180C	8620C	IJ180C or RG180C ¹
SHORT TERM GRAPHIC APPLICATIONS ² (less than one year)		
3M™ Controltac™ Plus Changeable Graphic Film with Comply™ Performance		
3552C	8652C	IJ3552C or RG3552C ¹

1. Films with an "RG" designation are reverse wound for use on the Océ Arizona 90 and 180 Printers.
2. Films recommended for short-term durability use 3M's changeable adhesive. Because of the lower adhesion with these films, some lifting of film may occur in areas where the film is highly stretched, which is not covered by the warranty.
3. See the film's Product Bulletin for specific Warranted Durability information.

Note: For the full product names of the 3M products listed on this page, please see page 1.

Determining Which Films Can Be Stretched

Vinyl film has a memory for its original shape. Consequently, stretching the film does result in some shrinkage as it attempts to return to its original dimensions. As it shrinks, you can expect some minor tenting and lifting. Techniques to reduce lifting are discussed in this bulletin.

Read the product bulletin for each film you are considering for its suitability to contours and complex curved surfaces. The 2-mil films work best for contoured substrates if minimal lifting is required, and these films are called out above. All constructions can exhibit some tenting when stretched, especially 4-mil films and films that have changeable or removable adhesives.

Graphics made with the following constructions cannot be stretched and, therefore, are not warranted for use on complex curves, contour surfaces and deep draws:

- Polyolefin base films or e-film technology overlaminates
- 3M™ Scotchlite™ Reflective Graphic Films (stretching damages the reflectivity)
- Polyester base films or overlaminates

Health and Safety

Caution

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

To obtain MSDS sheets for 3M products:

- By fax, call 1-800-364-0768 in the US and Canada or 1-650-556-8417 for all other locations.
- Electronically, visit us at <http://www.3M.com/MSDS>.
- By mail, or in case of an emergency, call 1-800-364-3577 or 1-651-737-6501.

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

Surface Preparation

Caution

Before handling any chemical products, always read the container label and the MSDS.

Clean the Surface

All substrates must be considered contaminated. Clean the substrate immediately before applying the film. Dust and other contaminants can collect quickly on the substrate and prevent the film from adhering properly. Even a freshly painted substrate can collect dust before graphics can be applied.

1. Use a solution of 1 ounce of liquid dishwashing detergent, such as Joy® or Dawn®, per gallon of lukewarm water to thoroughly clean the vehicle. Rinse with water.
 - Avoid soaps or preparations that contain waxes, oils or lotions; some window cleaners contain waxes!
 - Be aware that the chemicals used in some automated vehicle washing equipment may prevent good film adhesion.
 - Pay particular attention to cleaning the front and rear of the vehicle, which tend to have more dirt, oil and dead insects.
 2. Dry the surface thoroughly with clean, lint-free paper towels. A heat gun may be used to apply moderate heat and accelerate the drying.
 - Moisture prevents the adhesive from adhering correctly, can cause bubbles, and can freeze in cold environments. Any moisture trapped beneath the graphic will cause the graphic to fail prematurely.
 - Moisture on the substrate results from:
 - Inadequate drying after cleaning as well as from application solutions.
 - Condensation at low temperatures.
 - High humidity environments.
 3. Wipe the surface again with a solvent-based cleaner. Refer to the list of cleaners, page 3.
- Note: Car wax can greatly reduce graphic adhesion. Solvent-based cleaners must be used to thoroughly remove any wax residue. Alcohol-based cleaners do *not* remove wax as effectively.
- a. Saturate a clean paper towel with a solvent.
 - b. Wipe with a lint-free paper towel before the solvent evaporates from the substrate. As the paper towel becomes dirty, discard it. A dirty towel just moves the dirt around—it does not remove the dirt.
 - c. Make sure the substrate is completely dry. If necessary, use a heat gun to dry any retained solvents.
4. Apply the graphic immediately. Dust and contaminants prevent the adhesive from performing as expected.

Note: For the full product names of the 3M products listed on this page, please see page 1.

Cleaning Products

This list of cleaners is provided for your convenience; other acceptable cleaners may be available. 3M does not endorse any particular chemical manufacturer or supplier.

Air Quality Regulations

State Volatile Organic Compound (VOC) regulations may prohibit the use of certain cleaning solutions. For example, the California South Coast Air Quality Management District prohibits use of certain solvent-based solutions without a permit and other California AQMD's prohibit use of certain solutions without a permit or a regulatory exemption. You should check with your State environmental authorities to determine whether use of this solution is restricted or prohibited.

