

**AA-5 SERIES
MAINTENANCE MANUAL**

**CHAPTER 20
STANDARD PRACTICES — AIRFRAME
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AIRFRAME STRUCTURAL REPAIR — DESCRIPTION

1. **General**

The information in this section should be used in conjunction with the AC43.13-1A "Acceptable Methods, Techniques and Practices — Aircraft Inspection and Repair." Information contained herein is applicable to repair of damage where replacement of the damaged assembly is considered unnecessary. If some doubt exists relative to repair not specifically covered, consult the Grumman American Customer Service Department.

Field repairs of bonded structures can be made using rivets. Flush riveted repairs can be made in both sheet metal and honeycomb areas. These repairs are normally covered with an epoxy filler to maintain surface contour and smoothness.

2. **Tools, Jigs, and Fixtures**

Very few special tools are required for normal maintenance on the AA-5, AA-5A, and AA-5B. Standard shop tools (including a torque wrench and micrometer) are usually adequate. Required special tools, jigs, and fixtures can be procured through your authorized Grumman American Dealer or Distributor. Special tools are listed in Chapter 12.

3. **Materials**

Structural repairs should be accomplished using identical material to that being repaired (i.e., 0.032-inch 2024-T3 Clad Aluminum). Figure 1 shows the various materials utilized and should be used in determining type of material for all repair work. If material shortages make substitution necessary, 2024-T3 in most cases can be substituted for any other aluminum alloys. However, it is important that the 2024-T3 aluminum contain an aluminum coating (designated as "Alclad") for corrosion protection.

4. **Service Kits**

Service Kit No. SK-102A is a potting kit for honeycomb repair and Service Kit No. SK-125 is a bondline repair kit used for the repair of delaminated metal-to-metal bond joints. Both kits contain instructions for proper preparation and application and are available through your authorized Grumman American Dealer or Distributor.

5. **Sheet Metal Repairs — Riveted**

Damage to skin, ribs, and frame areas can generally be repaired using normal sheet metal repair techniques. These are covered in AC43.13-1A. Several typical repairs are also discussed in Approved Repairs, Paragraphs 1 and 2. Complete fuselage sections can be replaced using standard rivet practices as discussed in Paragraphs 10, 11, and 13. Local wing skin damage can be satisfactorily repaired using rivets. However, if extensive wing skin damage exists, it is recommended that the complete skin panel be replaced. The Grumman American Customer Service Department should be contacted for additional information.

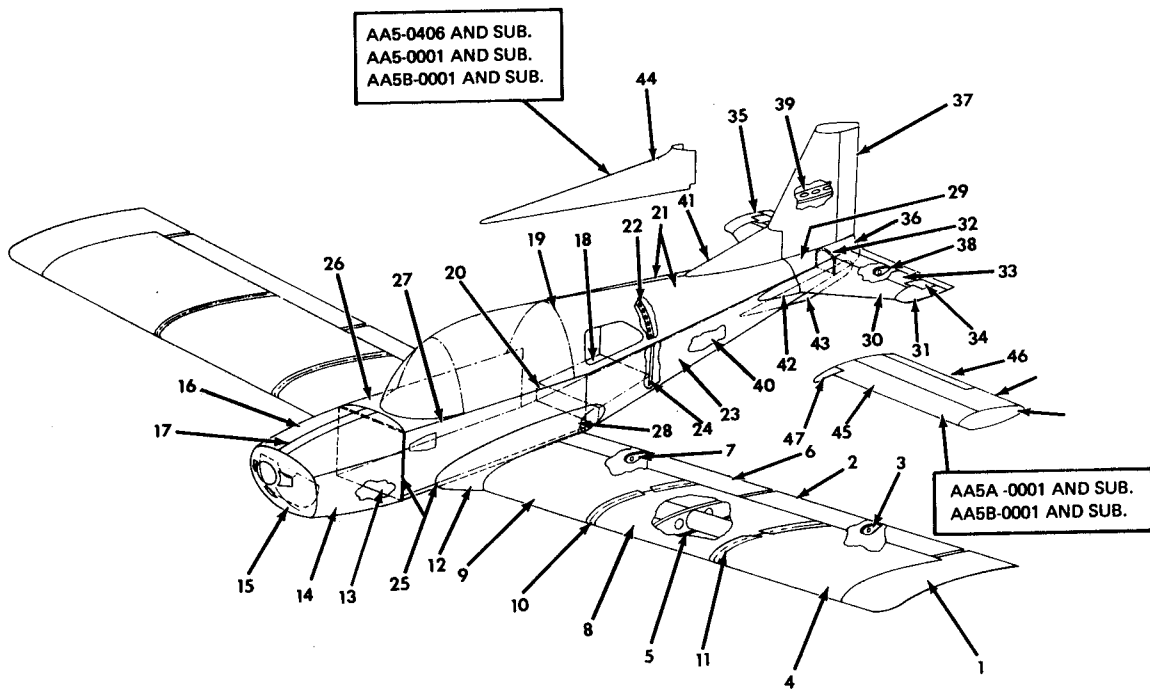
NOTE: Repair of the wing in the fuel tank area is not authorized.

6. **Honeycomb Panel Repairs — Riveted**

Damage to honeycomb panels can be repaired by removal of the damaged section, sealing any exposed honeycomb core with PR1436GB-2 Inhibited Sealant, and splicing in of new repair parts. The splice can be installed with rivets and can be made flush with the external surface if desired. Representative repairs for damaged honeycomb panels are discussed in Approved Repairs, Paragraph 3 through 8.

NOTE: PR1436GB-2 Inhibited Sealant is approved and is available through Products Research and Chemical Corporation, 2919 Empire Avenue, Burbank, California or through your authorized Grumman American Dealer or Distributor.

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Airframe Materials Chart (Sheet 1 of 2)
Figure 1

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<u>ITEM NO.</u>	<u>DESCRIPTION</u>	<u>MATERIAL</u>	<u>ITEM NO.</u>	<u>DESCRIPTION</u>	<u>MATERIAL</u>
1	Wing Tip	Fiberglass	24	Stiffener	.032" 2024-T3 Alclad
2	Aileron Skin	.016" 2024-T3 Alclad	25	Angles	.025" 2024-T3 Alclad
3	Aileron Rib	.50" Honeycomb	26	Skin	.025" 6061-T4
4	Wing Skin	.020" 2024-T3 Alclad	27	Fuselage Panels	.50" Honeycomb
5	Wing Rib	.025" 6061-T6	28	Gusset	.40" 2024-T42 Alclad (AA5-0001 & Sub)
6	Flap Skin	.032" 2024-T3 Alclad			.063 2024-T42 Alclad (AA5A-0001 & Sub & AA5B-0095 & Sub)
7	Flap Rib	.50" Honeycomb			.063 4130 Cond (AA5B-0001 thru AA5B- 0094)
8	Wing Skin	.025" 2024-T3 Alclad	29	Cover	.020" 2024-T3 Alclad
9	Wing Skin	.032" 2024-T3 Alclad (Model AA-5 & AA-5A Std)	30	Stabilizer Skin	.020" 2024-T3 Alclad
		.025" 2024-T3 Alclad (Model AA-5B & AA-5A Opt.)	31	Stabilizer Tip	Thermo-Plastic
10	Doubler	.025" 2024-T3 Alclad	32	Bulkhead	.090" 2024-T42 Alclad
11	Doubler	.025" 2024-T3 Alclad	33	Elevator Skin	.016" 2024-T3 Alclad
12	Wing Root Fairing	Fiberglass	34	Extension Skin	.032" 2024-T3 Alclad
13	Firewall	.018" Aluminized Steel	35	Trim Tab Skin	.025" 2024-T3 Alclad
14	Lower Cowl	.032" 6061-T6 (AA5-0001 thru AA5- 0640)	36	Tailcone	Thermo-Plastic
		.032" 6061-T4 (AA5-0641 & Sub, AA5A -0001 & Sub, AA5B-0001 & Sub)	37	Rudder Skin	.016" 2024-T3 Alclad
15	Nose Cowl	Fiberglass	38	Elevator Rib	.50" Honeycomb
16	Upper Cowl	.025" 6061-T6 Alclad (AA5-0001 thru AA5-0640)	39	Stabilizer Rib	.025" 2024-T42 Alclad
		.032" 6061-T4 (AA5- 0641 & Sub, AA5A-0001 & Sub, AA5B-0001 & Sub)	40	Bottom Skin	.025" 2024-T3 Alclad
		.032" 5052-H32	41	Dorsal Fin	.025" 2024-T3 Alclad
17	Baffle	.032" 2024-T3 Alclad	42	Horizontal Fillet	.032" 2024-T3 Alclad
18	Baggage Floor	.032" 2024-T3 Alclad	43	Ventral Fin	.50" Honeycomb (Model AA5 only)
19	Bulkhead	.032" 2024-T3 Alclad	44	Dorsal Fin	Thermo-Plastic
20	Bulkhead	.032" 2024-T3 Alclad	45	Stabilizer Skin	.016" 2024-T3 Alclad (AA5B-0001 thru AA5B- -0077)
21	Skin	.020" 2024-T3 Alclad	46	Trim Tab Skin	.020" 2024-T3 Alclad
22	Bulkhead	.025" 2024-T42 Alclad	47	Horizontal Fillet	Thermo-Plastic
23	Side Skin	.032" 2024-T3 Alclad			

Airframe Materials Chart (Sheet 2 of 2)
Figure 1

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Critical honeycomb areas are those areas within 6 inches of the wing spar and within 4 inches of the engine mount, tail cone, and nose gear structures. Minor damage to one face sheet of a honeycomb panel which is confined to an area of 1.0 inch or less in diameter, and located in a non-critical area, can be repaired by smoothing sharp edges in the damaged area, sealing any exposed honeycomb core with PR 1436GB-2 sealant and filling with an epoxy filler.

Minor damage to a critical area which is equal to or less than 1.0 inch in diameter can be repaired by removal of the damaged face sheet, sealing any exposed honeycomb core with PR1436GB-2 sealant, application of a resin filler, and installation of a doubler plate. Service Kit No. SK-102A includes an acceptable resin filler with resin, hardener, and instructions for preparation and application. It is available through your authorized Grumman American Dealer or Distributor. A representative repair is discussed in Approved Repairs, Paragraph 3.

Damaged areas greater than 1.0 inch in diameter or including punctures through both face sheets will require removal of the damaged area and insertion of a honeycomb repair section. Typical repairs are discussed in Approved Repairs, Paragraph 4.

Extensive honeycomb panel damage, such as in the nose gear attachment area can be repaired by splicing in new honeycomb repair assemblies which are available through your authorized Grumman American Dealer or Distributor. Such a repair is discussed in Approved Repairs, Paragraphs 5 and 8.

When making honeycomb panel repairs which require splicing of the bonding strap angles located at the lower corners of the fuselage, the splice must be so designed to maintain the continuity of the angles from the original panel into the repair panel. This can be achieved with angles riveted over the bonding strap angles across the splice. This is discussed in Approved Repairs, Paragraph 6. The length of the external splice angle can be increased as required for appearance purposes.

