Overview

This bulletin describes the application, maintenance, and removal of 3M™ Exterior Aircraft Graphic Film A7322 (“EAGF”), and is subject to restricted access. Film will only be provided when the graphic manufacturer and end user have provided approved documentation, including the Graphic Manufacturer Checklist and the Designated Engineering Representative Letter.

CAUTION

3M does NOT claim that the 3M™ Exterior Aircraft Graphic Film A7322 satisfies, is tested or approved by, or is in compliance with any aviation and military authority or regulation, including the U.S. Federal Aviation Administration. Users are responsible for obtaining any necessary approvals and determining the film’s fitness for any particular use.

All specifiers, purchasers, and users must obtain and read all current, related 3M literature, including this instruction bulletin and Product Bulletin A7322.

WARNING

Serious product failure, such as the graphics lifting off the surface, can result if the product is used on surfaces for which it has not been qualified, or if it is improperly applied or maintained.

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Determining EAGF Suitability

- EAGF is only to be used for exterior aircraft graphics. The aircraft owner/operator is responsible for determining if EAGF installation requires regulatory approval from the owner/operator's authorizing agent or appropriate aviation authorities.
- Aircraft owners/operators, graphics manufacturers, and installers have unique and shared responsibilities for the proper, successful installation and use of EAGF.
- EAGF film CANNOT be used for any regulatory-required graphics. Do NOT use in applications that require conformance to MIL-P-38477A
- Both perforated and non-perforated versions of EAGF are available
  - Perforated film is recommended for pressurized portions of aircraft.
  - Non-perforated film may be used for non-pressurized portions of aircraft.

Potential Film Application Areas (Dependent on Installation Approval)

Each aircraft brand and model is different, so application areas may vary slightly. EAGF is only to be applied between the first and the last door, to the tail fin of an aircraft, and above the wing line of the main wing.

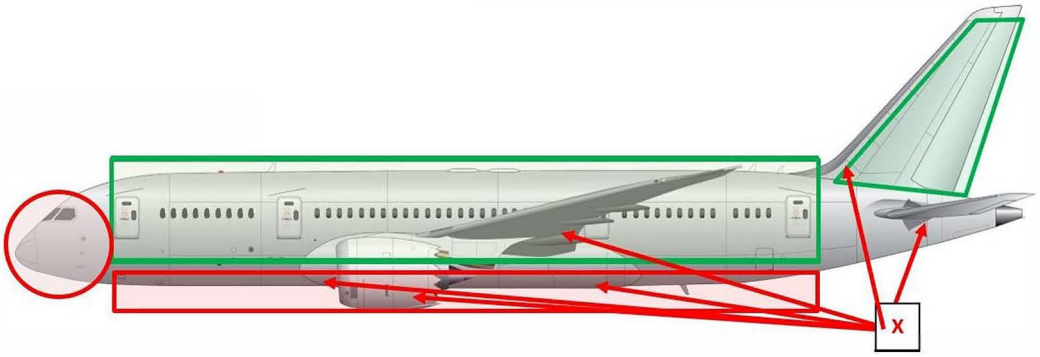

Figure 1. Potential EAGF Application Areas

Do NOT apply the EAGF on:

- Radome and nose cone
- Fuselage area below wing line
- Underbelly
- Wings, winglets, or engines
- Convex area between wings and fuselage
- Movable flaps
- Within 16 in. (406 mm) of a leading edge of any aircraft surface
- Interior surfaces
- Glass or other aircraft window surfaces
- Areas covering or surrounding any access panel, hatch, hinge, locking mechanism, or any other uneven surface or safety equipment
- Areas exposed to severe abrasion
- Areas exposed to operating temperatures above 150°F (65°C)
- Surfaces exposed to leaking fluids, such as aviation hydraulic fluid LD-4, JetA, JP4, aviation gasoline, Mil-L-7808 (synthetic oil), Mil-H-5606A (hydraulic Fluid), blue fluid (lavatories), or any fluid which can affect film or adhesive performances.
- Extreme, sharply rounded, or complex curves
- Irregular surfaces, including raised bead riveted aircraft surfaces—1/16 in. to 1/4 in. (1.6 to 6.4 mm)—unless:
  - The film is cut and removed around such surfaces.
  - The film is cut completely along any seams.

NOTE

Safety requirements dictate all access panels must be visible for emergency access when required. If EAGF is used on the door of an access panel, a margin of 1/4 in. to 1/2 in. (6.4 to 12.7 mm) of EAGF must be removed from the outer edge of the door and the frame around the door.