Lower Solvent Content Cleaners

- 3M™ Prep Solvent-70, 8983¹
- Several other suitable products may be available from your local building products store.

Petroleum Distillate-based Cleaners

- 3M™ Adhesive Cleaner and Wax Remover 8984¹
- DuPont Prep-Sol™ Solvent Cleaner 3919S²
- Sherwin Williams R7K156 Sher-Will-Clean™²
- Sherwin Williams R7K158 Sher-Will-Clean™²
- Xylol, lacquer thinner, or VM&P Naphtha³

¹ Available from 3M Commercial Graphics Division.

² Available from automobile supply houses handling DuPont or Sherwin Williams products.

³ Available from chemical companies listed under "Solvents" in the Yellow Pages. If these are not available locally in small quantities, they may be obtained from mail order chemical firms, such as E. H. Sargent and Co. and Fisher Scientific.

Application Tools

- 3M™ Plastic Applicator (squeegee) PA-1¹
- 3M™ Low Friction Sleeve SA-1¹ (Use a low friction sleeve on the plastic applicator to minimize the possibility of surface scratching.)
- 3M™ Scotchmate Reclosable Hook and Loop Fastener – Loop portion SJ-3523 (apply to PA-1 as an alternate to Low Friction Sleeve SA-1)¹
- 3M™ Rivet Brush RBA-1¹ or RBA-3¹
- 3M™ Air Release Tool 391X¹
- 3M™ Tape Primer 94¹
- 3M™ Citrus Base Industrial Cleaner¹
- Snap-off cutting knives or razor blades in safety holders.
- Industrial heat gun, or the equivalent, that is capable of attaining at least 500°F (260°C)
- Cotton gloves

¹ Available from 3M Commercial Graphics Division.

Application Temperature and Environment



Caution

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

For the best success with the films recommended for vehicle graphics, always apply the graphics when the air and vehicle surface are both above 60°F (16°C).

If the temperature is too cool, move the vehicle indoors to bring its surface temperature up to at least the minimum application temperature.

Below the recommended minimum application temperature:

- Films are not able to maintain the elevated temperatures required for stretching; films will cool too quickly.
- The initial bond of the adhesive may be insufficient to ensure the film stays adhered.
- Moisture may condense on the vehicle surface if the temperature of the vehicle surface is below the dew point.
- In very humid conditions, it may be difficult to keep the substrate dry.

If the temperature is too warm, move the vehicle indoors or into the shade and be sure the vehicle surface cools to below 90°F (32°C) before beginning the installation.

Above the recommended maximum application temperature:

- Graphics may pre-adhere thereby trapping air.
- The adhesive will be more aggressive.
- Controltac films may lose their positionability feature.
- The film may stretch.

After application of the graphic, keep the vehicle temperature above 60°F (16°C) for as long as possible—ideally, for a minimum of 12 hours—before exposing the vehicle to either a cold or wet climate; this strengthens the graphic's bond to the contoured areas.

Note: For the full product names of the 3M products listed on this page, please see page 1.

Unique Film Handling Tips

Identify all areas on the vehicle where the graphics may tend to lift, such as in concave channels, inside wheel wells and other underside areas of the vehicle.

Here are ways to avoid or reduce problems with lifting.

- Use 3M's tape primer 94 to promote better film adhesion where the film will be stretched.**
 - In **concave channels**, apply a thin layer of primer over most of the concave area. Allow the primer to dry for five minutes.
 - When going around **convex areas**, apply a thin layer of primer at the outer edges of the curve to prevent film edge lifting. Allow the primer to dry for five minutes.
- Apply the film to flat areas of the vehicle first.**

Avoid areas at the underside of the vehicle. These areas are usually too difficult to clean sufficiently for proper film adhesion.
- Use heat to soften the film when stretching** it around and into complex curves.
 - Use as much heat as possible to soften the film without burning it. Typically, heat the film to about 180°F (82°C) for convex and concave areas including bumpers and channels.
 - Film cools within seconds so gently stretch the film immediately after the heat source is removed. The film should be too hot to touch with unprotected hands; be sure to wear cotton gloves.
 - To apply film into concave channels, use cotton gloves or use a squeegee with a low friction sleeve or Scotchmate loop material. Press the heated and softened film into the middle of the channel first so that the film is stretched evenly across the channel. See Figure 1.

