



ECCN
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AERONAUTICAL ACCESSORIES, INC.

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ALERT SERVICE BULLETIN **ASB No. AA-06179** **Revision A**

SUBJECT: **Emergency Pushout Window**
P/N 407-561-113 / 407-561-114 / 407-561-121 /
407-561-122 / 407-561-125 / 407-561-126

MODELS AFFECTED: Bell Helicopter Textron model 407 with
Aeronautical Accessories, Inc. 407-561-113 /
407-561-114 / 407-561-121 / 407-561-122 /
407-561-125 / 407-561-126 Passenger Door
Pushout Window Assemblies installed in
accordance with STC SR01687AT.

COMPLIANCE: This bulletin shall be complied with within 6
months of receipt.

DESCRIPTION: This Alert Service Bulletin is being issued to verify
pushout forces are within certified design limits.

FAA/DER APPROVAL: The engineering aspects of this bulletin are FAA
approved.

MANPOWER: Approximately 10.0 hours

IF OWNERSHIP OF AIRCRAFT HAS CHANGED, PLEASE FORWARD THIS BULLETIN TO NEW OWNER

MATERIAL:

The following materials are required to comply with this bulletin:

TABLE 1 – PARTS LIST
407-562-001 PUSHOUT WINDOW RETROFIT KIT

<u>Qty</u>	<u>Part Number</u>	<u>Description</u>
-001		
1	407-562-121	Template
2	090-104-007	Decal – Two Sided
2	090-104-008	Decal – Two Sided
1	DT110	Filler Strip Installation Tool

NOTE

Retain Filler Strip Installation Tool (DT110) for use with Hardware Kit (407-562-100) if seal replacement is required.

If replacement of window seal is required, Hardware Kit (407-562-100) – 1 kit per window, must be ordered from Aeronautical Accessories, Inc.

TABLE 2 – PARTS LIST
407-562-100 HARDWARE KIT

<u>Qty</u>	<u>Part Number</u>	<u>Description</u>
-100		
1	099-050-243	Sealant (RTV-732, 3 oz CLR)
1	099-859-002	Syringe, 15cc
1	HUN-X3001	X-Acto Knife
1	407-210-105	Seal (Black)
1	407-210-103	Seal Lock (Black)

NOTE

These kits are available from Aeronautical Accessories, Inc. at no cost. (Contact AAI Sales Department at 1-800-251-7094)

The following customer supplied materials are needed to comply with this bulletin:

**TABLE 3 – PARTS LIST
CUSTOMER SUPPLIED MATERIALS**

<u>Qty</u>	<u>Description</u>
1	Isopropyl Alcohol (pint)
50 ft	Mylar, or similar tape (3M-Fine Line)
1	Abrasive Pad (80 – 100 grit)
1	Abrasive Paper (180 grit)
1	Abrasive Paper (80 grit)

REQUIRED TOOLS:

Calibrated Compression Force Gauge (100 lb capacity)

Recommended gauge/models available from:

(Wagner – model FDL 100):

Wagner Instruments
PO Box 1217
Greenwich, CT 06836-1217
Phone: (203) 698-0681
Fax: (203) 698-9696

(model no. 17435T37):

McMaster-Carr
6100 Fulton Industrial Blvd.
Atlanta, GA 30336-2852
Phone: (404) 346-7000
Fax: (404) 349-9091

NOTE

If a gauge is not locally available, contact:
Aeronautical Accessories, Inc. Product Support.

WEIGHT AND BALANCE:

Not affected

PUBLICATIONS AFFECTED:

Installation Instructions, Report Number AA-97142

Instructions for Continued Airworthiness, Report Number AA-06161

Any questions regarding this bulletin should be addressed to:

AERONAUTICAL ACCESSORIES, INC.

P.O. Box 3689

Bristol, 37625-3689 TN

PRODUCT SUPPORT

1-800-251-7094

OVERVIEW

Upon receipt of this bulletin, determine by part number if affected pushout window(s) is (are) installed (see Figure 1). If affected pushout window(s) is (are) installed, an evaluation is to be made (see Section 1) to determine if modification to the window(s) and/or replacement of the seal(s) is necessary.

NOTE

In all cases, decals (090-104-002) in the lower two corners must be replaced (see Section 4).

ACCOMPLISHMENT INSTRUCTIONS**VERIFICATION CHECK TO DETERMINE IF PUSHOUT FORCES ARE ACCEPTABLE**

Refer to Figures 2, 3, 5, 6, 7, and 8.

SECTION 1 – PUSHOUT WINDOW FORCE VERIFICATION TEST

1. If installed, verify the upper interior door trim panel does not overlap the seal more than 50% (see Figures 7 and 8). If the overlap exceeds 50%, remove the upper interior door trim panel and trim the material until the overlap on the seal is less than 50%. Reinstall the upper interior door trim panel before proceeding.
2. From the lower outside forward corner of the window, gradually apply force, perpendicular to the window, to the center of the "Emergency, Push Here" decal that is located in that corner (see Figure 3).

NOTE

Use of a calibrated compression force gauge is required to conduct this procedure along with a push block (see Figures 2 and 3) made from a material, such as wood, that will not scratch or damage the window.

NOTE

Push Block No. 1 can be used for all applications except for the forward, lower corner of a slider window application, where Push Block No. 2 must be used.

CAUTION

Do not apply pressure too quickly, or apply too much pressure, as this will result in window removal which may result in permanent damage to the seal and necessitate seal replacement.

Observe the relationship between window and seal and the seal and the window frame as pressure is applied. Continue applying force until the corner edge of the window barely breaks past the edge of the seal on the inside of the same corner. The window should begin to dislodge from the seal when 45 – 60 lbs force is applied. If window begins to dislodge when 45 – 60 lbs force is applied, stop applying pressure and proceed to Step 5. Otherwise continue with Step 3.