Graphic Construction Limitations

Printing Requirements

Only specific digital UV printers and inks, and screen-printing inks are approved for 3M™ Exterior Aircraft Graphic Film A7322 conversion. Refer to Product Bulletin A7322 for a list of approved printers and inks.

Graphic Protection

Only screen-printing clear coats are allowed. Refer to Product Bulletin A7322 for a list of approved screen-printing clear coats.

⚠ WARNING

Do NOT install any EAGF that includes an overlaminate film. Overlaminate film could detach from the base film during in-flight conditions and cause issues.

Application Tape

Application tape is always required on EAGF. It helps protect the graphic during installation and provides stiffness to make large panels easier to install.

Required Documentation

3M™ Exterior Aircraft Graphic Film A7322 is made to order and no physical inventory is kept at our graphics distributors locations. The below stated documentation must be provided to 3M before an order can be placed for 3M™ Exterior Aircraft Graphic Film A7322:

- The graphic manufacturer must complete, sign and return the Graphic Manufacturer Checklist document to 3M as stated on the document. A copy of the Graphic Manufacturer Checklist can be provided by the 3M Technical team
- The end user (aircraft owner or operator) must complete, sign, and return the Designated Engineering Representative (DER) Letter to 3M (address as stated within the letter template). The 3M Technical team can provide a copy of the letter template.

Compatible Products

Refer to Product Bulletin A7322 for a complete list of compatible inks, printers, graphic protection, edge sealers, and other products to use with EAGF.

Tools

Cleaning Tools

- 70% isopropyl alcohol and 30% water solution (IPA)
- 3M™ Prep Solvent-70 or another similar solvent cleaner
- 3M™ Surface Preparation System
- Clean, lint-free paper towels
- Scotch-Brite™ High Performance Cleaning Cloth or equivalent micro-fiber towel
- 3M™ Citrus Base Industrial Cleaner
- Other cleaning tools as required by the cleaning process selected from 3M Instruction Bulletin Application: 3M Graphic Product Selection and Substrate Preparation

Application Tools

- 3M™ Plastic Applicator PA-1-G Gold, also called a “squeegee”
  - Adding a suede covering or other protective covering to the squeegee will reduce friction and help prevent scratches on the surface of the graphics.
- 3M™ Air Release Tool 391X
- 3M™ Rivet Brush Applicator RBA-1 or RBA-3
- 1 in. wide (2.5 cm wide) roll of Scotch™ Masking Tape
- 2 in. or 3 in. wide (5.1 cm or 7.6 cm wide) roll of Scotch™ Masking Tape
- 3M™ Knifeless™ Tape Design or Finish line
- Retractable knife blade
- Container for used blades
- Seam buster or concealed blade safety cutter
- Measuring tape (for registration)
- 3M™ Professional Panel Wipes 34567 or lint-free paper towels
- Garbage bags
- Safety glasses
- Scissors
- 3M™ Edge Sealer 3950 *or* 3M™ Edge Sealer ES2000
- 3M™ Fastbond™ Adhesive 30NF or 3M™ Tape Primer 94
- 4 in. (10.2 cm) Scotch™ Superior Performance Box Sealing Tape 375

Keys to a Successful Installation

Contacting the Aircraft Installation Site’s Safety Officer

- Discuss rules, safety, location of aircraft, entry into building, scaffolding, power, etc.
- Arrange and conduct an on-site inspection to examine the aircraft for rough spots, damage, or other problems. Notify the graphics manufacturer of any problems.
- Coordinate the installation date with the site.

About Surface Finishes

- All new surface finishes must be fully cured before EAGF is applied. Two-part polyurethane paint systems and clear coats outgas as they cure, which can cause the EAGF to bubble.
- To achieve the best possible adhesion, aircraft with a matte surface must be finished to a smoothness comparable to a glossy paint or clear coat, especially in areas where the EAGF's leading edge and edge sealer are applied.
- Contact the graphics’ manufacturer with any concerns about the aircraft’s surface finish.

Plan Workflow for Maximum Efficiency

Since most EAGF will be applied while working on scaffolding, plan your workflow so that all cutting, weeding, post-heating, re-squeegeeing, and edge sealer application is completed on a given area before moving scaffolding to the next area.