- After the film has been applied**, apply heat to the graphic to reduce the internal stress in the vinyl film.
 - Adjust the heat source so that the film temperature is too hot to touch—about 200°F (94°C).
 - Move the heat source slowly across the stretched film surface.
- If the film has been stretched into deep channels:**

Long term use films, such as film 180, may be cut in deep channels to relieve the inherent stress of the film.

In general, cutting is not necessary if the previous application techniques have been followed unless the film is expected to lift in the high stress areas or non-recommended films were used.

Cutting is *not* recommended for short term films with changeable adhesive, such as film 3552C.

- Identify areas where the film is stretched greater than 130% of the original film dimension *and* the radius of the channel is 1/4 inch or less.
- Cut the film in the channel to avoid lifting of the film. See Figure 2. To check for the percent stretch, measure the travel distance through the channel (A) and divide by the length across the channel (B) (example: $1.8'' / 1.0'' = 180\%$).

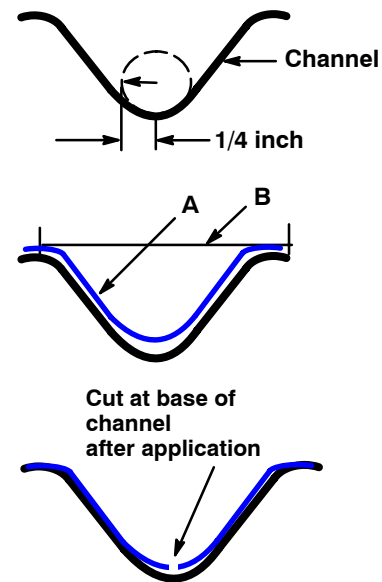
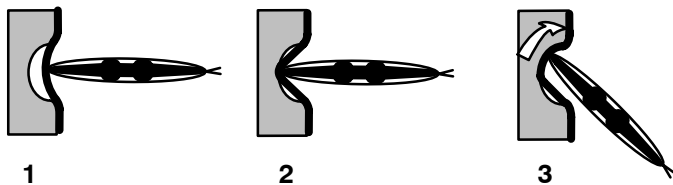


Figure 2. Applying in Channels

Right



Wrong

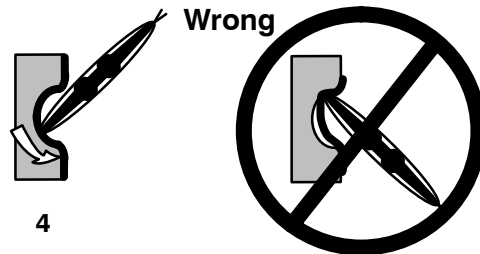


Figure 1. Right and Wrong Technique For Stretching Heated Film into Channels

Application Techniques

Caution

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 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.

Application Procedure

1. Use firm, even application pressure.
2. Use overlapping squeegee strokes to be sure you don't miss any areas. For Controltac films, all of the adhesive must have pressure applied to activate it. A missed area leaves wrinkles and bubbles in the applied film. These are areas where premature film failures may occur.
3. Carefully cut the film at all seams in vehicle body panels, being sure not to scratch the paint. Seams on vehicles flex as the vehicle moves. If they are not cut, the graphics will pull away from the seam, resulting in premature failure.
4. Strive for a bubble-free application. Although puncturing air bubbles improves the appearance of the graphic, it can contribute to premature graphic failure if the film is torn.
5. Re-squeegee all edges and overlaps to ensure good adhesion before releasing the vehicle for use.

Application Techniques to Avoid

- **Do not apply film in any way that restricts the safe operation of emergency window exits.** See the most current Instruction Bulletin 5.4 for details.
- Avoid applying graphics to unpainted plastic substrates. 3M does not warrant the application of film to textured plastic substrates under any circumstances. However, if you wish to try, using heat and a rivet brush to conform the film to the texture may be satisfactory for an unwarranted application.
- Do not apply the films to rubber or flexible plastics. The adhesive on the recommended films does not adhere to these materials.

Review These Bulletins for Additional Information

- Refer to Instruction Bulletin 5.5 for:
 - Graphic placement
 - Making film overlaps
 - Registering the graphic
 - Removing the adhesive's liner
 - Application sequences (that apply to your type of graphic)
- Refer to Instruction Bulletin 5.31 for using films with Comply performance.