3. If the window cannot be dislodged within the specified force range, verify sealant application is as specified in Section 5 and Figure 5. Verify the seal lock is installed correctly as specified in Section 5, and that there is no evidence of binding between the seal, door and window. Inspect the upper interior door trim panel to verify the edge contacting the seal is adequately trimmed and not impeding the seal's function as specified in Step 1. Correct any discrepancies, if found, and repeat Step 2; otherwise proceed to Step 4.
4. If the window cannot be dislodged with a maximum of 60 lbs of applied force, proceed to Sections 2 through 6. If the window is dislodged with 45 – 60 lbs of force applied, continue to Step 5.
5. With a thin flat object, carefully reinstall the corner of the window in the seal ensuring no permanent damage has occurred to the seal, window or door frame. Continue with pushout window force test verification.
6. From the lower inside aft corner of the window gradually apply force, perpendicular to the window, to the center of the "Emergency, Push Here" decal that is located in that corner (see Figure 3).

Observe the relationship between window and seal and the seal and the window frame as force is applied. Continue applying force until the corner edge of the window barely breaks past the edge of the seal on the outside of the same corner. The window should begin to dislodge from the seal when 45 – 60 lbs force is applied. If window begins to dislodge when 45 – 60 lbs force is applied, stop applying pressure and proceed to Step 10. Otherwise continue with Step 7.

7. If the window cannot be dislodged within the specified force range, verify sealant application is as specified in Section 5 and Figure 5. Verify the seal lock is installed correctly as specified in Section 5, and that there is no evidence of binding between the seal, door and window. Inspect the upper interior door trim panel to verify the edge contacting the seal is adequately trimmed and not impeding the seal's function as specified in Step 1. Correct any discrepancies, if found, and repeat Step 6; otherwise proceed to Step 8.
8. If the window cannot be dislodged with a maximum of 60 lbs of applied force, proceed to Sections 2 through 6. If the window is dislodged with 45 – 60 lbs of force applied, continue to Step 9.
9. With a thin flat object, carefully reinstall the corner of the window in the seal ensuring no permanent damage has occurred to the seal, window or door frame.
10. Replace the "Emergency, Push Here" decals (see Section 4).
11. Repeat Steps 1 thru 10, as applicable, for the opposite window installation (see Figures 2, 3, 5, 6, 7, and 8).
12. Force verification test complete.

REMOVAL, MODIFICATION AND REPLACEMENT INFORMATION

Refer to Figures 4, 5 and 6.

SECTION 2: REMOVAL - PASSENGER EMERGENCY PUSHOUT WINDOW**CAUTION**

The process of removing this window is a sensitive procedure and should be attempted with caution and great care, otherwise serious window damage could result.

1. Remove the seal lock from existing window seal. Carefully press against inside, lower corners of the window until window becomes free of the seal.

CAUTION

DO NOT flex, pry, or otherwise cause any stress to the window during this process, as cracking may occur.

2. Removal complete.

SECTION 3: MODIFICATION – PASSENGER EMERGENCY PUSHOUT WINDOW

1. Carefully lay the window on a horizontal work area that will not scratch or damage the surface. Orient the Template (407-562-121) in the lower aft corner of the window by aligning the alignment lines on the template with the aft and lower edges of the window, as shown in Figure 4 – Detail A.

CAUTION

Verify the amount of window material that extends past the radial portion of the template radius does not exceed .06 inches (ref. Figure 4 – Detail A).

NOTE

If window material does not extend past the radial portion of the template radius, the window does not require modification; proceed to Section 5. Otherwise continue with Step 2.

2. Mark the new corner profile from the template onto the surface of the window with a fine tip felt marker. Remove excess window material according to the new profile, using a medium grit abrasive pad (80 – 100 grit).

CAUTION

Use care not to break window, or cause crazing, when removing excess window material.

3. Deburr both edges and corners of the newly cut area ensuring no roughness or protrusions exist.

NOTE

Deburring can be accomplished by drawing the corner of a square edge tool, such as a 6" metal scale, along the edge.

4. Window modification complete.

**SECTION 4: MODIFICATION – PASSENGER EMERGENCY PUSHOUT WINDOW –
DECAL REPLACEMENT**

1. Remove existing “Emergency – Push Here” decals (090-104-002) from the lower, inside corners of the window. Remove all remaining adhesive from the window using isopropyl alcohol.
2. Apply Decal – Two Sided (090-104-007) to the forward lower, inside corner of window as shown in Figure 4– Detail B. Apply Decal – Two Sided (090-104-008) to the aft lower, inside corner of window as shown in Figure 4 – Detail A.
3. Window decal replacement complete.

**SECTION 5: INSTALLATION – PASSENGER EMERGENCY PUSHOUT WINDOW
SEAL AND WINDOW****NOTE**

If replacement of window seal is required, Hardware Kit (407-562-100) – 1 kit per window, must be ordered from Aeronautical Accessories, Inc.

CAUTION

DO NOT flex, pry, or otherwise cause any stress to the window during this process, as cracking may occur.

CAUTION

DO NOT use solvents such as acetone, benzene, carbon tetrachloride, fire extinguisher fluid, dry cleaning compounds, lacquer thinners, aliphatic naphtha, window sprays or kitchen scouring compounds on the acrylic plastic as permanent damage may result.

WARNING

DO NOT USE A METAL TOOL TO REMOVE SEALANT.

NOTE

The installation of this window will require procurement of approximately 25 feet of Mylar, or similar, tape.

1. Remove upper interior door trim panel.
2. Using Mylar or similar tape, carefully mask off the door window frame leaving an area 0.44 inches (7/16) wide to be bonded to prevent adhesive from getting on the surrounding areas not intended for bonding.
3. Using Mylar or similar tape, carefully mask off the lower aft corner (2 x 2 inch) of the window opening in the frame, as shown in Figure 5. The seal should not be bonded in the lower aft 90 degree quadrant of the frame (inside 2 x 2 inch area).
4. Remove all adhesive and/or finish from unmasked portion of window frame using stiff fiber brush and isopropyl alcohol. 180 grit abrasive material may be used to remove any primer from the unmasked area of the window frame. Finish must be removed from the seal bonding area of the frame.
5. Inspect the edge of the frame for scratches, cracks, or other damage.