Preparing for the Installation

- Ensure all necessary tools—including scaffolding, long power cords, and a sufficient quantity of edge sealer—are present before starting work.
- Check the temperatures of the air, EAGF, and substrate. All three temperatures should be 50°F to 100°F (10°C to 38°C).
- Review and follow the layout plan provided by the graphics manufacturer.
  - Aircraft graphics are generally large and multi-panel. Ensure the layout area is sufficiently large and that it is clean and/or covered with a protective cloth to avoid contaminating the EAGF.
  - Layout and dry fit the EAGF panels. Make note of all doors, windows, access panels, and openings where film must be cut away, and of all joints and seams where film must be cut to ease stress on the film. Make appropriate alignment marks on the EAGF and on the aircraft. See Figure 2.

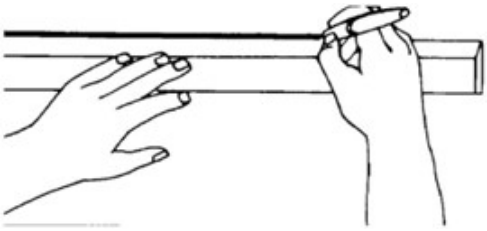

Figure 2. Making Registration Marks

NOTE

The layout plan that comes with the EAGF is intended for a specific model of aircraft and may not position correctly on different models. Installers are responsible for ensuring the EAGF is installed on the correct aircraft model. Contact the graphic manufacturer about any discrepancies and do NOT proceed until given clarification.

NOTE

Use a marker approved by the aircraft manufacturer for use on the aircraft skin to make registration marks. Do NOT use chalk lines, china markers, or grease pencils, as these prevent adhesive from bonding to the surface.

- Clean the installation areas just before installing the EAGF.

⚠ WARNING

Aircraft skin integrity is critical. Damaged aircraft skin can lead to premature corrosion and have other serious consequences.

Use care to avoid damaging the skin of the aircraft when cutting the liner or film. When cutting film on the substrate, it is preferable to use 3M™ Knifeless™ Tape or a cutter where the blade is protected and cannot cut the aircraft skin, such as a seam buster or concealed blade safety cutter.

Surface Preparation

1. Clean all application surfaces.
2. Remove any existing graphics and all adhesive residues using the "EAGF Removal Methods" on page 11.
3. Clean the substrate using the appropriate technique. See 3M Instruction Bulletin Application: 3M Graphic Product Selection and Substrate Preparation.
4. Clean the sections of the aircraft to be worked on for the given day of the installation. Improperly cleaned aircraft skin voids any 3M warranty for EAGF failure.
5. To clean unpainted, primed, or top-coated aircraft skin:
   a. Clean with a lint-free towel soaked with 3M™ Prep Solvent-70 or a similar product. Then clean the surface with the 70% IPA and 30% water solution.
   b. See 3M Instruction Bulletin Application: 3M Graphic Product Selection and Substrate Preparation for additional details.

Application

Installation method selection depends on the size of the EAGF. Consider all options before selecting the best method for each panel of an installation.

EAGF Overlap Considerations

If multiple graphic panels are to be installed on the aircraft, always ensure any rain, moisture, ice, snow, and dust will run downward without being stuck in an overlap.

- For vertical overlaps:
  - Apply the rear most piece of EAGF first. Subsequent pieces must overlap the previous one by at least 1/4 in. (6.4 mm), but no more than 1/2 in. (12.7 mm).
- For horizontal overlaps:
  - Apply the lower most piece of EAGF first. Subsequent pieces must overlap the previous one by at least 1/4 in. (6.4 mm), but no more than 1/2 in. (12.7 mm).

Panels Smaller Than 4 Square Feet (0.4 Square Meters)

1. Separate the liner and film layer by flicking the film edge away from the liner with a fingernail or by bending the corner slightly.
2. Lay the EAGF face down against the side of the aircraft or on a clean flat surface.
3. Pull off the entire liner in a continuous motion at an 180 degree angle. If the liner is scored, bend the liner at the seam and then remove it. Always remove the liner from the film layer (rather than the film layer from the liner) to avoid stretching the film. See Figure 3.
4. Tack the EAGF in place with thumb pressure in the upper corners, holding the rest of the EAGF away from the application surface while doing so to prevent pre-adhesion.
5. Apply the rest of the EAGF using firm squeegee pressure, starting at the center of the film and working outward in all directions.
6. Release the tack points and then squeegee over them to avoid wrinkles. See Figure 4.