Removal

Refer to the film's Product Bulletin for information on its removability.

Removal of short-term graphics with changeable adhesives will leave little or no adhesive residue. These films will not damage a soundly painted surface or a previously applied 3M vinyl graphic unless the surface was corroded, rusted, blistered, scratched or previously damaged, or if it was damaged since the graphic application.

To remove a changeable film, grasp a corner of the graphic and peel it back at approximately a 120 degree angle. In areas where tape primer 94 is used, some adhesive will remain on the vehicle. Any remaining adhesive and tape primer 94 can be removed with an adhesive cleaner such as 3M's citrus base industrial cleaner.

See Instruction Bulletin 6.5 for additional details on film removal.

Warranty and Limited Remedy

The information contained and techniques described herein are believed to be reliable, but 3M makes no warranties, express or implied, including but not limited to any implied warranty of merchantability or fitness for a particular purpose. 3M shall not be liable for any loss or damages, whether direct, indirect, special, incidental or consequential, in any way related to the techniques or information described herein.

Attention:

Scotchprint® Graphics Authorized Manufacturers

Visit our password-protected website for exclusive product information, profiles and services.

www.scotchprint.com, then *Login*

To register, login and click "Register" on the right side of the screen. Certain restrictions apply.

3M Related Literature

Before starting any job, be sure you have the most current product and instruction bulletins.

The information in 3M bulletins is subject to change. Current bulletins, as well as a list of all bulletins updated within the last three months, are available at www.scotchprint.com or through our Fax-on-Demand system. Any warranty, if offered, is based on information in the bulletin that was current at the time you purchased the 3M products. The following bulletins provide the information and processes you need to properly make the graphics described in this bulletin.

Fax-on-Demand phone numbers:
United States or Canada: 1-800-364-0768
International: 1-651-732-6506

Subject	Bulletin No.	FOD No.
Product Bulletins		
3M™ Controltac™ Plus Graphic Film Series 180	180	1005
3M™ Controltac™ Plus Graphic Film with Comply™ Performance Series 180C	180C	1009
3M™ Controltac™ Plus Changeable Graphic Film Series 3552C	3552C	1016
3M™ Controltac™ Plus Conformable Graphic Film 8620 ES	8620	3532
3M™ Controltac™ Plus Conformable Graphic Film with Comply™ Performance 8620C ES	8620C	3555
3M™ Controltac™ Plus Changeable Graphic Film 8652C ES	8652C	3570
3M™ Controltac™ Plus Graphic Film 180-10	IJ180-10	4539
3M™ Controltac™ Plus Graphic Film with Comply™ Performance IJ180C-10	IJ180C-10	4540
3M™ Controltac™ Plus Changeable Graphic Film Series IJ3552C	IJ3552C	4576
3M™ Controltac™ Plus Graphic Film RG180-10	RG180-10	4518
3M™ Controltac™ Plus Graphic Film with Comply™ Performance Series RG180C-10	RG180C-10	4555
3M™ Controltac™ Plus Changeable Graphic Film Series RG3552C	RG3552C	4580

Please note the **3M Auto and Van Graphics Pre-installation Inspection Record** and **3M Bus and Mini-Bus Graphics Pre-installation Inspection Record** on the following pages.



Commercial Graphics Division
3M Center, Building 220-12E-04
PO Box 33220
St. Paul, MN 55133-3220 USA
General Info. 1-800-374-6772
Technical Info. 1-800-328-3908
Fax 1-651-736-4233

Fax-on-Demand 1-800-364-0768 US/Canada or 1-651-732-6506 International
Fax-on-Demand document: 7036
www.scotchprint.com

3M Canada
P.O. Box 5757
London, Ontario
Canada N6A 4T1
1-800-265-1840
Fax 519-452-6245

3M México, S.A. de C.V.
Av. Santa Fe No. 55
Col. Santa Fe, Del. Alvaro Obregón
México, D.F. 01210
52-55-52-70-04-00
Fax 52-55-52-70-22-77

3M Puerto Rico, Inc.
Puerto Rico Industrial Park
P.O. Box 100
Carolina, PR 00986-0100
787-620-3000
Fax 787-750-3035