6. Clean any residue from window frame with a cloth dampened with isopropyl alcohol. Wipe dry with clean cloth.
7. Prepare seal for bonding by abrading the narrow seal groove with 80 grit abrasive material.
8. Clean any residue from the seal groove with a cloth dampened with isopropyl alcohol. Wipe dry with clean cloth.
9. Remove the masking tape applied in Step 3 from the lower aft corner of the window frame.
10. Do not put any adhesive in the seal groove which accepts the window.

NOTE

Seal lock groove faces outboard.

NOTE

Seal is cut to proper length for installation. **DO NOT TRIM.**
Seal ends should meet at the 6 o'clock position.

11. Install seal in window frame. Masking tape may be used to temporarily hold the seal in place for the next step. Verify seal is fully seated into window frame corners.
12. Place the window in the seal groove and work seal lip around outside edge of window.
13. Starting at the 12 o'clock position, install provided Seal Lock (407-210-103) into seal insert groove using provided Filler Strip Insert Tool (DT110), while pushing the seal lock through the tool to keep it from stretching (see Figure 6). Seal lock is precut to proper length, do not trim. Work seal lock around until it fits properly.

NOTE

Seal lock ends should meet at the 12 o'clock position.

14. Using Syringe (099-859-002), apply Sealant (099-050-243) to both sides of the narrow seal groove except in lower aft corner area, as shown in Figure 5, and to the areas of the window frame that have been prepared for bonding.
15. Remove all masking tape and allow sealant to cure for a minimum of 24 hours at 75 degrees Fahrenheit (24 degrees Celsius).
16. Reinstall upper interior door trim panel, if previously removed, ensuring the inside edge of the upper interior door trim panel is adequately trimmed for seal to function correctly. A minimum of one-half of the seal flange width must be exposed around the perimeter (see Figures 7 and 8).
17. Touch up the paint as required.
18. Repeat Steps 1 – 17 for the opposite window installation.
19. Window Installation complete. After sealant is fully cured – 24 hours at 75°F (24°C), verify proper seal, window and trim installation per Section 6, Installation Verification Test.

WINDOW INSTALLATION CHECK

Refer to Figures 2, 3, 4, 7, 8, 9 and 10.

SECTION 6 – INSTALLATION VERIFICATION TEST

1. From the lower outside forward corner of the window, gradually apply force, perpendicular to the window, to the center of the “Emergency, Push Here” decal that is located in that corner (see Figure 3).

NOTE

Use of a calibrated compression force gauge is required to conduct this procedure along with a push block (see Figures 2 and 3) made from a material, such as wood, that will not scratch or damage the window.

NOTE

Push Block No. 1 can be used for all applications except for the forward, lower corner of a slider window application, where Push Block No. 2 must be used.

CAUTION

Do not apply pressure too quickly, or apply too much pressure, as this will result in window removal which may result in permanent damage to the seal and necessitate seal replacement.

Observe the relationship between window and seal and the seal and the window frame as pressure is applied. Continue applying force until the corner edge of the window barely breaks past the edge of the seal on the inside of the same corner. The window should begin to dislodge from the seal when 45 – 60 lbs force is applied. If window begins to dislodge when 45 – 60 lbs force is applied, stop applying pressure and proceed to Step 4. Otherwise continue with Step 2.

2. If the window cannot be dislodged within the specified force range, verify sealant application is as specified in Section 5 and Figure 5. Verify the seal lock is installed correctly as specified in Section 5, and that there is no evidence of binding between the seal, door and window. Inspect the upper interior door trim panel to verify the edge contacting the seal is adequately trimmed and not impeding the seal’s function as specified in Step 1. Correct any discrepancies, if found, and repeat Step 1; otherwise proceed to Step 3.
3. If the window is dislodged with 45 – 60 lbs of force applied, continue to Step 4.
4. With a thin flat object, carefully reinstall the corner of the window in the seal ensuring no permanent damage has occurred to the seal, window or door frame. Continue with pushout window installation verification

5. From the lower inside aft corner of the window gradually apply force, perpendicular to the window, to the center of the "Emergency, Push Here" decal that is located in that corner (see Figure 3).

Observe the relationship between window and seal and the seal and the window frame as force is applied. Continue applying force until the corner edge of the window barely breaks past the edge of the seal on the outside of the same corner. The window should begin to dislodge from the seal when 45 – 60 lbs force is applied. If window begins to dislodge when 45 – 60 lbs force is applied, stop applying pressure and proceed to Step 10. Otherwise continue with Step 6.

6. If the window cannot be dislodged within the specified force range, verify sealant application is as specified in Section 5 and Figure 5. Verify the seal lock is installed correctly as specified in Section 5, and that there is no evidence of binding between the seal, door and window. Correct any discrepancies, if found, and repeat Step 5; otherwise proceed to Step 7.
7. With a thin flat object, carefully reinstall the corner of the window in the seal ensuring no permanent damage has occurred to the seal, window or door frame.
8. Repeat Steps 1 thru 7 for the opposite window verification test (see Figures 2 thru 4, and 7 thru 10).

NOTE

If unable to successfully dislodge the window within the specified force criteria, contact Aeronautical Accessories, Inc. Product Support for additional troubleshooting guidance.