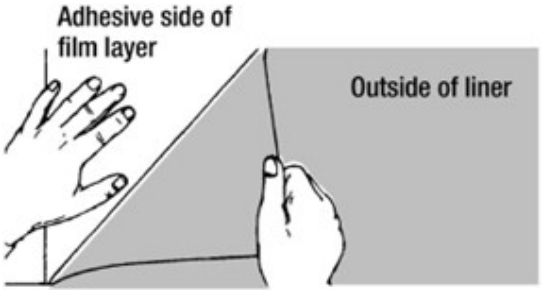

Figure 3. Removing Liner From the Film

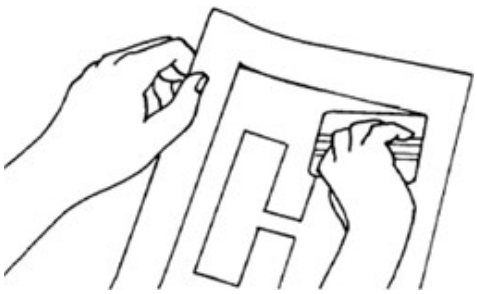

Figure 4. Holding EAGF Away from the Surface to Prevent Pre-Adhesion

Graphics Larger Than Four Square Feet (0.4 Square Meters)

- Horizontal Top Hinge Method
  - Good for stripes less than 12 in.-wide (30.5 cm-wide).
  - Apply a masking tape hinge perpendicular to the longest dimension of the EAGF.
  - If the surface is curved, position the hinge to wrinkle as little as possible when it is folded back.
- Center-Hinge Method
  - Good option for horizontal applications or when masking tape is not available.
- Self Hinge Method
  - Good for all application methods.
  - Remove the liner from the EAGF between the scored lines.

Horizontal Top Hinge Method

1. Align and tape the EAGF into position with tabs of masking tape.
2. Apply a 2 in. to 3 in.-wide (5.1 cm to 7.6 cm-wide) strip of masking tape over the top edge of the EAGF to make a hinge. See Figure 5.
3. Lift up the EAGF, grasp the liner, and peel off several inches of liner. See Figure 6.
4. Hold the EAGF away from the application surface with one hand. Only allow the adhesive to touch the application surface as pressure is applied.
5. Apply the film using firm overlapping squeegee strokes, starting at the top center of the EAGF and working out to each edge.
6. Apply the rest of the EAGF, peeling off additional liner in several inch increments as needed. See Figure 7.
7. Remove the tape hinge and tape tabs.
8. Post-heat and re-squeegee all EAGF edges.

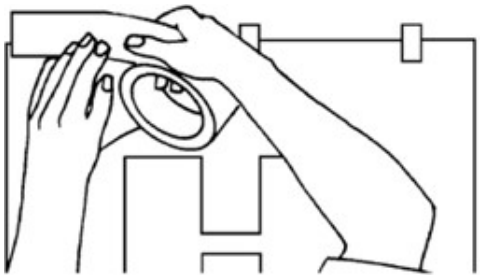

Figure 5. Making a Hinge

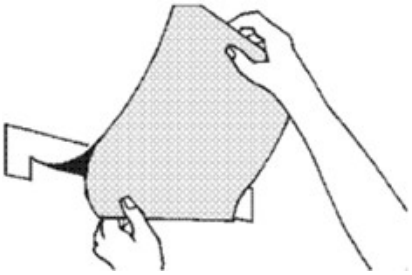

Figure 6. Peeling Back the Liner

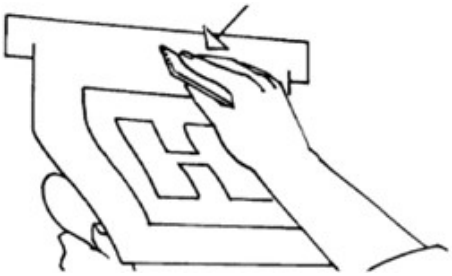

Figure 7. Squeegeeing the EAGF

Center-Hinge Method

1. Align and tape the EAGF into position with tabs of masking tape on top of the graphic.
2. Apply a 2 in. to 3 in.-wide (5.1cm to 7.6 cm-wide) strip of masking tape across the center of the EAGF to make a hinge. This can be done either horizontally or vertically, but is typically done across the EAGF's longest dimension. See Figure 8.
3. Remove the top tape tabs from the side of the graphic to be applied.
4. Gently fold half the EAGF back over the hinge.
5. Peel off the liner from the exposed end of the EAGF back to the tape hinge.
6. Carefully cut the liner along the hinge. See Figure 9.
7. Discard the cut piece of liner.
8. Hold the EAGF away from the surface with one hand. Only allow the adhesive to touch the application surface as pressure is applied.
9. Apply the EAGF using firm, overlapping squeegee strokes, starting in the center and working across the shortest distance to the EAGF's exposed edges. See Figure 10.
10. Remove the tape hinge. See Figure 11.
11. Gently fold over the other side of the EAGF and repeat Steps 5 to 9.