Subject	Bulletin No.	FOD No.
Instruction Bulletins		
Application, substrate selection, preparation and substrate-specific application techniques	5.1	7001
Application, special applications and vehicles	5.4	7004
Application, general procedures for interior and exterior dry applications	5.5	7005
Applying 3M graphic films with Comply™ Performance	5.31	7031
Storage, handling, maintenance, removal	6.5	8505
Warranties		
Worldwide 3M™ MCS™ Warranty		9503

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Dawn and Joy are registered trademarks of Proctor and Gamble.
Sher-Will-Clean is a trademark of Sherwin-Williams Company.
All other trademarks are the property of their rightful owners.*

Bulletin Change Summary

Added further recommendations for graphics manufacturers prior to installation. Noted polyolefin base films should not be stretched. Reiterated solvent-based cleaning requirement. Included specific application temperatures and revised recommendations for the application environment. Removed reference to a typical film stretch percentage. Noted slitting of film is not required if proper application techniques are used. Added subsection for application techniques to avoid. Updated the vehicle diagrams in the inspection records. Replaced the Vehicle Graphics Warranty with the 3M™ MCS™ Warranty. Other changes or additions are indicated by black bars in the margins.

3M Auto and Van Graphics Pre-installation Inspection Record

Page 1 of 2

Installer Requirements

Note: **Complete both pages of this Pre-installation Inspection Record**, using a separate record for each vehicle, before each new graphic installation and between subsequent graphic installations on the same vehicle.

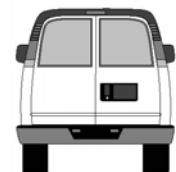
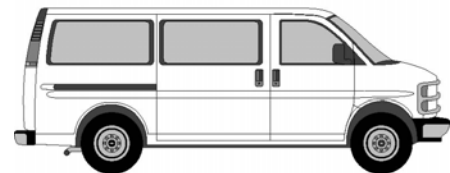
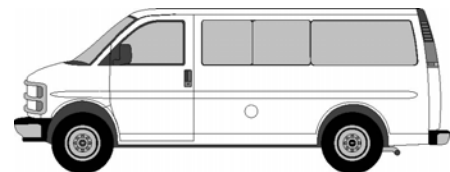
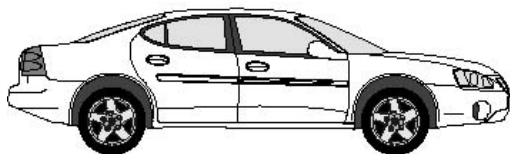
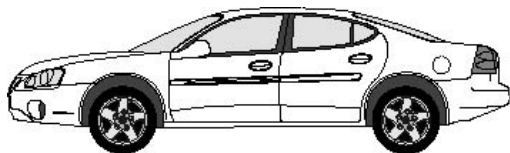
1. **Carefully and thoroughly examine each vehicle and record all potential problem areas** prior to installing the graphics. We recommend washing the vehicle so that potential problem areas are easily seen.
2. **Ensure that the paint is sound** so that graphics will have good adhesion to the paint. For the purpose of this program, “sound paint” is defined as paint that is free of defects (see the “Defects” bullet below).

Circle all areas on the following diagram where your inspection shows that the paint may be unsound, the graphic may adhere poorly, or graphic removal may damage the vehicle paint. This includes:

- Defects: loose paint, dents, rough surface, fillers used for damage, rust or blistered paint.
- Areas where water can collect, which are more likely to rust, resulting in paint adhesion problems.

Note: Primer, which does not outgas, may be applied to bad paint spots on the vehicle to prepare it for another graphic wrap. However, this must still be considered a problem area and must be documented on the Pre-installation Inspection Record.

3. **Photograph all areas that you circled** on the diagram as exhibiting unsound paint.



4. **Explain proper graphic maintenance** to the Vehicle Owner/Operator. See Instruction Bulletin 6.5.
5. **Complete the Pre-installation Inspection Record** (see the next page of this document).
6. **Make and distribute copies** to all signing parties.
7. **Maintain a file** with the signed form and photographs.