9. Installation verification test complete.

SECTION 7 – RECORDS

1. Annotate records to indicate compliance with this bulletin.

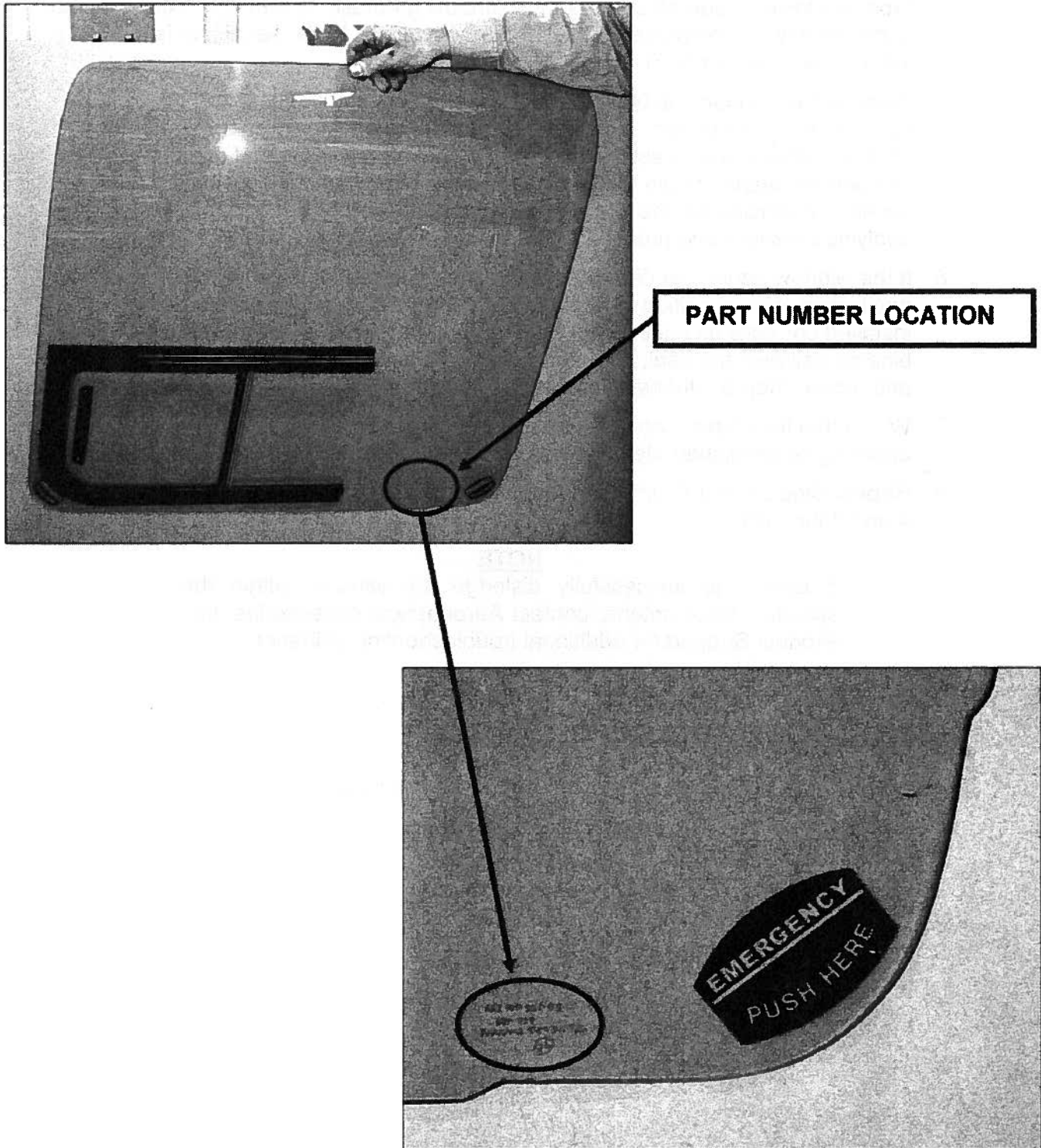


FIGURE 1 – LOCATION OF WINDOW PART NUMBER

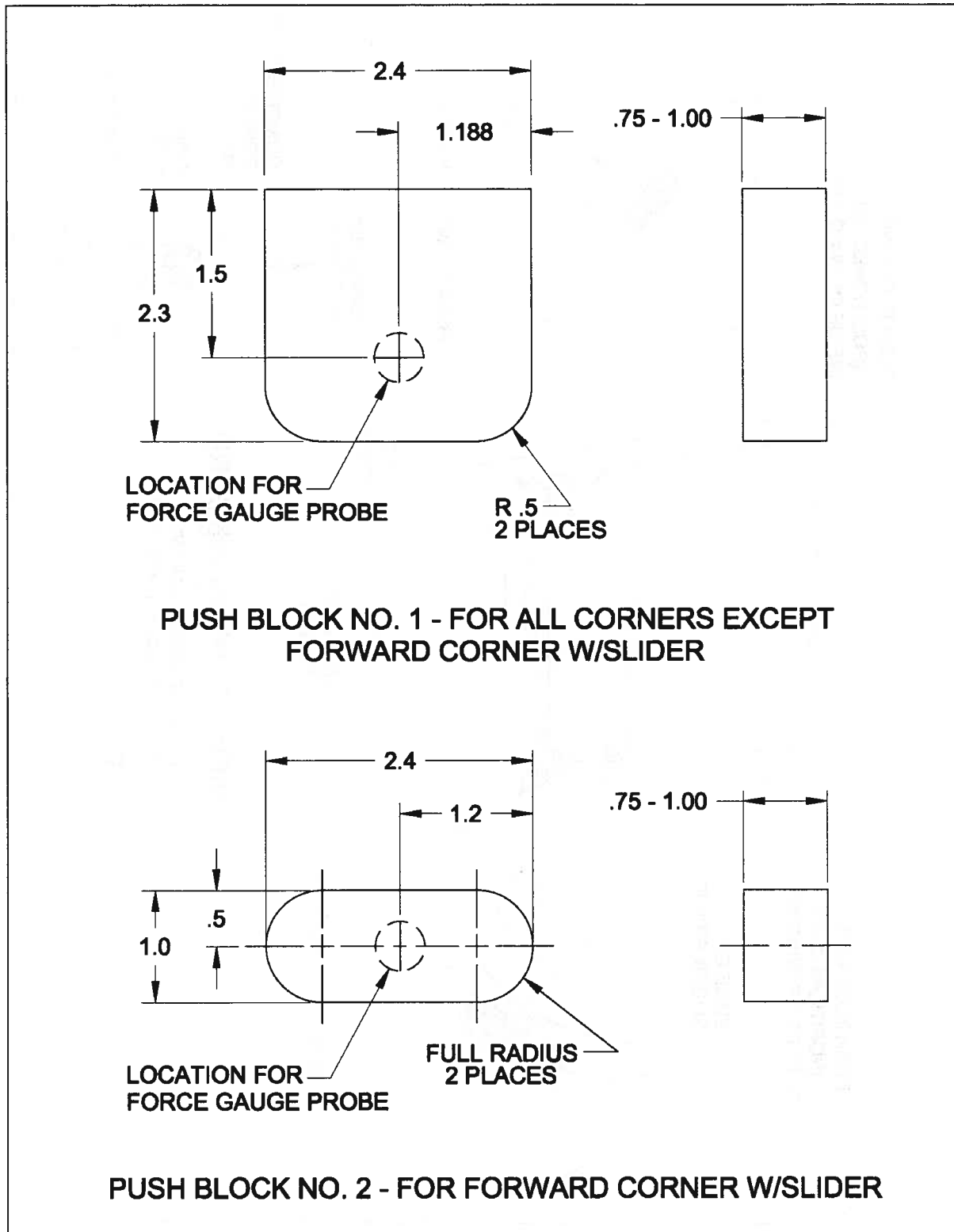


FIGURE 2 - PUSH BLOCK DIMENSIONS (DO NOT SCALE)