All riveted honeycomb repairs must include some means of sealing the repair joint from external moisture. This protection is provided by PR1436GB-2 Inhibited Sealant. Epoxy filler may be used to smooth the repair prior to painting.

All honeycomb edges and repair faying surfaces should be coated with PR1436GB-2 sealant. Also, all rivets should be dipped in this sealant prior to installation. After completion of the repair, the repaired area should be coated with zinc chromate primer.

7. Repair of Formed Thermo-Plastic Parts

Repairs of punctures may be accomplished by cutting out the damaged area, removing the paint and installing an overlapping or flush patch of identical material. A doubler may be added behind the patch if additional strength is required. The bonding agent can be Trichloroethane or a suitable substitute.

WARNING: WHEN USING TRICHLOROETHANE, ENSURE THAT THE WORKING AREA IS WELL VENTILATED AND THAT PROTECTIVE EQUIPMENT (GLOVES, EYE PROTECTION) IS WORN. AVOID BREATHING FUMES. KEEP AWAY FROM FLAMES.

Cracks or voids may be repaired by applying a filler composed of solvent and material shavings. Upon completion of the repair, sand the area smooth and repaint. Extensively damaged parts should be replaced.

8. Engine Mount Repair

Engine mount repairs should be accomplished in strict accordance with Part 43 of the Federal Aviation Regulations. Repair details for the repairs of damaged honeycomb in the areas adjacent to the two upper and lower engine mount extrusions on the Model AA-5 are given in Approved Repairs, Paragraphs 7 and 8.

9. Control Surface Repair

After repair or repainting of any control surface, it is necessary to check the balance and adjust the mass balance weight as required to bring it within tolerance as follows:

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	AA-5	AA-5A & AA-5B
Elevator	+3 to +6 in. lbs.	-1 to -5 in. lbs.
Rudder	-2 to +1 in. lbs.	-2 to 0 in. lbs.
Ailerons	-1 to +2 in. lbs.	-1 to +2 in. lbs.

A control surface which is leading edge heavy is referred to as "overbalanced" and referred to by (-). Refer to Chapter 27 for control system balancing and rigging.

10. Bondline Damage and Repair

A. Types of Bondline Damage

(1) Physical Damage

The most common type of bondline damage is physical damage along the trailing edges of the flaps, ailerons, elevators and rudder. This is usually caused by persons stepping on the in-board trailing edges of the flaps and general "hangar rash" on the other control surfaces. This type of damage is usually readily visible in the form of joint separation. A typical bondline repair procedure is discussed in Approved Repairs, Paragraph 13.

(2) Corrosion Damage

A less common type of bondline damage is damage caused by metal corrosion. This type of damage is usually restricted to edges of unfilleted bondlines, such as the trailing edges of wings, rudders, elevators, and trim tabs, particularly if these edges are not well protected by paint. This type of damage is more likely in tropical and subtropical climates, particularly where an aircraft is located close to the coast.

B. Areas Requiring Inspection Emphasis

Areas which should be given particular attention include: flanges of wing and stabilizer rear spars, trailing edges of control surfaces, the side lap joint between the tailcone and forward cabin section, the joint between the tailcone top and side skin, and the aft tailcone bulkhead joints.

Inside edges and internal joints which have an undisturbed bondline fillet are generally not affected. See Approved Repairs, Paragraph 13.

11. Non-Repairable Parts

The following parts are not repairable and must be replaced if damaged:

- Center Spar
- Wing Spar
- Main Gear Leg (If damage exceeds allowable limit specified in Note below.)
- Nose Strut
- Nose Gear Torque Tubes

NOTE: Minor surfaces delaminations are acceptable providing they do not extend more than one ply into the surface of the strut. Corner delaminations (slivers) are acceptable if they are smaller than 1/16 x 1/16 inch in size throughout their length. To correct these minor damages see Approved Repairs, Paragraph 14.

12. Rivet Substitution

Rivets of higher strength than those called out may be used on any structural repair.

13. Primary Structures

The following portions of the aircraft are primary structures.

A. Fuselage

- (1) Engine Mount
- (2) Engine Mount Extrusions
- (3) Lower Fuselage Honeycomb Corners (4 inches of floor and 4 inches of side panels)
- (4) Upper 4 inches of Fuselage Honeycomb Side Panels
- (5) Center Spar
- (6) Center Spar Attach Collars
- (7) Nose Gear Assembly
- (8) Main Gear Assembly
- (9) Aft Fuselage Waterline 49.00 Stiffener Flanges
- (10) Aft Fuselage Lower Corner Flanges
- (11) Aft Fuselage Bulkhead (Stabilizer Spar Attach)
- (12) Horizontal and Vertical Stabilizer Forward Attach Fuselage Bulkheads
- (13) Forward Turtleback Bulkhead
- (14) Aft Fuselage/Cabin Honeycomb Side and Bottom Bond Joints

B. Control System

- (1) All Components

C. Wing

- (1) Wing Main Spar
- (2) Wing Main Spar Doublers

D. Empennage

- (1) Stabilizer Rear Spars
- (2) Stabilizer Front Spars

E. Control Surfaces

- (1) Support Brackets
- (2) Balance Weight Supports
- (3) Torque Tubes

AIRFRAME STRUCTURAL REPAIR – APPROVED REPAIRS

1. Leading Edge Repair

Figure 801 illustrates a typical repair to be employed in patching skin on the leading edge. The repair should be made flush with the external surface of the leading edge skin and surface contour must be maintained.

Repair skin as follows:

- A. Trim out the damaged area in a rectangular pattern and deburr.
- B. Place repair doubler beneath wing skin as shown in Figure 801.

NOTE: Dimensions given in Figure 801 are typical for most repairs of the leading edge.

- C. Holding repair doubler in place, drill dimple holes (1/8 inch diameter) through wing skin, spacing holes 5/8 inch apart from center of hole to center of adjacent hole.

NOTE: This repair can be completed in the area of wing ribs by installing the doubler in two pieces, one on each side of the rib flange.

- D. Secure doubler to wing leading edge with 1/8 inch diameter countersunk Cherry rivets (CR162) or equivalent. If bucked rivets are used, exercise caution to prevent nearby bond damage.

NOTE: Filler should be of the same material and thickness as skin.

- E. Place filler flush with the doubler.
- F. Holding filler piece in place, drill dimple holes through filler, spacing holes 5/8 inch apart from center of hole to center of adjacent hole.
- G. Secure filler to doubler with rivets as specified in Step D.
- H. Use an epoxy filler as necessary and sand smooth.

2. Wing Rib Repair

Figure 802 illustrates typical wing rib repairs. If the wing ribs are extensively damaged, they should be replaced. Refer to Chapter 57.

Repair rib as follows:

NOTE: If rib damage consists of a crack, stop drill crack if crack does not extend to edge of part and add reinforcement plate to carry stress across damaged portion and stiffen the joints.

- A. If the area to be repaired is damaged extensively, trim out damaged area and deburr.

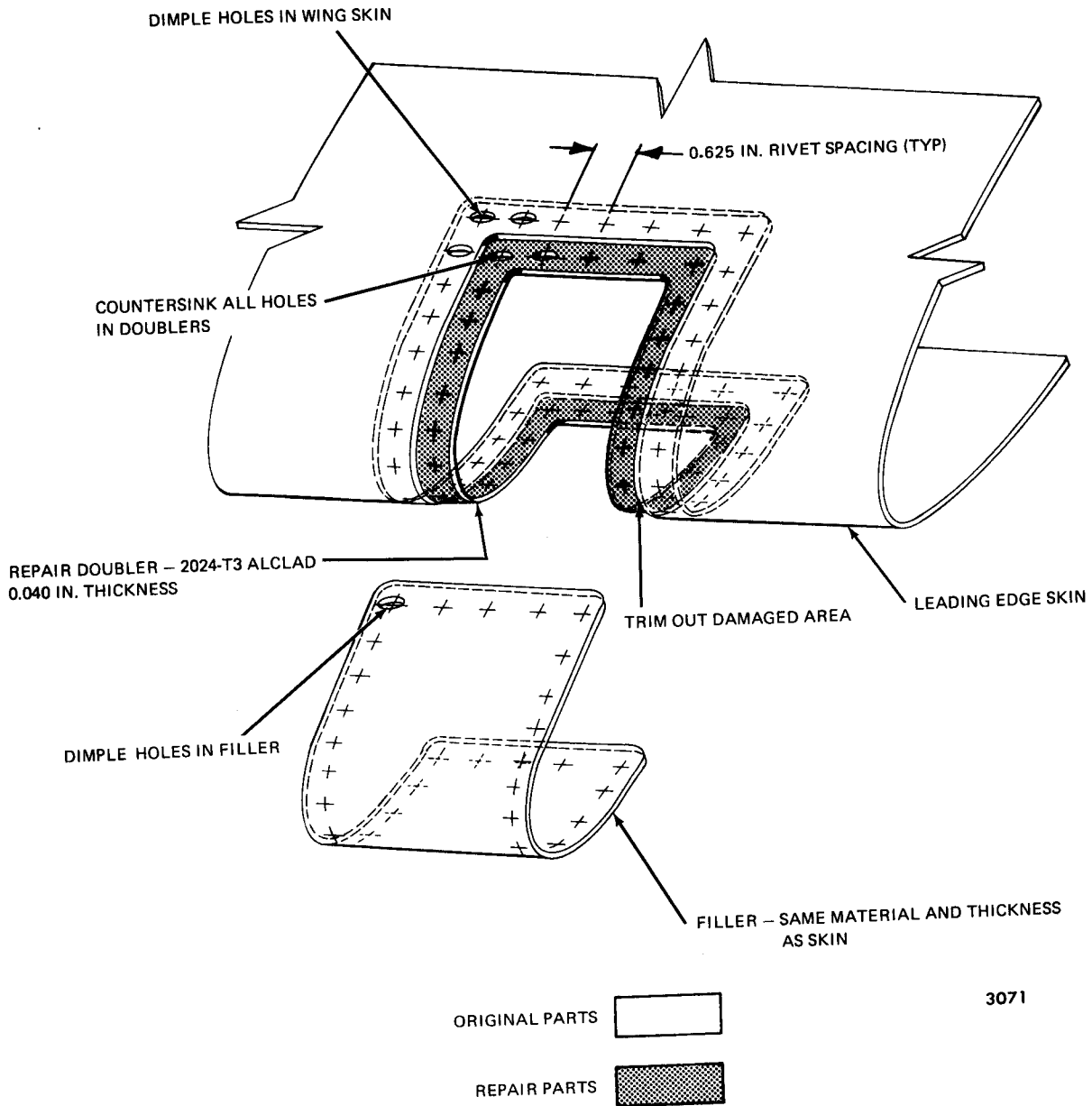
NOTE: Repair parts shall be 6061-T6 or equivalent.