Warranty Claims and Exceptions

1. Failure to obtain a properly executed and signed **Pre-installation Inspection Record** (see the next page of this document) prior to graphic installation voids all expressed or implied 3M product warranties.
2. If the pre-inspection shows the paint is not free of defects, the owner of the vehicle waves all expressed or implied 3M product warranties.
3. 3M makes no warranty (expressed or implied) for paint or existing graphic damage that occurs during the removal of a graphic. See the 3M™ MCS™ Warranty for complete details at Scotchprint.com.
4. To make a claim, contact 3M Commercial Graphics Division Quality Direct at 1-800-511-3705 or go to www.scotchprint.com/qualitydirect. Be prepared to send in:
 - A piece of the 3M film exhibiting the defect.
 - A properly executed and signed 3M Pre-installation Inspection Record, including any available photographs.

Circle all areas where the paint may be unsound. Mark only one vehicle type.

(Diagrams courtesy of Digital Auto Library, 1-888-843-1325 or www.digitalauto.on.ca)

3M Auto and Van Graphics Pre-installation Inspection Record

Page 2 of 2

**COMPLETE THIS FORM, PROVIDE A COPY FOR EACH SIGNER
AND RETAIN WITH PHOTOGRAPHS IN CASE OF A CLAIM.**

Please print except in signature boxes.

AUTOMOBILE OWNER/OPERATOR
COMPANY NAME
CONTACT NAME
STREET ADDRESS
CITY / STATE / ZIP
AREA CODE / PHONE NUMBER
GRAPHICS PRINTER
COMPANY NAME
CONTACT NAME
STREET ADDRESS
CITY / STATE / ZIP
AREA CODE / PHONE NUMBER
GRAPHICS INSTALLER
COMPANY NAME
CONTACT NAME
STREET ADDRESS
CITY / STATE / ZIP
AREA CODE / PHONE NUMBER

AUTOMOBILE INFORMATION	
LICENSE NUMBER	STATE
AUTOMOBILE YEAR, MAKE AND MODEL	
VIN NUMBER	
AUTOMOBILE OWNER/OPERATOR	
PRE-INSPECTION: (see the previous page of this bulletin for inspection requirements)	
<input type="checkbox"/> PASSED (DATE: _____ BY: _____) <input type="checkbox"/> FAILED (Owner waives all product warranties if graphics are applied)	
PHOTOGRAPHS OF POTENTIAL PROBLEM AREAS:	
<input type="checkbox"/> YES (DATE: _____ BY: _____) <input type="checkbox"/> NO	
GRAPHIC CONSTRUCTION AND INSTALLATION INFORMATION	
INSTALLATION DATE	
GRAPHIC COVERAGE	
<input type="checkbox"/> FULL <input type="checkbox"/> REAR ONLY <input type="checkbox"/> TRUNK ONLY <input type="checkbox"/> DRIVER SIDE ONLY <input type="checkbox"/> PASSENGER SIDE ONLY	
SUBSTRATE CLEANED AND PREPARED ACCORDING TO 3M RECOMMENDATIONS:	
<input type="checkbox"/> YES (DATE: _____ BY: _____)	
FILM USED	
SIGNATURES OF ALL PARTIES	
INSTALLER	/ DATE
AGENCY REPRESENTATIVE	/ DATE
AUTOMOBILE OWNER/OPERATOR	/ DATE

3M Bus and Mini-Bus Graphics Pre-installation Inspection Record

Installer Requirements

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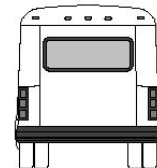
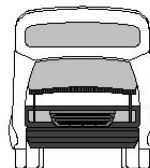
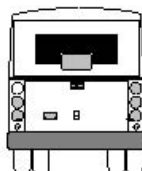
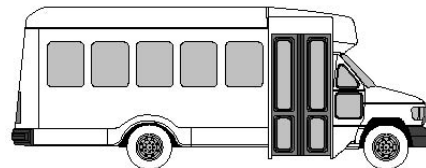
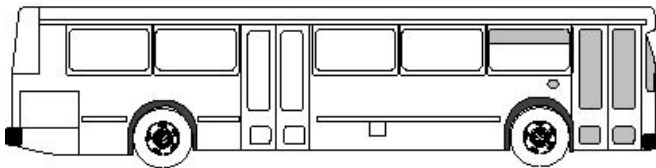
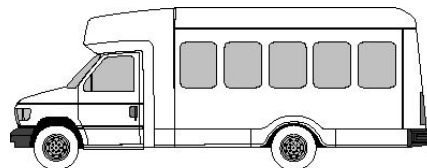
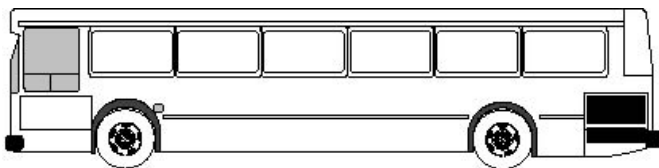
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Circle all areas on the following diagram where your inspection shows that the paint may be unsound, the graphic may adhere poorly, or graphic removal may damage the vehicle paint. This includes:

- Defects: loose paint, dents, rough surface, fillers used for damage, rust or blistered paint.
- Areas where water can collect, which are more likely to rust, resulting in paint adhesion problems.