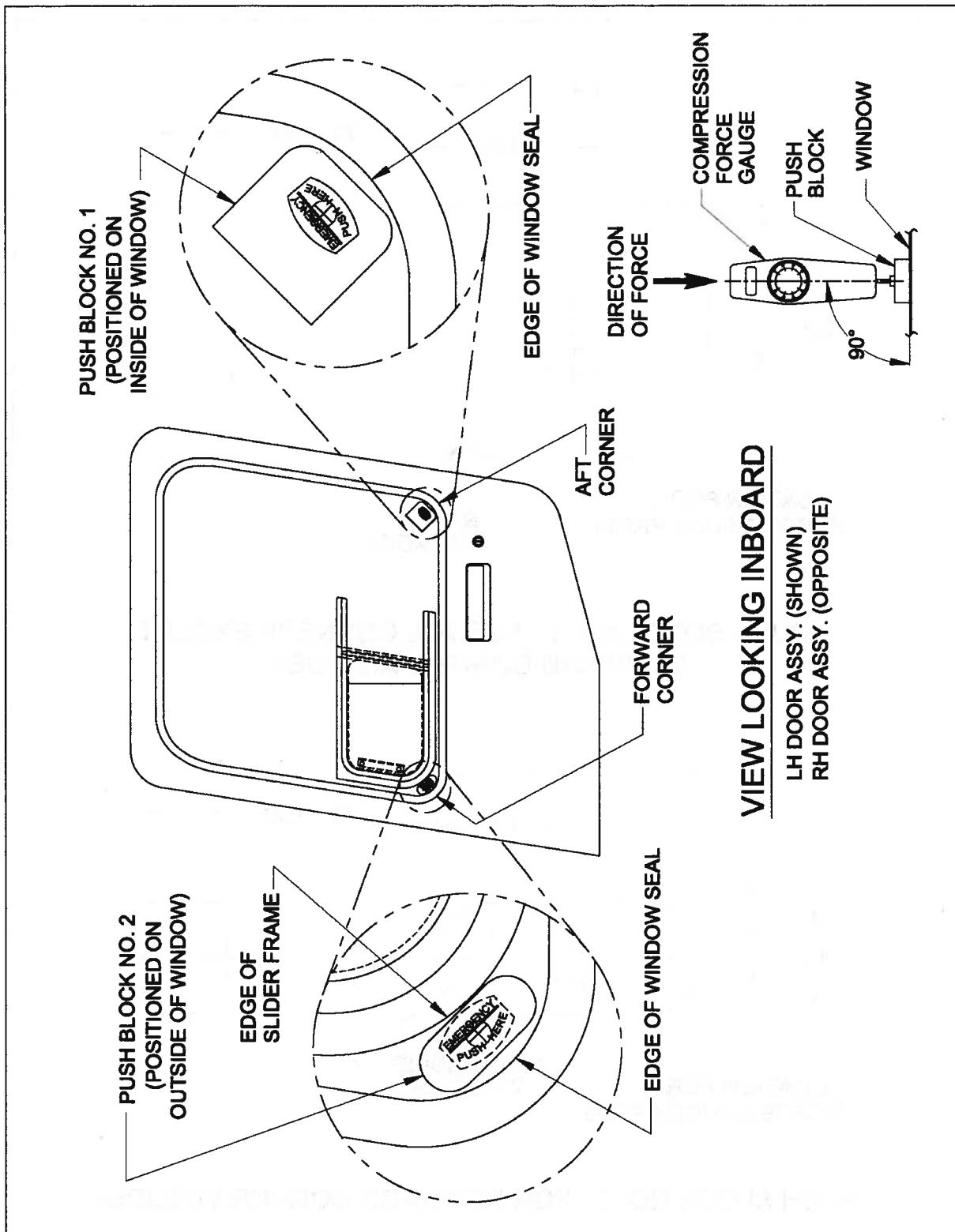


FIGURE 3 – PUSH BLOCK POSITIONS FOR INITIAL EVALUATION

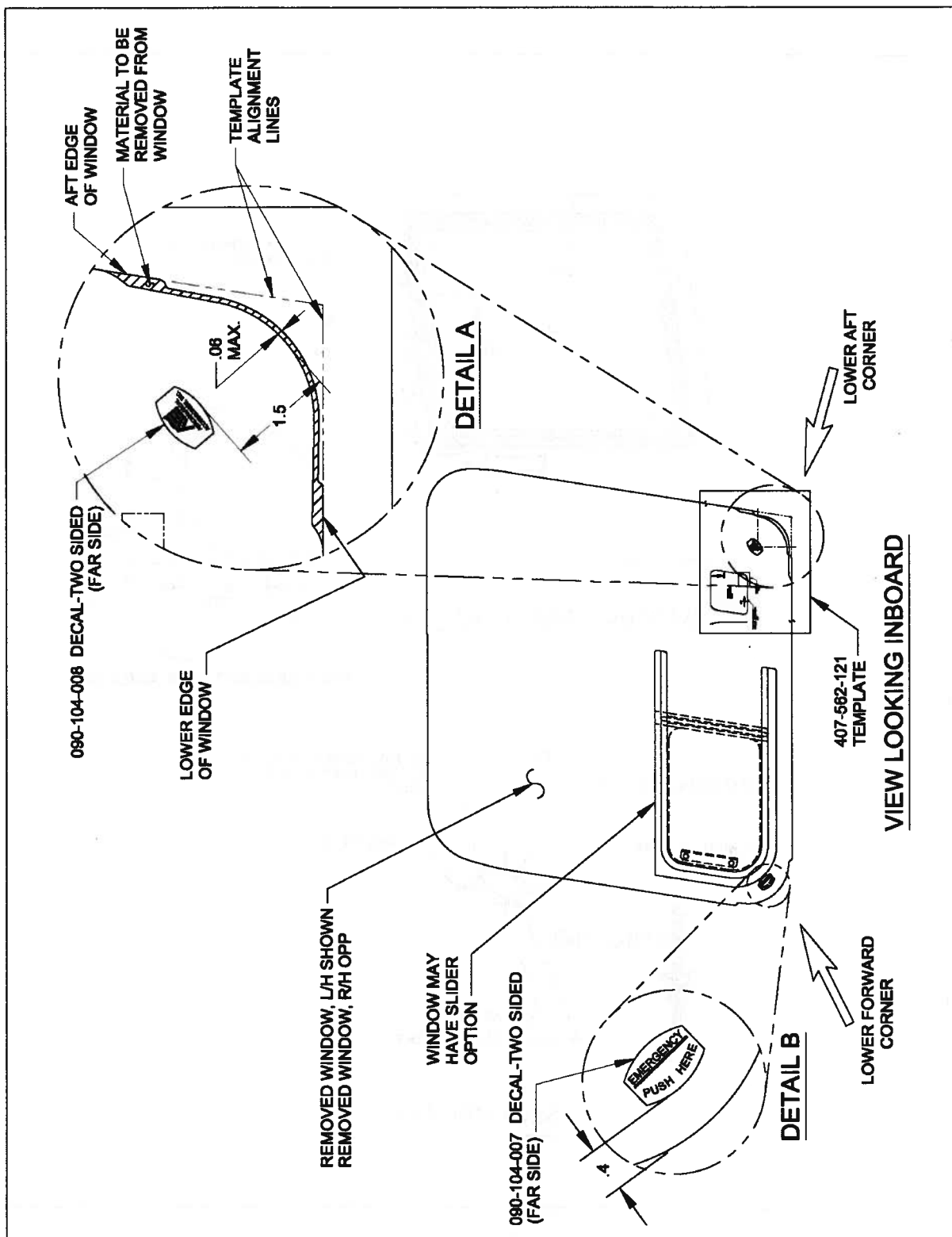


FIGURE 4 – WINDOW MODIFICATION

AERONAUTICAL ACCESSORIES, INC.