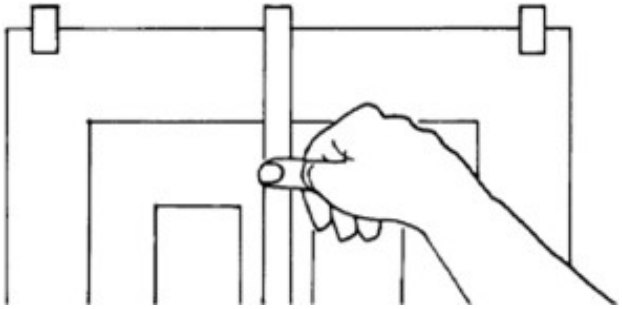

Figure 8. Making a Center Hinge

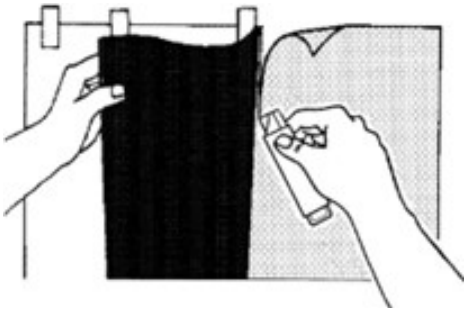

Figure 9. Cutting Off the Liner

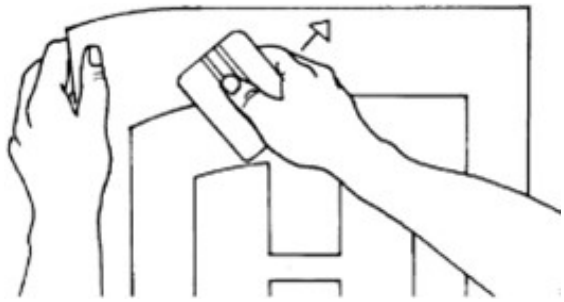

Figure 10. Squeegeeing the EAGF

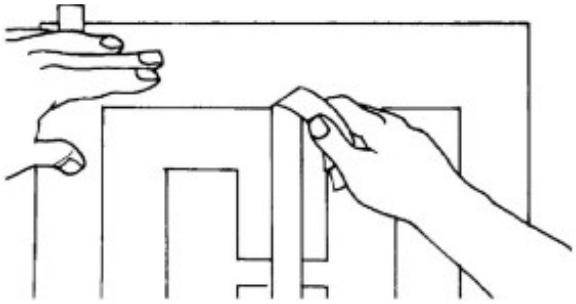

Figure 11. Removing the Tape Hinge

Self Hinge Method

1. Place the EAGF face down on a clean, flat surface.
2. Use a liner cutter to cut through just the liner across the shortest width of the film.
3. Make another liner cut about 4 in. (10.2 cm) away on either side of the first cut. See Figure 12.
4. Remove the resulting strip of liner.
5. Position the EAGF on the aircraft and lightly adhere it in place with finger pressure where the exposed adhesive touches the aircraft.
6. Squeegee the film along the exposed adhesive to apply the strip of EAGF to the aircraft, as indicated by the parallel dotted lines in Figure 13. This area now serves as a hinge.
7. Remove the smaller piece of the liner and apply the EAGF according to Steps 5 through 9 of the "Center-Hinge Method" on page 7. See Figure 14.
8. Remove the remaining piece of liner and apply the EAGF according to Steps 5 through 9 of the "Center-Hinge Method" on page 7.