- B. Hold doubler (.032 inch thick) in place against the damaged area on the rib structure. If extra support is needed, place a formed angle against the inside portion of the rib nested under the flange; and place a doubler on the opposite side of the rib against the damaged area.

NOTE: Dimensions given in Figure 802 are typical for most repairs of the wing rib.

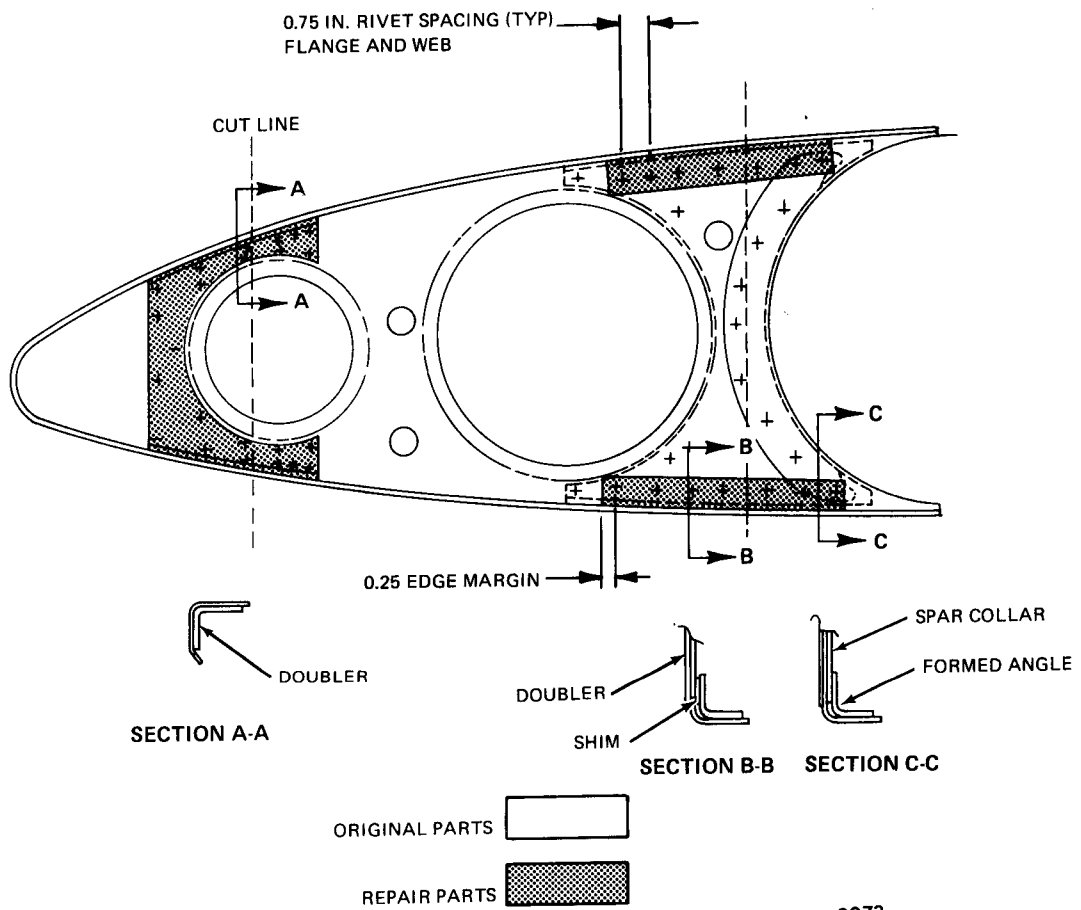
- C. With repair parts held in place, drill 1/8 inch diameter holes through repair parts and rib structure, spacing holes 3/4 inch apart from center of hole to center of adjacent hole. Holes drilled at the ends of the formed angle should be placed 1/4 inch from the edge.

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Leading Edge Repair (Riveted)
Figure 801

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Wing Rib Repair (Riveted)
Figure 802

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- D. Install all rivets (1/8 inch diameter Cherry rivets CR162, CR163, or equivalent) with wet zinc chromate primer. If bucked rivets are used, exercise caution to prevent nearby bond damage.
- E. After the repair is completed, the repaired area should be coated with zinc chromate primer.

3. Honeycomb Repair, Partial Core Damage

Minor damage extending partially through the core of honeycomb panel and equal to or less than 1 inch diameter (Figure 803) can be repaired with an external doubler as follows:

- A. Trim out damaged area of face sheet in a circular pattern.
- B. Thoroughly clean the repair area with fine sandpaper and acetone.
- C. Coat all repair parts with zinc chromate primer.
- D. Seal the exposed honeycomb core with PR1436GB-2 Inhibited Sealant.
- E. Using Service Kit SK-102A, apply resin filler to area where damaged honeycomb core was removed.

NOTE: Refer to AC 43.13-1 for doubler and rivet pattern dimensions. Dimensions given in Figure 803 are typical repair for this type.

- F. Place 2024-T3 alclad aluminum doubler (0.40 inch thick) over repair area and drill out 1/8 inch diameter holes around circumference of doubler.
- G. Dip all rivets (1/8 inch diameter Cherry rivets, CR162, CR163, or equivalent) in PR1436GB-2 Inhibited Sealant and install to secure doubler to honeycomb panel.
- H. Fair external doubler periphery with epoxy filler to maintain a smooth surface.
- I. Coat repaired area with zinc chromate primer.

4. Honeycomb Repair, Extensive Core Damage

Damaged areas greater than 1 inch diameter or areas in which damage extends completely through the core require removal of the damaged area and installation of a honeycomb repair section. (See Figures 804, 805, and 806.)

- A. Patch repair using external and internal doublers. (See Figure 804.)

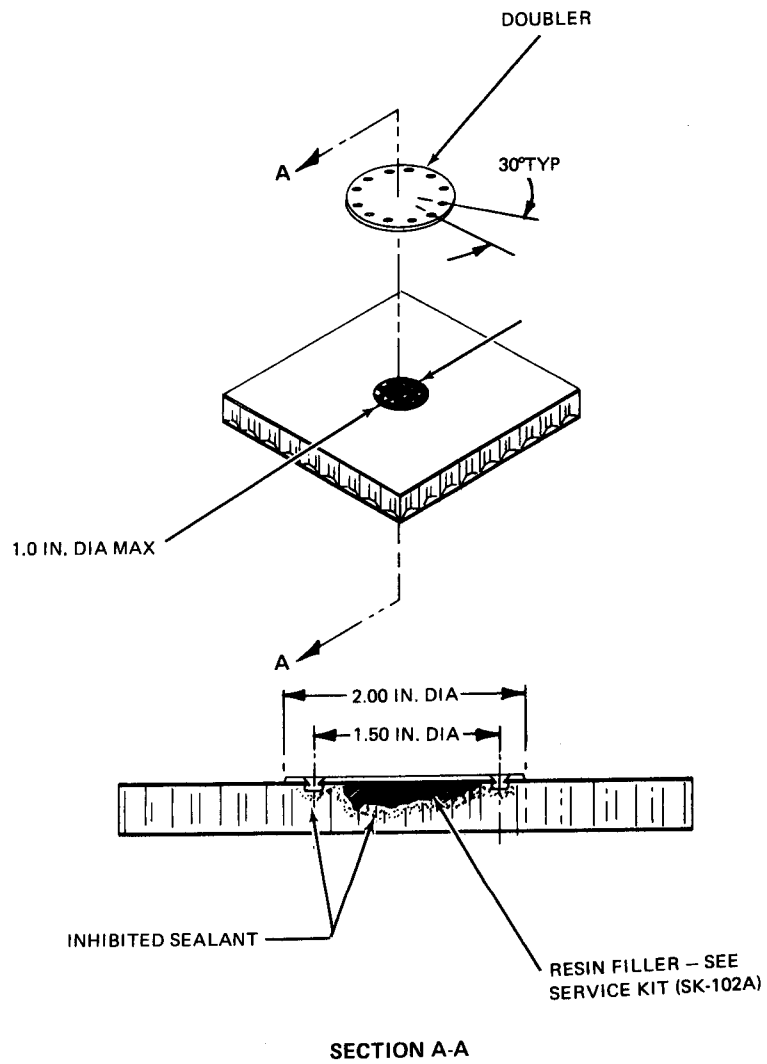
Repair honeycomb as follows:

- (1) Trim out damaged area in a circular pattern as shown in Figure 804 and deburr.
- (2) Coat all repair parts with zinc chromate primer.
- (3) Seal all exposed honeycomb core areas on the repair section and the panel section with PR1436GB-2 Inhibited Sealant.
- (4) Place internal and external doublers (2024-T3 alclad aluminum, 0.040 inch thick) over repair area.

NOTE: Refer to AC 43.13-1 for hole diameter limitations and corresponding rivet patterns.

- (5) Dip all rivets (1/8 inch diameter Cherry rivets, CR162, CR163, or equivalent) in PR1436GB-2 Inhibited Sealant and install through the doubler and repair section (both sides) such that maximum distance between any two rivets is 1.5 inch.
- (6) Fair external doubler periphery with epoxy filler to maintain a smooth surface.