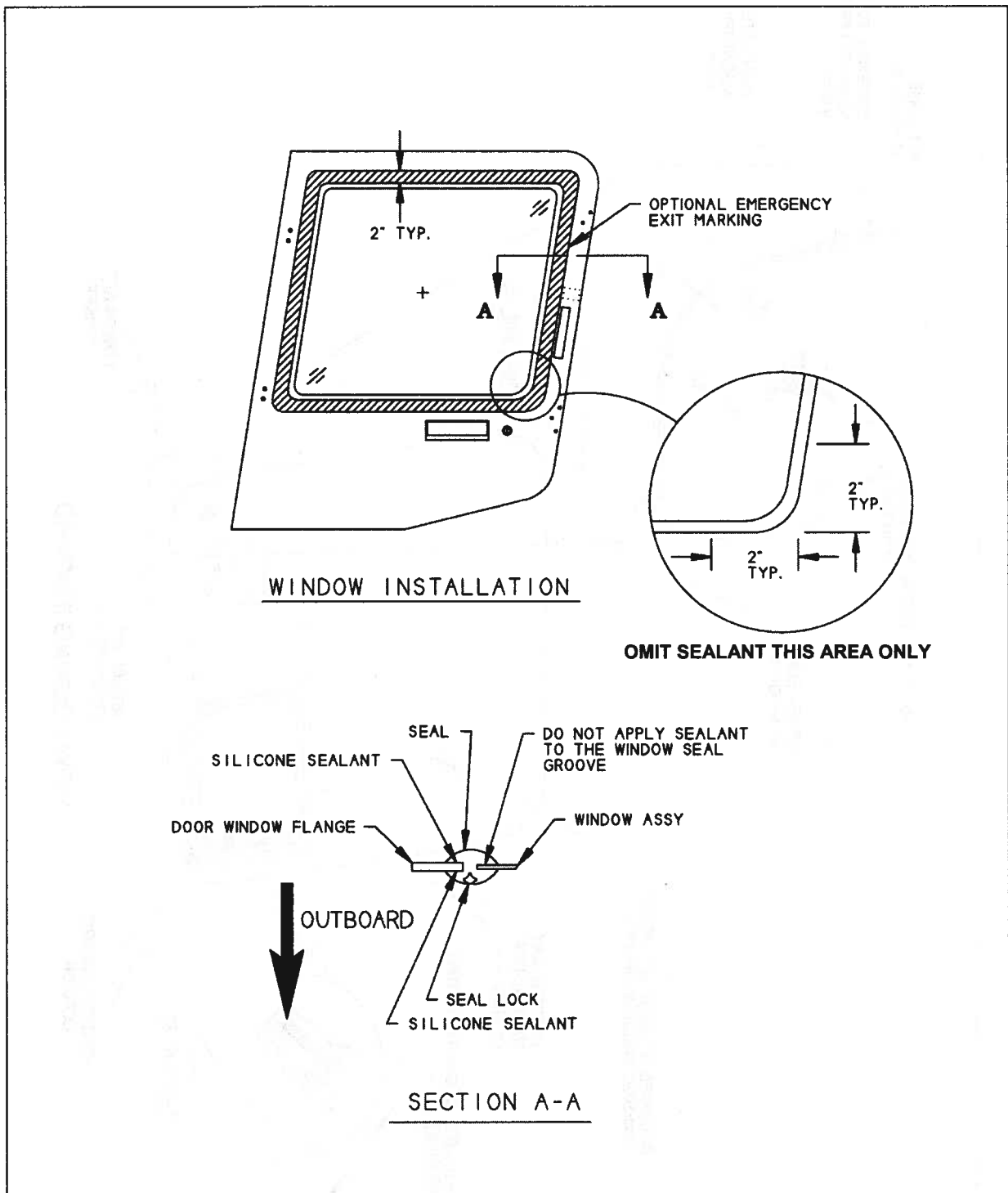


FIGURE 5 - WINDOW INSTALLATION

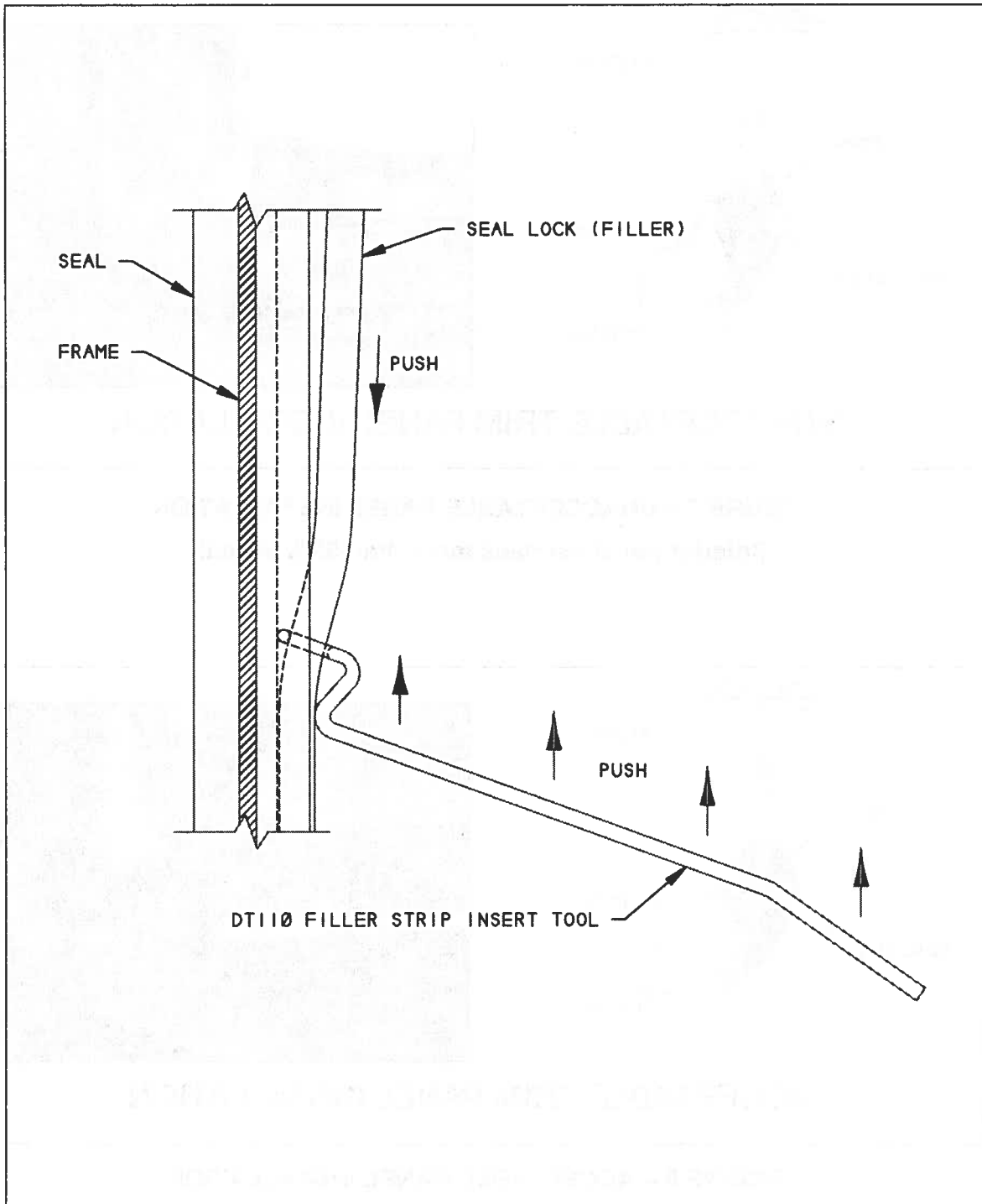


FIGURE 6 – SEAL LOCK (FILLER) INSTALLATION