Figure 12. Creating a Self Hinge

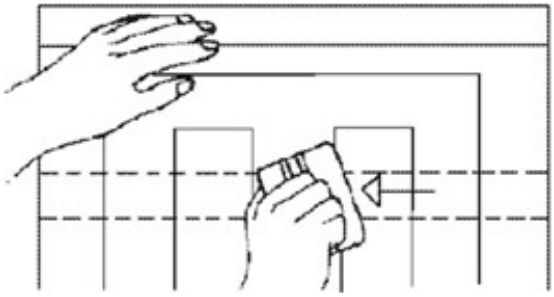

Figure 13. Squeegeeing EAGF After Liner Removal

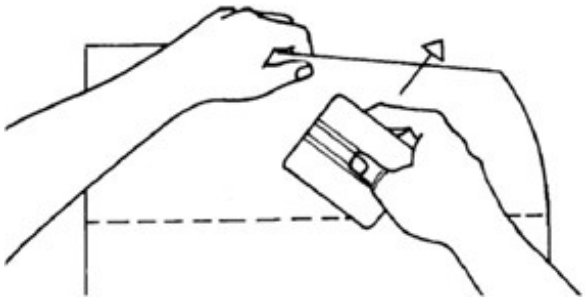

Figure 14. Applying the Rest of the EAGF

Small Pre-Spaced EAGF

1. Separate the liner and film layer by flicking the film edge away from the liner with a fingernail or by bending the corner slightly.
2. Lay the EAGF face down against the side of the aircraft or on a clean, flat surface.
3. Peel the entire liner off the EAGF in a continuous motion at an 180 degree angle. For scored liners, bend the EAGF at the seam and remove both pieces of the liner. Always remove the liner from the film layer (rather than the film layer from the liner) to avoid stretching the EAGF. See Figure 15.
4. Tack the EAGF in place with thumb pressure in the upper corners. See Figure 16.
5. Apply the EAGF using firm squeegee pressure and overlapping strokes. Start at the top of the EAGF in the center, and work out toward the edges and down the graphic. See Figure 17. Release the tack points before squeegeeing those areas of the EAGF to avoid wrinkles.

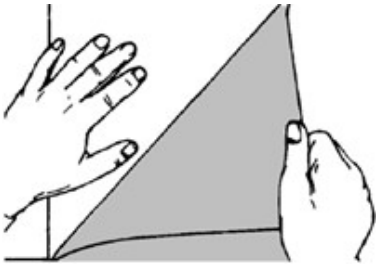

Figure 15. Removing the Liner

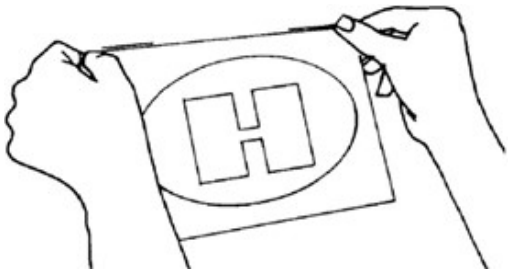

Figure 16. Tacking the Corners

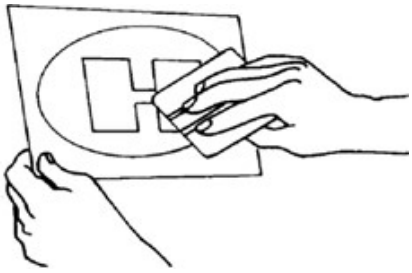

Figure 17. Squeegeeing the EAGF

Large Pre-Spaced EAGF

1. Position the EAGF on the aircraft and tape it in place using the "Horizontal Top Hinge Method" on page 7. See Figure 18.
2. Create an independent top hinge for each letter, number, or other element by cutting through the premasking tape and into the masking tape. See Figure 19.
3. Remove the liner from one element and squeegee it to the aircraft using firm overlapping strokes. Be sure to also squeegee areas where there is just premasking tape. This helps prevent wrinkles and misalignment.
4. Continue applying the other elements.

Figure 18. Making a Top Hinge

Figure 19. Creating a Top Hinge for Each Character

Finishing Steps

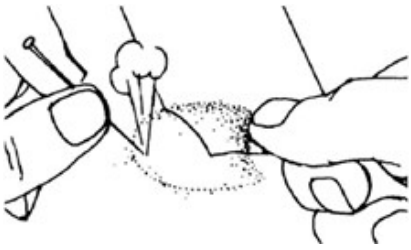

Figure 20. Puncturing an Air Bubble

WARNING

Aircraft skin integrity is critical. Damaged aircraft skin can lead to premature corrosion and have other serious consequences.

Use care to avoid damaging the skin of the aircraft when cutting the liner or film. When cutting film on the substrate, it is preferable to use 3M™ Knifeless™ Tape or a cutter where the blade is protected and cannot cut the aircraft skin, such as a seam buster or concealed blade safety cutter.

1. Remove the premasking tape by pulling it back on itself at an 180 degree angle.
2. Resqueegee the EAGF to ensure a good bond between the film and the substrate.
3. Look for air bubbles in flat areas and remove them:
   a. Puncture the bubbles at one end with a pin or round pointed tool.