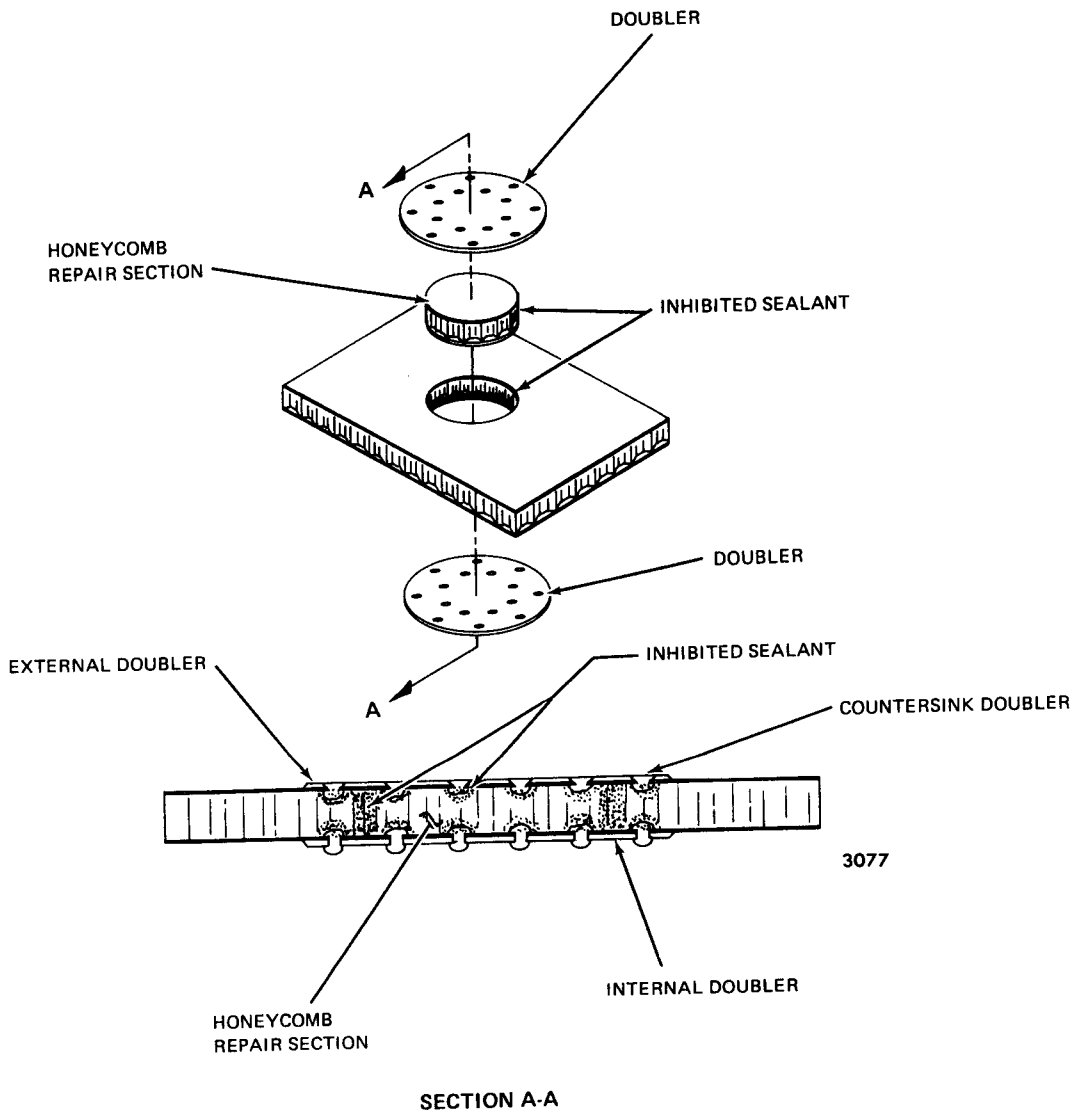
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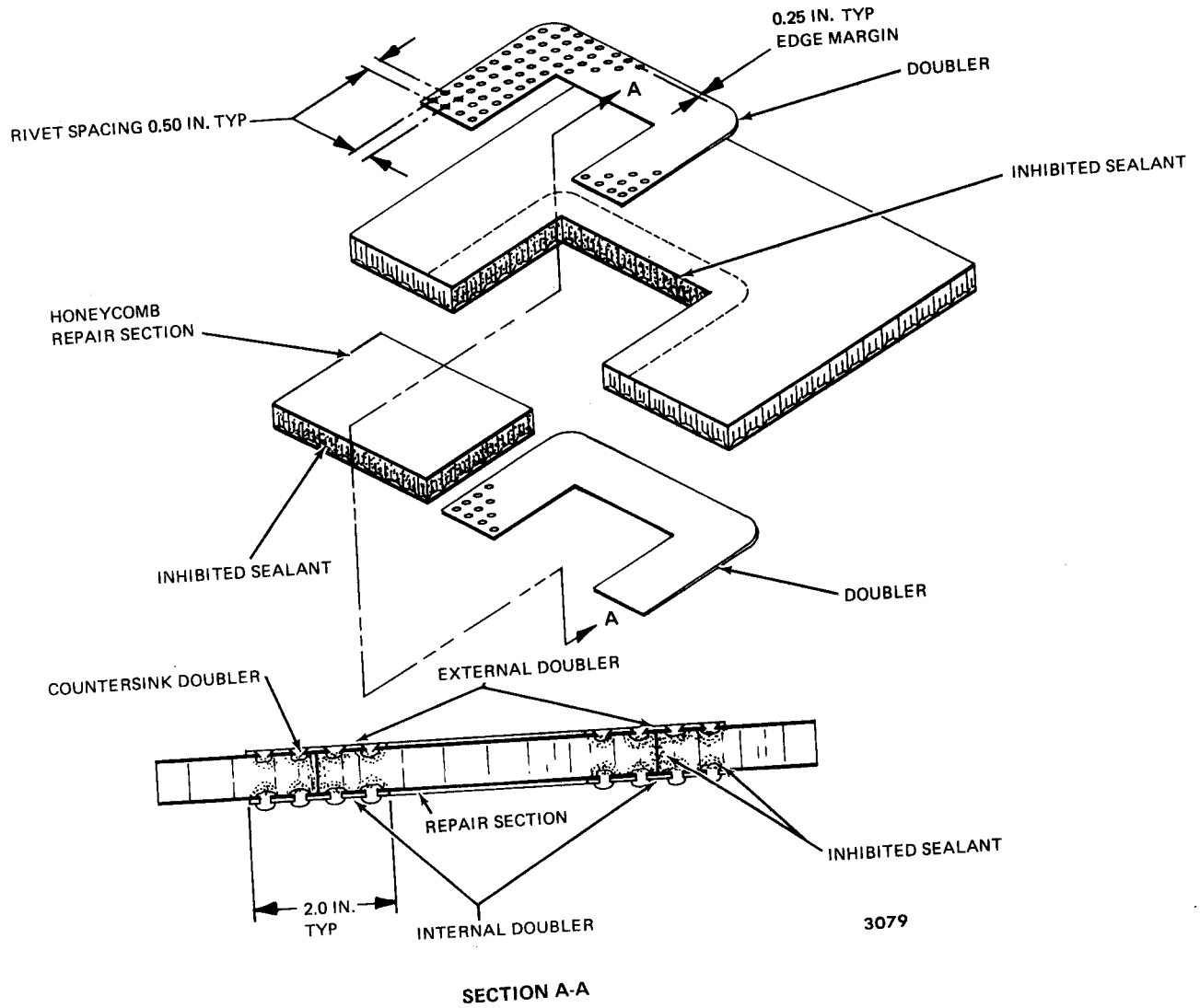
Honeycomb Repair, Partial Core Damage
Figure 803

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Honeycomb Patch Repair, External and Internal Doublers
Figure 804

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Honeycomb Repair using Spliced-In Panel Section
Figure 805

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(7) Coat repair area with zinc chromate primer.

B. Splicing in New Panel Section (See Figure 805.)

This repair is satisfactory for most honeycomb repairs which require new panel sections to be spliced into existing structure. Repair honeycomb as follows:

- (1) Trim out damaged area in a rectangular pattern as shown in Figure 805 and deburr.
- (2) Coat all repair parts with zinc chromate primer.
- (3) Seal all exposed honeycomb core areas with PR1436GB-2 Inhibited Sealant.
- (4) Place internal and external doublers (2024-T3 alclad aluminum) over repair area. The external doubler shall be 0.040 inch thick, and the internal doubler shall be 0.032 inch thick.

NOTE: Dimensions given in Figure 805 are typical for most honeycomb repairs using external doublers.

- (5) Dip all rivets (1/8 inch diameter Cherry rivets, CR162, CR163, or equivalent) in PR1436GB-2 Inhibited Sealant and install through the doubler and repair section (both sides).
- (6) Fair external doubler periphery with epoxy filler to maintain a smooth surface.
- (7) Coat repaired area with zinc chromate primer.

5. Honeycomb Repair, Forward Fuselage Section

Repair in the area of the forward fuselage section of the aircraft can be accomplished using (a) external doublers as shown in Figure 804, (b) rectangular sections of honeycomb the length of the repair splice similar to Section AA of Figure 805, or (c) the sheet metal pan and doubler method as described below.

The external doublers are recommended for repair splices in the firewall and floor honeycomb panels. This allows the honeycomb panels to be butted enhancing ease of repair. The decision on whether to use an external or flush repair on the fuselage side panel is a matter of preference. When using the sheet metal pan and doubler (Figure 806) repair honeycomb as follows:

CAUTION: TO PREVENT DISTORTION, CAREFULLY SUPPORT OUTER FACE SHEETS OF HONEYCOMB PANELS WHILE REMOVING CORE MATERIAL.

- A. Remove damaged core material from the internal surface side of panel.
- B. Coat all parts with zinc chromate primer.
- C. Seal all exposed honeycomb core areas with PR1436GB-2 Inhibited Sealant.

NOTE: Obtain preformed pan sections through your authorized Gulfstream American Dealer or Distributor.

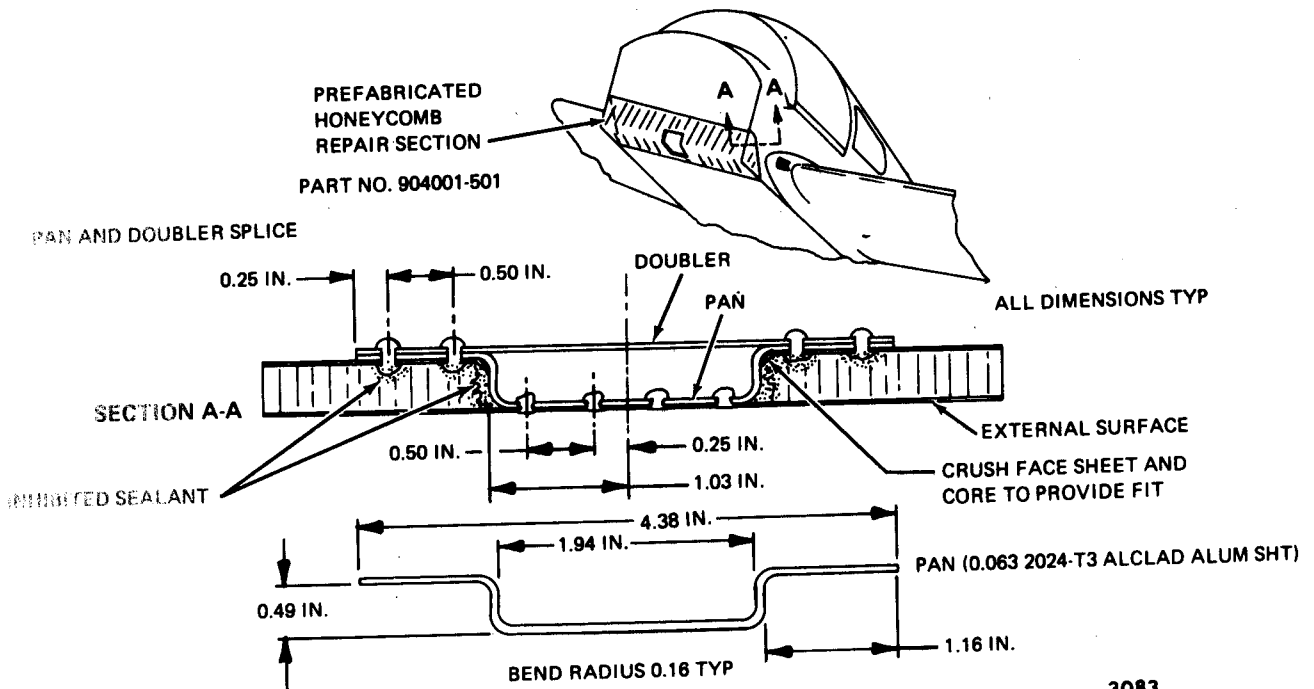
- D. Countersink pan and dimple honeycomb face sheets.
- E. Provide fit for pan (0.063 inch 2024-T3 alclad aluminum or equivalent) by crushing internal face sheet and core edges.
- F. After fitting pan into panel, install rivets to secure external surface to pan bottom (rivet spacing in Figure 806 is typical).