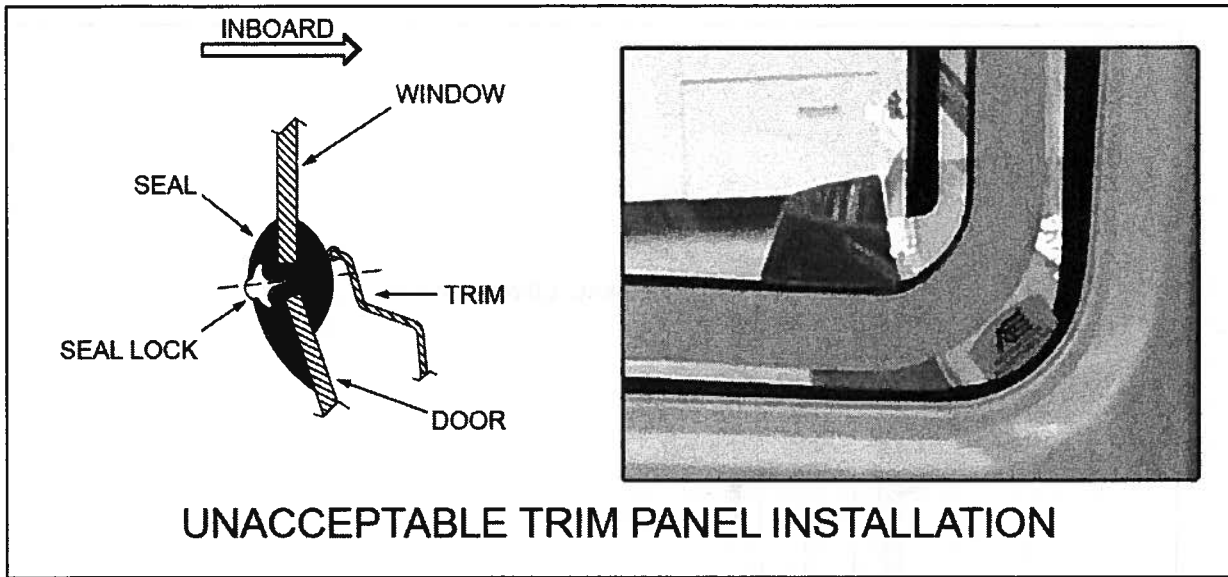


FIGURE 7 – UNACCEPTABLE PANEL INSTALLATION
(Interior panel overlaps more than 50% of seal)

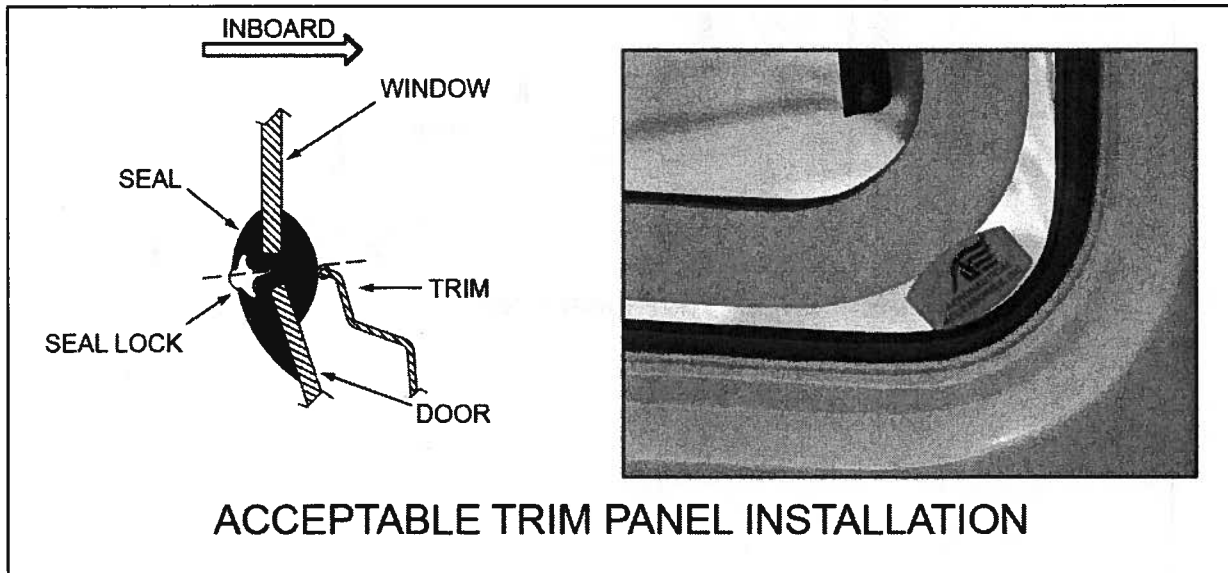


FIGURE 8 – ACCEPTABLE PANEL INSTALLATION