NOTE

NEVER use a razor blade or cutting knife blade as this will score the film and may lead to premature failure of the graphic.

   b. Use a finger to push the trapped air out toward the puncture. See Figure 20.
4. Work the EAGF into irregular areas with a rivet brush.
5. Cut the EAGF on all substrate seams using either previously applied 3M™ Knifeless™ Tape, or a cutting tool, taking care to NOT touch the aircraft skin with the cutting tool.
6. Resqueegee the EAGF again. Use a felt or edge-protected squeegee to avoid scratching the clear coated surface.
7. Post-heat and re-squeegee all exposed EAGF edges and overlaps using a heat gun and very firm pressure from an edge-protected squeegee or a rivet brush.

Edge Sealing

Read all cautions notes in the "Health and Safety" section on page 13.

WARNING

Edge sealer is required on all exposed edges of EAGF applied to aircraft. Improper application may result in lifting and serious product failure, including the film coming loose and interfering with an aircraft's operation.

Edge sealing helps protect the EAGF from in-flight wind abrasion and rain erosion. The sealer also increases the EAGF edges' resistance to fluids. The following areas must be edge-sealed:

- The EAGF's leading edges
- Edges where the EAGF has been cut for doors, access panels, and similar items.
- Any cut-out repair areas where new EAGF overlaps the original EAGF.
- Edge sealer must cover the EAGF edge AND the substrate to be effective.

1. Apply the edge sealer so it covers both the EAGF and the substrate by 1/4 in. (6.4 mm).
2. Apply the edge sealer consistently along all the length of the exposed edge.
3. Allow the edge sealer to fully cure as per the conditions stated in the edge sealer's product bulletin.

Other edge sealers may be used on a customer test-and-approve basis. Some customers have successfully used the clear coat of the aircraft's paint system as an edge sealer. Problems attributed to such user tested-and-approved materials are NOT covered by any 3M warranty. Always follow the manufacturer's usage recommendations.

Refer to the respective edge sealer's product bulletin for complete information regarding application and curing time. 3M recommends the following edge sealers for EAGF applications.

- 3M™ Edge Sealer 3950
- 3M™ Edge Sealer ES2000

Maintenance

Inspection

It is the aircraft owner/operator's responsibility to periodically inspect the EAGF for lifting, fraying, and tearing. Damaged EAGF should be removed and/or repaired immediately by a qualified person.

Cleaning

EAGF damaged by improper cleaning is NOT covered by any 3M warranty.

An EAGF cleaner must be:

- a wet cleaner suitable for high quality painted surfaces;
- non-abrasive;
- neither highly acidic nor highly alkaline (a pH between 3 and 11); and
- free of strong aromatic solvents, chlorinated solvents, and ketone containing solvents (such as acetone and methyl ethyl ketone).

Repairing Damaged Areas

If the damaged section of a graphic is not located by a graphic edge, it may be difficult to remove without cutting the aircraft skin. Replacing the entire graphic may be a better solution in certain cases. Always take care to avoid damaging the aircraft skin while repairing a damaged graphic.

1. Mask around the damaged area with 2 in. (5.1 cm) masking tape. This helps protect the substrate from being cut or damaged by solvents.
2. Trim the area where EAGF is to be removed to create neat edges.
3. Carefully remove the damaged part of the EAGF from the aircraft skin.
4. Cut a replacement patch large enough so it overlaps all sides of the damaged area by 1/4 in. to 1/2 in. (6.4 mm to 12.7 mm).
5. Clean the repair area thoroughly with a solvent wipe.
6. Clean the repair area with a 70% IPA and 30% water solution.
7. Remove the masking tape from the damaged area.
8. Install the new EAGF following the application technique most appropriate to the size of the new EAGF patch.
9. Edge seal all edges with liquid edge sealer. Refer to the "Edge Sealing" section on page 10 for details.

EAGF Removal Methods

WARNING

Aircraft skin integrity is critical. Damaged aircraft skin can lead to premature corrosion and have other serious consequences. Use caution when removing EAGF from an aircraft.

Adhesive Life

3M™ Exterior Aircraft Graphic Film A7322 has a permanent, pressure-activated adhesive. It can be removed when used for the time period stated in Product Bulletin A7322. Removal of A7322 after that time is still possible, but such removal is more likely to cause damage to the substrate.

Film removal damage is NOT covered by any 3M warranty.

Removal Methods

3M does NOT warrant the clean or successful removal of EAGF. All removal methods are to be performed strictly on a user test-and-approve basis. Ensure the aircraft owner/operator agrees on which method to use prior to starting removal.