NOTE: Dimensions given in Figure 806 are typical for most honeycomb repairs of this type.

- G. Place doubler (0.063 inch 2024-T3 alclad aluminum or equivalent) over pan.

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- H. Dip all rivets (1/8 inch diameter Cherry rivets, CR162, CR163, or equivalent) in PR1436GB-2 Inhibited Sealant.
- I. Install rivets along outer edge of pan, penetrating doubler, pan and internal surface of panel (rivet spacing in Figure 806 typical).
- J. Coat the repaired area with zinc chromate primer.



Honeycomb Repair — Forward Fuselage Section — (Flush Riveted)
Figure 806

Bonding Strap Angle Splice

In order to maintain the continuity of angles from an original panel to a repair panel, angles must be riveted over the bonding strap angles across the splice. (See Figure 807.)

Repair honeycomb panel using the bonding strap angle splice as follows:

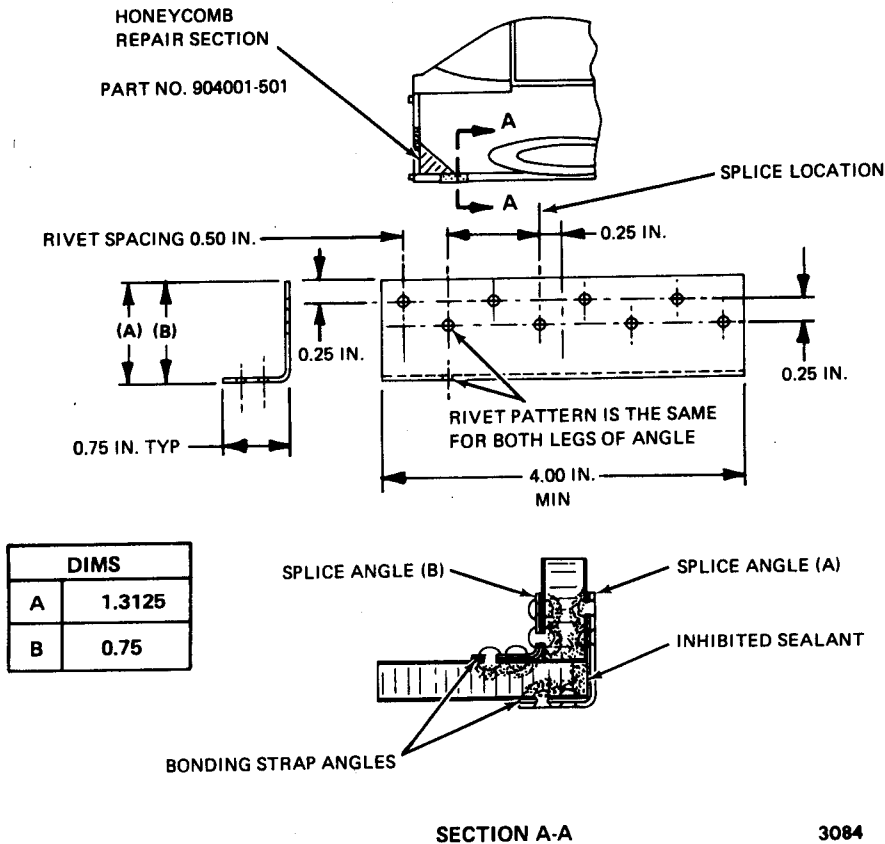
- A. Remove damaged honeycomb panel section.
- B. Coat all parts with zinc chromate primer.
- C. Seal all exposed honeycomb core areas with PR1436GB-2 Inhibited Sealant.
- D. Install honeycomb repair section at fuselage corner junction with bonding strap angle.
- E. Place splice angle (2024-T3 alclad aluminum) over the bonding strap angle and across the splice. (Where countersunk rivets are to be installed, angle thickness shall be 0.040 inch. Otherwise, 0.032 inch thick material is satisfactory.)

NOTE: The length of the external splice angle can be increased as required for appearance purposes. If splice angle length is increased, rivet spacing may be increased proportionately up to 1.0 inch maximum.

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- F. Dip all rivets (1/8 in. diameter Cherry rivets, CR162, CR163 or equivalent) in PR1436GB-2 Inhibited Sealant.
- G. Install a minimum of 8 rivets on each side of splice (rivet spacing as shown in Figure 807 typical).
- H. Coat the repaired area with zinc chromate primer.



Bonding Strap Angle Splice -- (Riveted)
Figure 807

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7. Honeycomb Repair, Lower Engine Mount Area (Model AA-5)

Repair damaged honeycomb in the area adjacent to the two lower engine mount extrusions (Figure 808) on the Model AA-5 as follows:

- A. Remove damaged honeycomb area and engine.
- B. Using fine grain sandpaper, clean away all remaining adhesive before riveting in repair sections. Coat any remaining exposed bondlines with PR1436GB-2 Inhibited Sealant.
- C. Coat all parts with zinc chromate primer.
- D. Seal all exposed honeycomb core areas with PR1436GB-2 Inhibited Sealant.

NOTE: Numbers in parentheses denote call-outs in Figure 808.

- E. Using 10 MS426AD4-14 rivets dipped in PR1436GB-2 Inhibited Sealant rivet 2024-T3 alclad spacer (3) and 2024-T3 alclad splice (4) to bottom block (2). (See Section B-B, Figure 808)
- F. Fit bottom block with engine mount extrusion into position in repair area, and place 2024-T3 alclad spacer (5) to fit under splice installed in Step E above.
- G. Using 27 CR2249-4-3 rivets dipped in PR1436GB-2 Inhibited Sealant, rivet through splice (6), spacer (5) and bottom honeycomb panel. (See Section D-D, Figure 808)
- H. Using 34 CR2248-4-2 rivets dipped in PR1436GB-2 Inhibited Sealant rivet through splice (4), spacer (3), and underneath side of bottom honeycomb panel. (See Section B-B, Figure 808)
- I. Slide side block (1) into place between side honeycomb panel and bottom block.
- J. Slide reinforcement panel (7) between side block and new engine mount extrusion.
- K. Using 48 CR2249-4-2 rivets dipped in PR1436GB-2 Inhibited Sealant rivet reinforcement panel (7) to side honeycomb panel. (See Section C-C, Figure 808)
- L. Using 18 MS426AD4-12 rivets dipped in PR1436GB-2 Inhibited Sealant rivet through engine mount extrusion, reinforcement panel (7), and side block (1). (See Section C-C, Figure 808)
- M. Fill over rivet heads on exterior areas with epoxy filler and smooth before applying primer.
- N. Coat repaired area with zinc chromate primer prior to application of exterior finish paint.

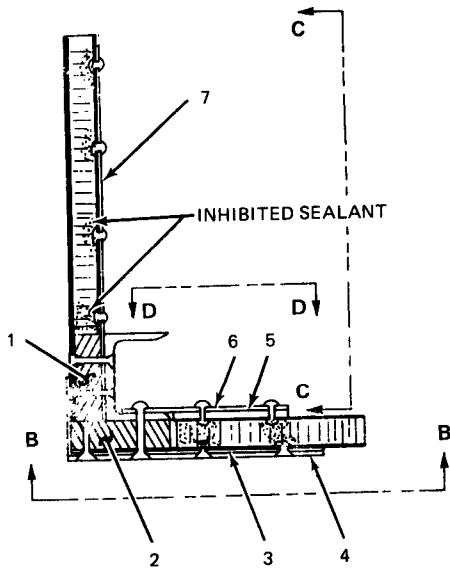
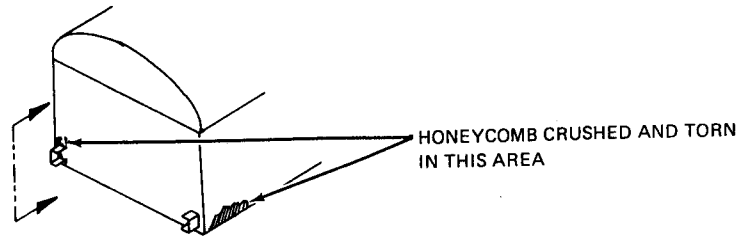
8. Honeycomb Repair, Upper Engine Mount Area (Model AA-5)

Repair damaged honeycomb in the area adjacent to the two upper engine mount extrusions (Figure 809) on the Model AA-5 as follows:

- A. Trim out damaged honeycomb area with engine mount extrusion.
- B. Using fine grain sand paper, clean away all remaining adhesive before riveting in repair sections.
- C. Coat any remaining exposed bondlines with PR1436GB-2 Inhibited Sealant.
- D. Coat all parts with zinc chromate primer.
- E. Seal all exposed honeycomb core areas with PR1436GB-2 Inhibited Sealant.

NOTE: Numbers in parentheses denote call-outs in Figure 809.

AA-5 SERIES
MAINTENANCE MANUAL



<u>ITEM</u>	<u>DESCRIPTION</u>	<u>MATERIAL</u>
1.	Block .484 x 1.5 x 9.6	2014-T6 or 2024-T3
2.	Block .484 x 1.7 x 9.6	2014-T6 or 2024-T3
3.	Spacer t = .025, trim to fit under item 4.	2024-T3 Alclad
4.	Splice See Section B-B	2024-T3 Alclad
5.	Spacer t = .090, trim to fit under item 6.	2024-T3 Alclad
6.	Splice See Section D-D	2024-T3 Alclad
7.	Reinforcement t = .080 See Section C-C	2024-T3 Alclad

View B-B, C-C, & D-D on following page.