(Interior panel overlaps less than 50% of seal)



FIGURE 9 – INGRESS VERIFICATION TEST

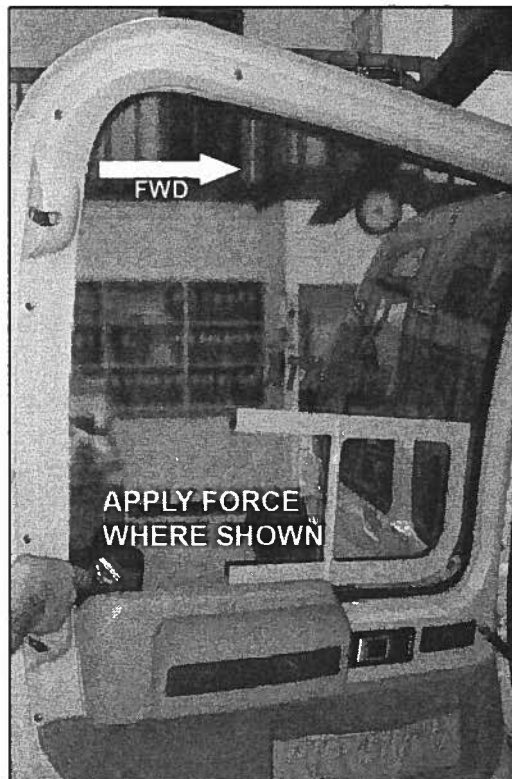


FIGURE 10 – EGRESS VERIFICATION TEST