Three removal methods are described below, in order from the easiest and most common method to more difficult and less common methods. The latter methods may be appropriate if the EAGF has remained on the aircraft for a long time and has become brittle.

⚠ CAUTION

Before using a heat gun or steamer, consult the aircraft manufacturer regarding the maximum temperature to which the skin of the aircraft can be heated without affecting surface integrity.

Heat Gun Removal

Using a heat gun to soften the EAGF's adhesive can be successful when the EAGF has not been on the aircraft for longer than the product warranty period.

1. Use a temperature controlled industrial heat gun set to 122°F to 140°F (50°C to 60°C)—or to the maximum temperature to which the aircraft skin can be heated without affecting surface integrity—to heat a corner of the EAGF.
2. Carefully peel up the heated corner with an air release tool. Take care to avoid damaging the aircraft's skin.
3. Slowly remove the EAGF at an angle less than 90 degrees while continuing to apply heat to the EAGF until all of the EAGF has been removed.
4. Use 3M™ Citrus Based Cleaner, or any owner or operator approved adhesive remover, to remove any remaining adhesive residue.
5. Clean the aircraft's surface with the 70% IPA and 30% water solution.

Steam Removal

Steam removal uses a professional steaming unit, such as a wallpaper steamer, to soften the EAGF adhesive, allowing it to be removed more efficiently. Typically very little adhesive remains on the aircraft skin when using this procedure, especially when it is used within the EAGF warranty period.

NOTE

Always wear protective gloves to prevent scalding. Never leave the unit unattended when it is on.

1. Set up the wallpaper remover according to the manufacturer's instructions and read and follow all safety instructions.
2. Turn on the unit and allow it to warm until it emits steam.
3. As the unit warms, cover all switches and sockets securely so no water or steam can enter them. NEVER point the unit directly at switches or sockets.
4. When the unit is ready, place the steam shield/plate/holder in a suitable location from which to start pulling off the EAGF. Leave it in place for about 20 to 30 seconds. This time period may need to be adjusted depending on the results.
5. Use a plastic scraper to gently loosen an edge of the EAGF where the steamer was used.
6. Slowly remove the EAGF at an angle less than 90 degrees to maximize the amount of adhesive removed with the EAGF and to minimize damage to the aircraft's finish.
7. Use 3M™ Citrus Based Cleaner, or any owner or operator approved adhesive remover, to remove any remaining adhesive residue.
8. Clean the aircraft's surface with the 70% IPA and 30% water solution.

Primer and Tape Method

In this method, an adhesive primer is applied to the top of the EAGF and then box sealing tape is applied over the primer. The tape strengthens the EAGF and makes it easier to remove. For this process, it is best to have two people working together removing one strip at a time. For the best results, work when the air and surface temperatures are 60°F to 90°F (16°C to 32°C).

Materials needed:

- 3M™ Fastbond™ Adhesive 30NF *or* 3M™ Tape Primer 94
- 4 in. (10.2 cm) Scotch™ Superior Performance Box Sealing Tape 375
- 3M™ Citrus Base Industrial Cleaner
- Scotch™ Masking Tape, 2 in. (5.1 cm)

1. Gently break the EAGF loose from any edge sealer using a sharp, hard plastic tool.
2. Apply 3M™ FastBond™ Adhesive 30NF or 3M™ Tape Primer 94 to the EAGF with a paint roller or brush.
3. Starting at the rear most position of the EAGF, apply 4 in. (10.2 cm) Scotch™ Superior Performance Box Sealing Tape 375 to the EAGF with a squeegee, perpendicular to the longest uninterrupted length.
4. Carefully lift the trailing edge of the EAGF at an angle less than 90 degrees.
5. Attach the lifted end of the EAGF to a 4 in. (10.2 cm) diameter PVC tube using Scotch™ Masking Tape.
6. Carefully and slowly roll the EAGF onto the tube.
7. Use 3M™ Citrus Based Industrial Cleaner, or any owner or operator approved adhesive remover, to remove any remaining adhesive residue.
8. Clean the surface with a 70% IPA and 30% water solution before applying any new EAGF.

Health and Safety

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.

Tools and Equipment Usage

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

Air Quality Regulations

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.

Warranty Information

See the Specific Warranty for 3M™ Exterior Aircraft Graphic Film A7322 in Product Bulletin A7322, which gives the terms, additional limitations of the warranty, if any, and limitations of liability.

Technical Information

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