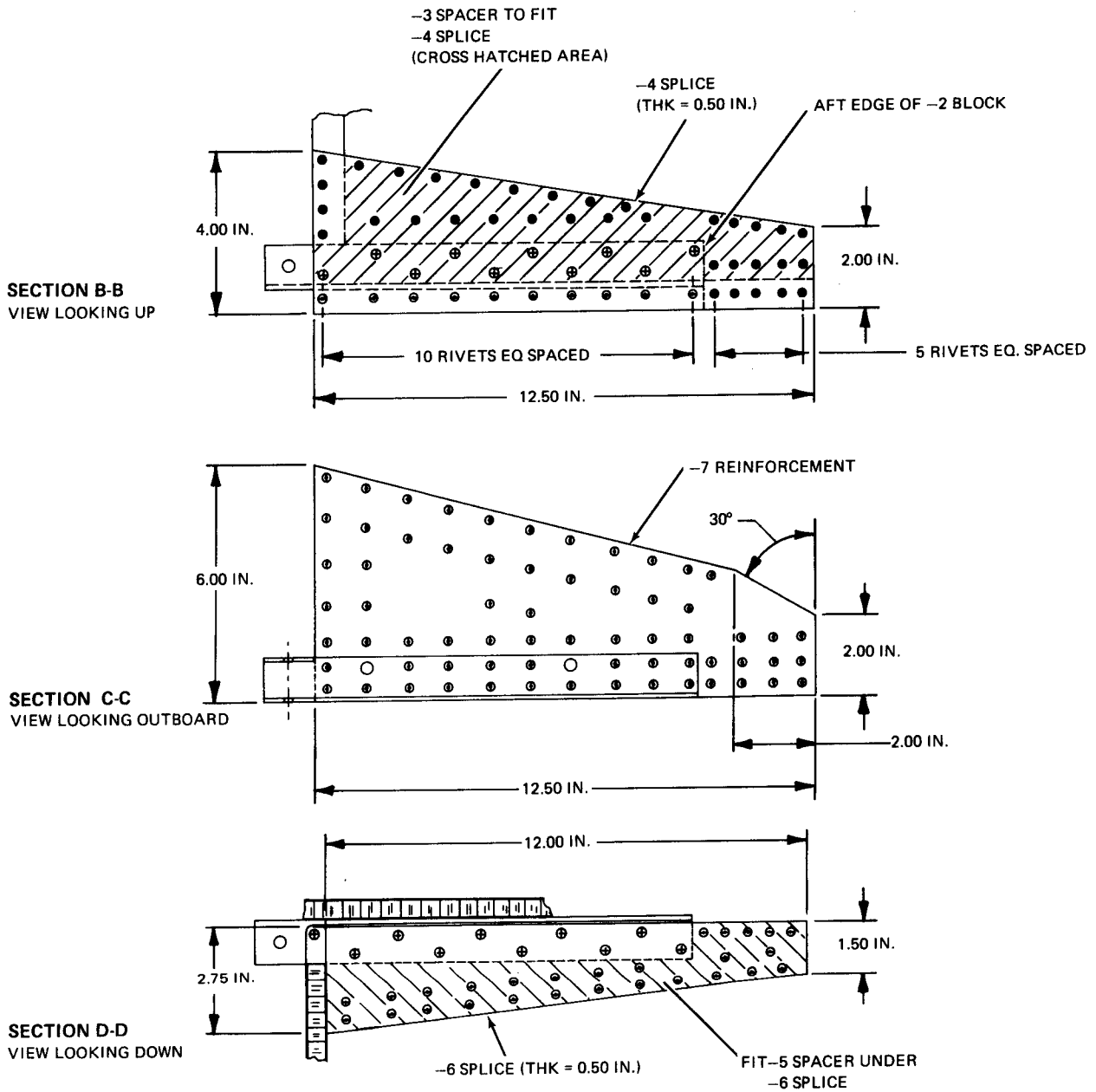
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NOTE: Nose gear torque tube not shown.

SECTION A-A Locking Aft (Firewall Removed)

Honeycomb Repair, Lower Engine Mount Area (Sheet 1 of 2)
Figure 808

AA-5 SERIES
MAINTENANCE MANUAL

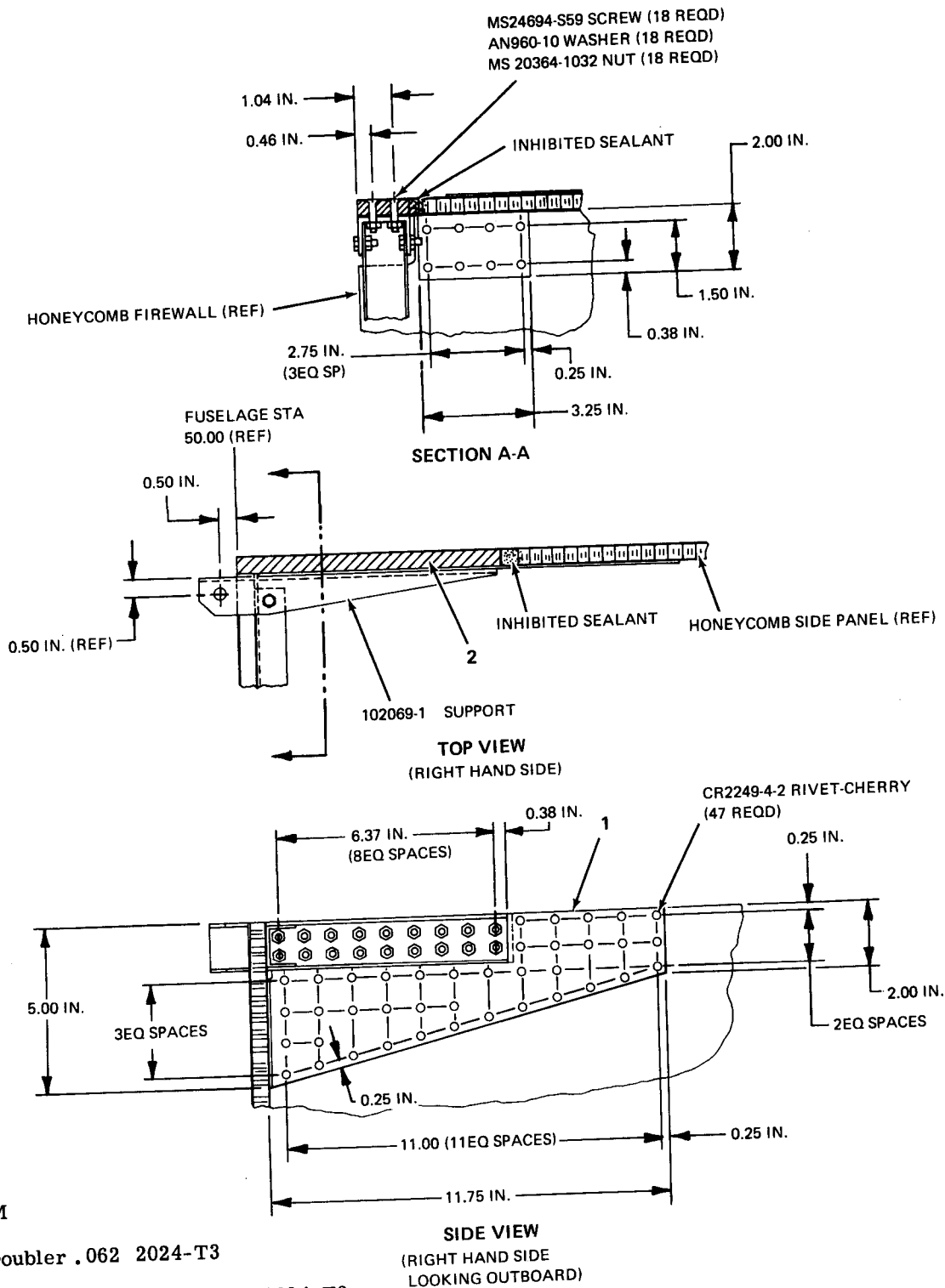


3093

- ⊙ MS426AD4-14 Double Countersunk as shown, Section A-A
- CR2248-4-2 Located as shown 35 req'd.
- ⊕ MS426AD4-16 10 req'd.
- ⊖ CR2249-4-3 27 req'd.
- MS426AD4-12 18 req'd.
- ⊙ CR2249-4-2 48 req'd.

Honeycomb Repair, Lower Engine Mount Area (Sheet 2 of 2)
Figure 808

**AA-5 SERIES
MAINTENANCE MANUAL**



MS24694-S59 SCREW (18 REQD)
AN960-10 WASHER (18 REQD)
MS 20364-1032 NUT (18 REQD)

1.04 IN.
0.46 IN.
2.00 IN.
1.50 IN.
0.38 IN.
2.75 IN. (3EQ SP)
0.25 IN.
3.25 IN.

HONEYCOMB FIREWALL (REF)
INHIBITED SEALANT
FUSELAGE STA 50.00 (REF)
0.50 IN.
0.50 IN. (REF)
102069-1 SUPPORT
INHIBITED SEALANT
HONEYCOMB SIDE PANEL (REF)
2

6.37 IN. (8EQ SPACES)
0.38 IN.
0.25 IN.
5.00 IN.
3EQ SPACES
11.00 (11EQ SPACES)
0.25 IN.
11.75 IN.
2.00 IN.
2EQ SPACES
CR2249-4-2 RIVET-CHERRY (47 REQD)
0.25 IN.

ITEM

1. Doubler .062 2024-T3
2. Filler .484 x 1.50 x 7.75 2024-T3
(Alternate-Use .125 thick 2024-T3 laminated)

**Honeycomb Repair, Upper Engine Mount Area
Figure 809**

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**AA-5 SERIES
MAINTENANCE MANUAL**

- F. Place doubler repair section (1) into place flush against honeycomb side panel and honeycomb front panel (Fuselage Station 50.0).
- G. Using 47 CR2249-4-2 Cherry rivets dipped in PR1436GB-2 Inhibited Sealant, rivet doubler to honeycomb side panel and honeycomb front panel.
- H. Place new filler section (2) into repair area, flush against doubler (1).
- I. Install new engine mount extrusion to doubler and filler sections with 18 MS24694-S59 screws, AN960-10 washers, and MS20364-1032 nuts.
- J. Drill new engine mount holes in extrusion.
- K. Fill over rivet heads and bolt heads on exterior areas with epoxy filler and smooth before applying primer.
- L. Coat repaired area with zinc chromate primer prior to application of exterior finish paint.

9. Honeycomb Panel Replacement (Station 50)

Replace the forward fuselage (Station 50) honeycomb panel (Figure 810) as follows:

- A. Remove damaged forward fuselage honeycomb panel without removing existing 102293-3 and 102293-5 angles.
- B. Using fine grain sand paper, clean away all remaining adhesive before riveting in repair sections. Coat any remaining exposed bondlines with PR1436GB-2 Inhibited Sealant.
- C. Coat all parts with zinc chromate primer.
- D. Seal all exposed honeycomb core areas with PR1436GB-2 Inhibited Sealant.
- E. Place new honeycomb panel into position flush against existing angles, 102293-3 and 102293-5. Rivet panel to angles using CR2249-4-1 rivets dipped in PR1436GB-2 Inhibited Sealant.

NOTE: Numbers in parentheses denote call-outs in Figure 810.

- F. Using CR2248-4-1 rivets dipped in PR1436GB-2 Inhibited Sealant, rivet side angles (1) into place at corner junction of forward fuselage.
- G. Using CR2248-4-1 rivets dipped in PR1436GB-2 Inhibited Sealant rivet bottom angle (2) into place at bottom edge of forward fuselage.
- H. Fill over exterior rivets with epoxy filler and smooth before applying primer.
- I. Coat repaired area with zinc chromate primer prior to application of exterior finish paint.