Note: Primer, which does not outgas, may be applied to bad paint spots on the vehicle to prepare it for another graphic wrap. However, this must still be considered a problem area and must be documented on the Pre-installation Inspection Record.

3. **Photograph all areas that you circled** on the diagram as exhibiting unsound paint.



4. **Explain proper graphic maintenance** to the Vehicle Owner/Operator. See Instruction Bulletin 6.5.
5. **Complete the Pre-installation Inspection Record** (see the next page of this document).
6. **Make and distribute copies** to all signing parties.
7. **Maintain a file** with the signed form and photographs.

Warranty Claims and Exceptions

1. Failure to obtain a properly executed and signed **Pre-installation Inspection Record** (see the next page of this document) prior to graphic installation voids all expressed or implied 3M product warranties.
2. If the pre-inspection shows the paint is not free of defects, the owner of the vehicle waves all expressed or implied 3M product warranties.
3. 3M makes no warranty (expressed or implied) for paint or existing graphic damage that occurs during the removal of a graphic. See the 3M™ MCS™ Warranty for complete details at Scotchprint.com.
4. To make a claim, contact 3M Commercial Graphics Division Quality Direct at 1-800-511-3705 or go to www.scotchprint.com/qualitydirect. Be prepared to send in:
 - A piece of the 3M film exhibiting the defect.
 - A properly executed and signed 3M Pre-installation Inspection Record, including any available photographs.

Circle all areas where the paint may be unsound. Mark only one vehicle type.

(Diagrams courtesy of Digital Auto Library, 1-888-843-1325 or www.digitalauto.on.ca)

3M Bus and Mini-Bus Graphics Pre-installation Inspection Record

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**COMPLETE THIS FORM, PROVIDE A COPY FOR EACH SIGNER
AND RETAIN WITH PHOTOGRAPHS IN CASE OF A CLAIM.**

Please print except in signature boxes.

BUS OWNER/OPERATOR
COMPANY NAME
CONTACT NAME
STREET ADDRESS
CITY / STATE / ZIP
AREA CODE / PHONE NUMBER
GRAPHICS PRINTER
COMPANY NAME
CONTACT NAME
STREET ADDRESS
CITY / STATE / ZIP
AREA CODE / PHONE NUMBER
GRAPHICS INSTALLER
COMPANY NAME
CONTACT NAME
STREET ADDRESS
CITY / STATE / ZIP
AREA CODE / PHONE NUMBER

BUS INFORMATION
LICENSE NUMBER
BUS YEAR, MAKE AND MODEL
VIN NUMBER
BUS OWNER/OPERATOR
PRE-INSPECTION: (see the previous page of this bulletin for inspection requirements) <input type="checkbox"/> PASSED (DATE: _____ BY: _____) <input type="checkbox"/> FAILED (Owner waives all product warranties if graphics are applied)
PHOTOGRAPHS OF POTENTIAL PROBLEM AREAS: <input type="checkbox"/> YES (DATE: _____ BY: _____) <input type="checkbox"/> NO
GRAPHIC CONSTRUCTION AND INSTALLATION INFORMATION
INSTALLATION DATE
GRAPHIC COVERAGE <input type="checkbox"/> FULL <input type="checkbox"/> BODY ONLY <input type="checkbox"/> WINDOWS ONLY <input type="checkbox"/> QUEEN PANELS ONLY <input type="checkbox"/> KING PANELS ONLY
SUBSTRATE CLEANED AND PREPARED ACCORDING TO 3M RECOMMENDATIONS: <input type="checkbox"/> YES (DATE: _____ BY: _____)
FILMS/OVERLAMINATES USED
SIGNATURES OF ALL PARTIES
INSTALLER _____ / DATE
AGENCY REPRESENTATIVE _____ / DATE
BUS OWNER/OPERATOR _____ / DATE