10. Upper Forward Fuselage Assembly Replacement

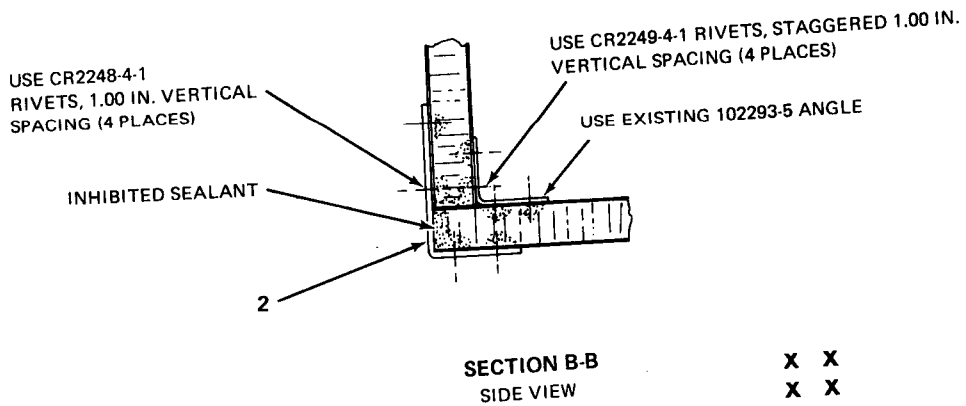
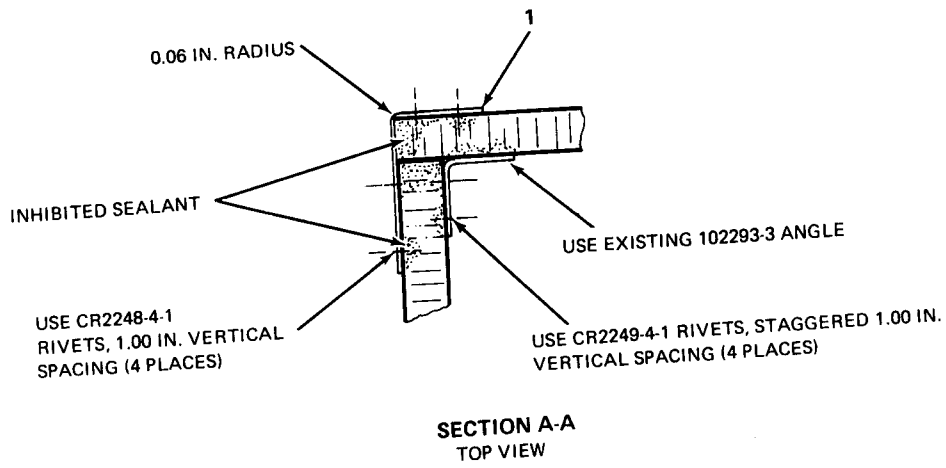
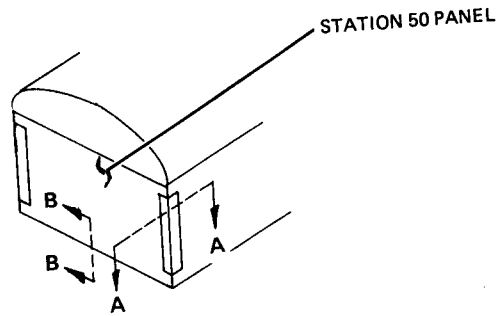
Replace the entire upper forward fuselage assembly (Figure 811) as follows:

- A. Remove windshield. (See Chapter 56.)
- B. Scrape the bond at the aft end of the forward fuselage assembly near the canopy.
- C. With pliers, peel assembly from fuselage structure.
- D. Remove damaged upper forward fuselage assembly.
- E. Using fine grain sand paper, clean away all remaining adhesive before riveting new assembly in place.

**AA-5 SERIES
MAINTENANCE MANUAL**

ITEM

1. ANGLE 1.00 IN x 1.50 IN., Make from 2024-T3 Alclad
THK = 0.040 IN., LTH = 21.77 IN.
2. ANGLE 1.00 IN. x 1.50 IN. Make from 2024-T3 Alclad
THK = 0.040 IN., LTH = 17.80 IN.



X X
X X
VERTICAL

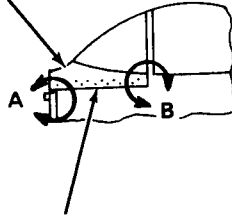
X
X
STAGGERED
VERTICAL

3095

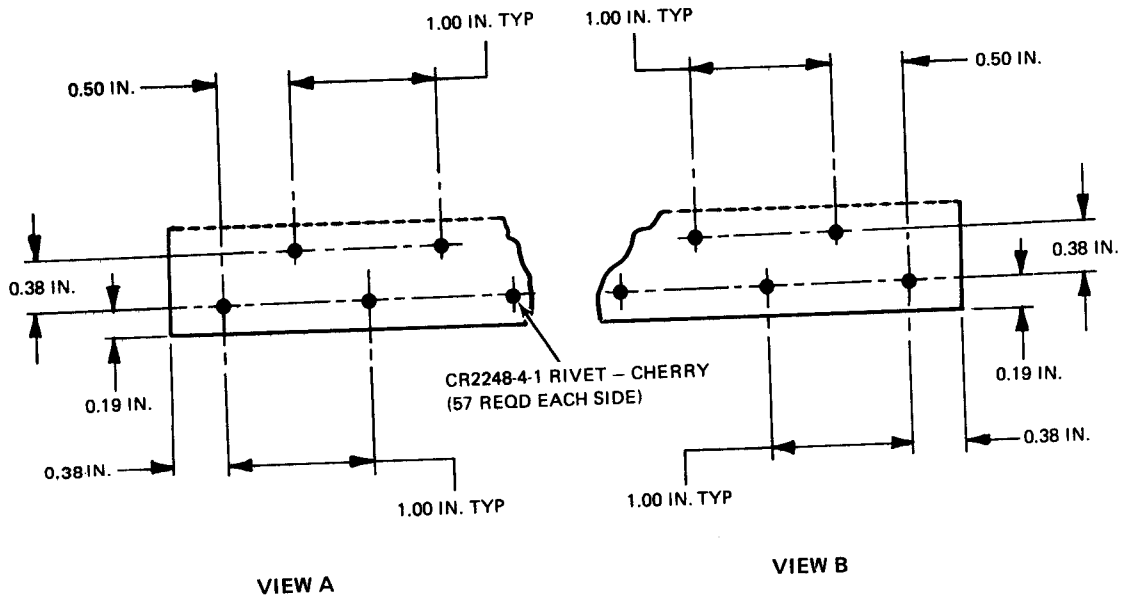
Honeycomb Panel Replacement (Station 50)
Figure 810

AA-5 SERIES
MAINTENANCE MANUAL

UPPER FORWARD FUSELAGE ASSEMBLY
PART NO. 5102295-501



1601-0410 RIVET - AVEX
(20 REQD)



VIEW A

VIEW B

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Upper Forward Fuselage Assembly Replacement
Figure 811

- F. Coat all joints with PR1436GB-2 Inhibited Sealant.
- G. Align upper forward fuselage assembly with honeycomb panel on each side of fuselage according to dimensions given in Figure 811.

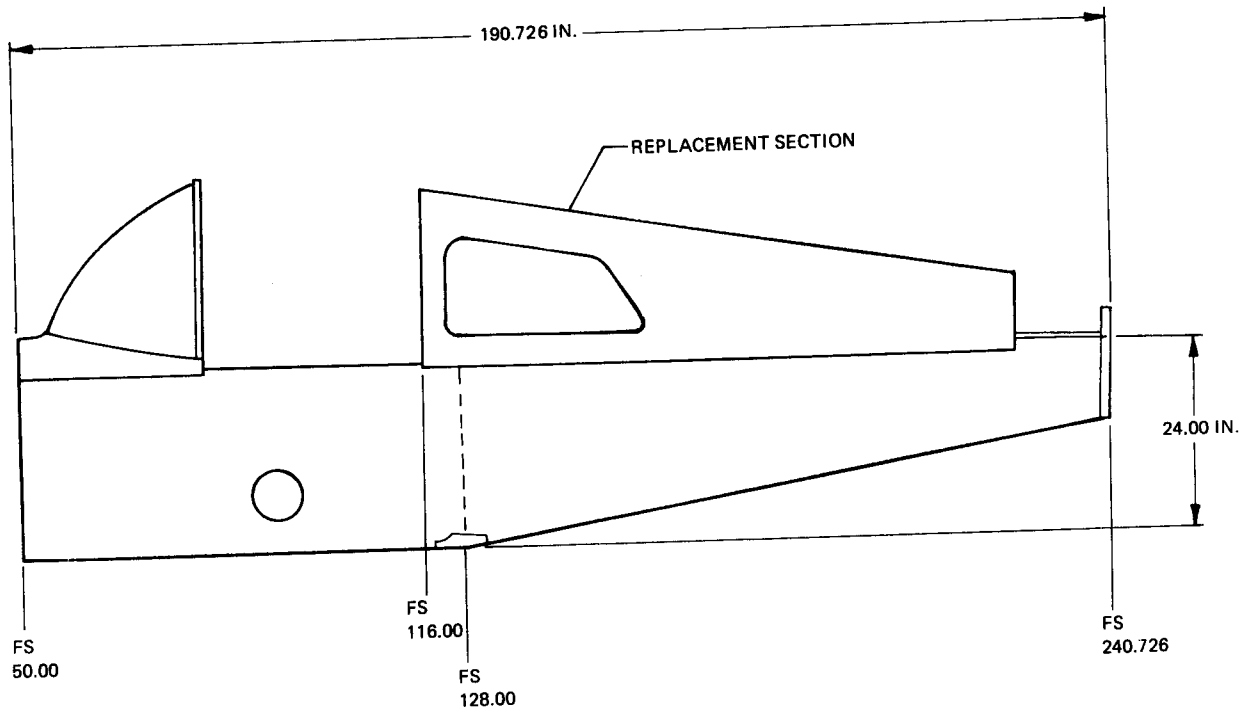
NOTE: Rivet spacing dimensions given below are typical for repairs of the upper forward fuselage assembly.
- H. Using CR2248-1 Cherry rivets dipped in PR1436GB-2 Inhibited Sealant, rivet upper forward fuselage assembly to honeycomb panel on each side of fuselage (57 rivets required per side).
- I. Using 20 1601-0410 Avex rivets dipped in PR1436GB-2 Inhibited Sealant, rivet upper forward fuselage assembly to firewall arch.
- J. Fill over exterior rivets with epoxy filler and smooth before applying primer.
- K. Coat repaired area with zinc chromate primer prior to application of exterior finish paint.

11. Aft Fuselage Assembly Replacement

Replace the entire aft fuselage assembly (Figure 812) as follows:

- A. Remove forward and aft side panel interiors. (See Chapter 25)
- B. Remove canopy. (See Chapter 52)
- C. Remove canopy rail (Figure 813) as follows:
 - (1) Remove bolt attaching canopy rail to forward fuselage and upper aft fuselage bulkhead.
 - (2) Drill out rivets attaching canopy rail to forward fuselage.
 - (3) Drill out rivets attaching rail to upper aft fuselage skin.
- D. Remove rear seat. (See Chapter 25.)
- E. Disconnect flap actuator motor from motor bracket.
- F. Disconnect all rigging cables (See Chapter 27), electrical wiring, and vacuum system tubing at rear seat section of fuselage.
- G. Remove vertical and horizontal stabilizers if existing stabilizers are to be used on new aft fuselage section. (See Chapter 55)
- H. Drill out rivets from two side braces connecting the two bulkhead assemblies at rear seat section of fuselage.
- I. Remove wings and wing roots. (See Chapter 57)
- J. Remove damaged aft fuselage station 128 (See Figure 814) as follows:
 - (1) On each side of fuselage, remove two 3/16 in. diameter bolts (just below W. L. 49) attaching flange of aft fuselage to aft end of forward fuselage side honeycomb panel.
 - (2) Remove remaining screw attaching upper aft fuselage bulkhead to forward fuselage.
 - (3) Drill out rivets to remove gussets from bottom edges of fuselage (W. L. 25, F. S. 128).
 - (4) On inside of fuselage forward of F. S. 128, remove rivets from reinforcement which secures aft fuselage to top edge of forward fuselage.
 - (5) Pry flange of aft fuselage section from forward fuselage section and with a pair of pliers, peel skin off to remove.

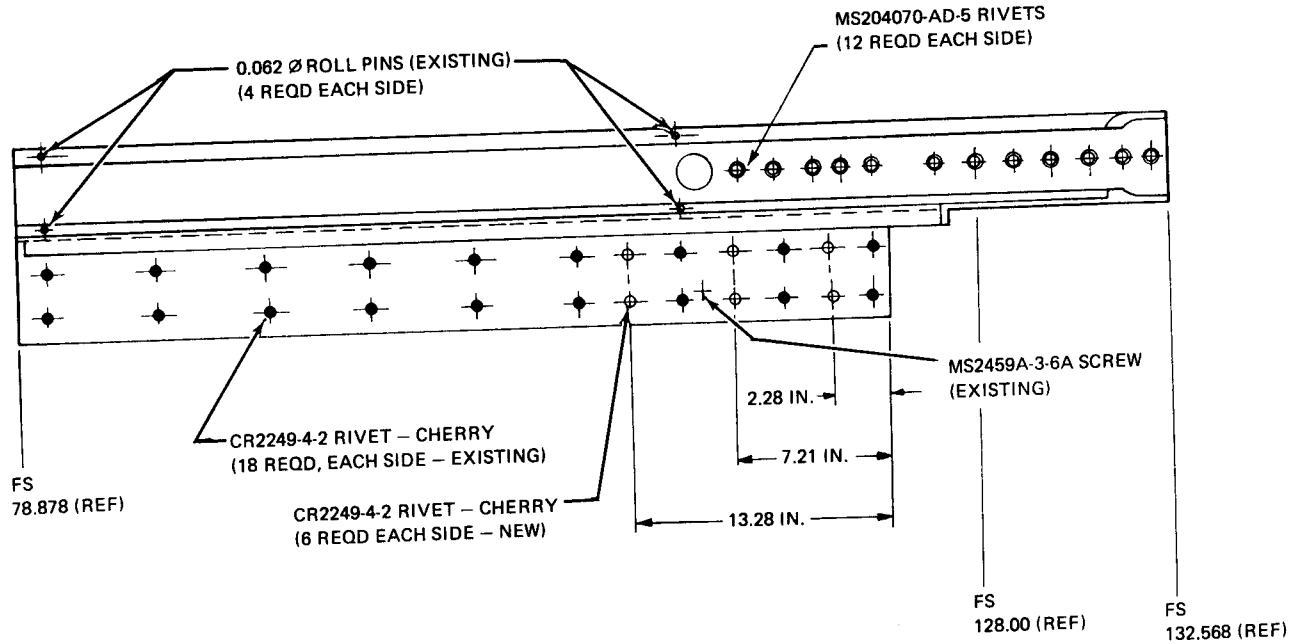
AA-5 SERIES
MAINTENANCE MANUAL



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Overall Fuselage Dimensions
Figure 812

**AA-5 SERIES
MAINTENANCE MANUAL**

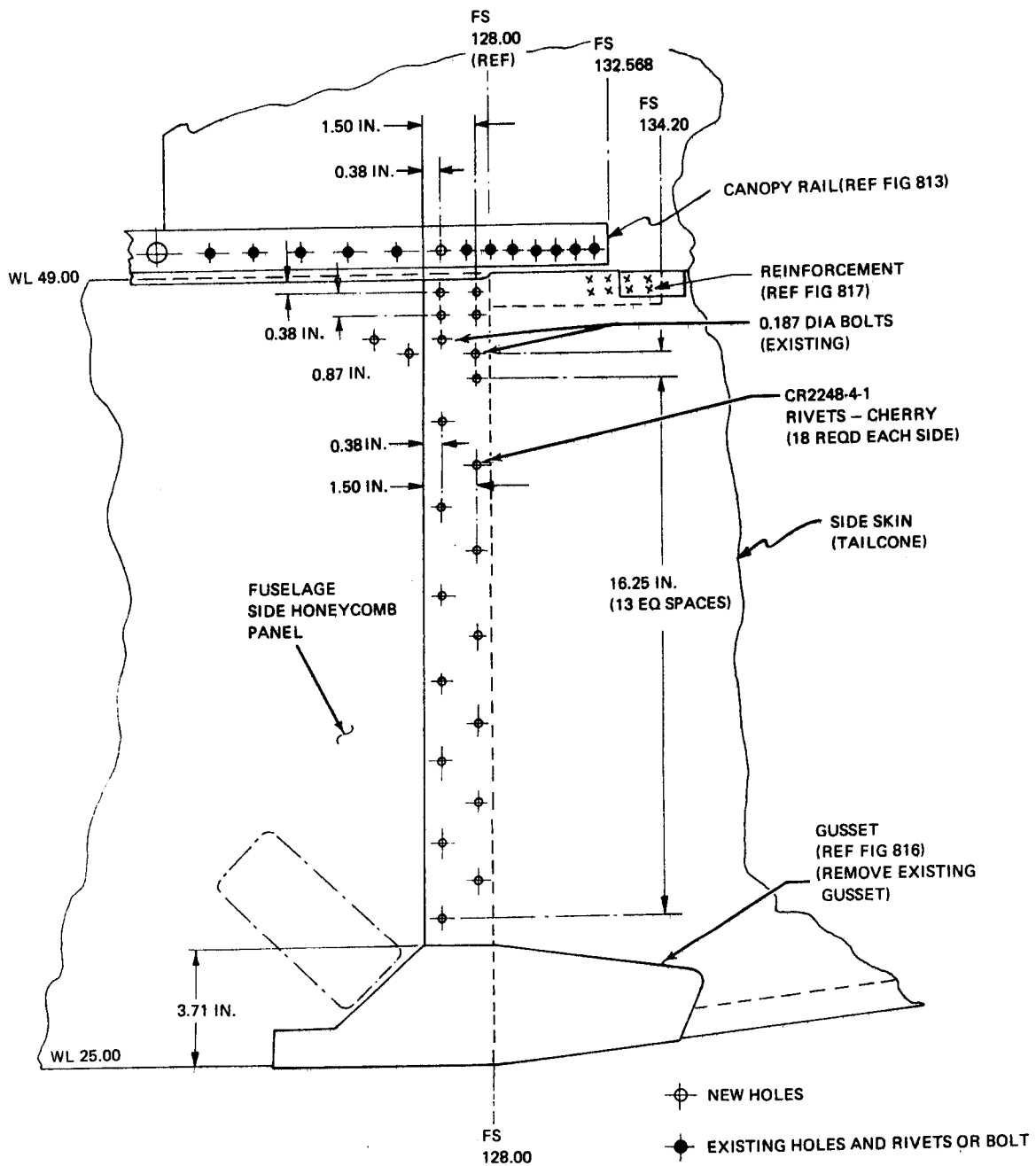


- ⊙ NEW HOLES - CR2249-4-2 RIVETS
- EXISTING HOLES - CR2249-4-2 RIVETS
- ⊙ EXISTING HOLES - MS20470-AD-5 RIVETS
- ⊙ EXISTING HOLES - 0.062 DIA ROLL PINS

3416

Installation of Track Assembly - Canopy Outer
Figure 813

**AA-5 SERIES
MAINTENANCE MANUAL**



3417

**Fuselage Side Attachment Details
Figure 814**

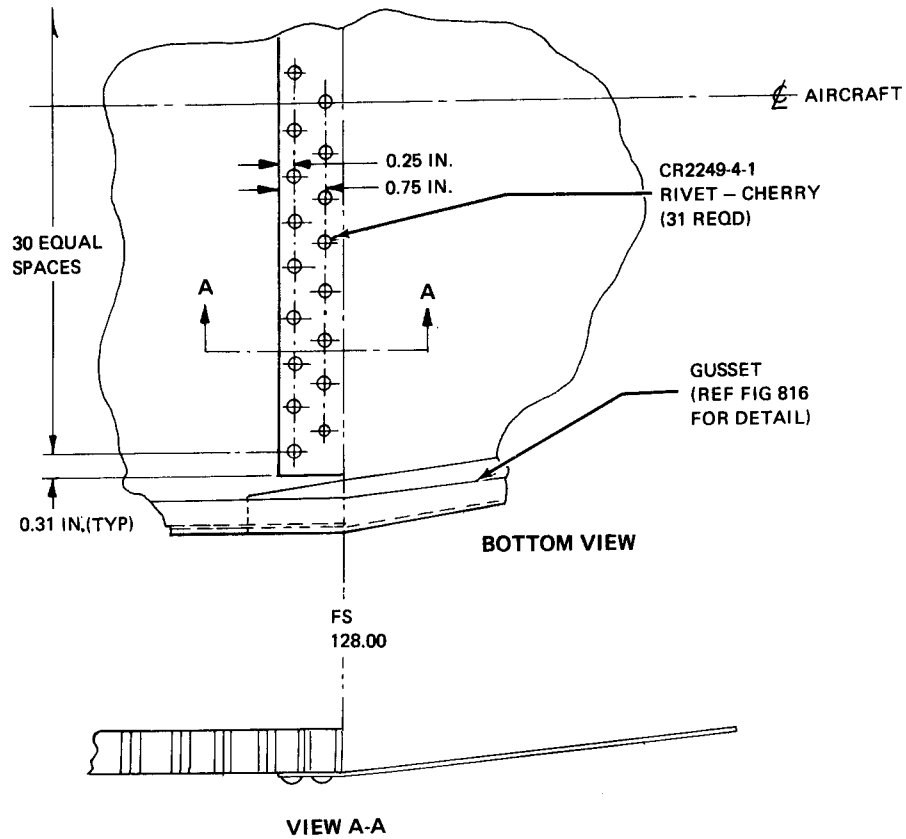
**AA-5 SERIES
MAINTENANCE MANUAL**

- K. Using fine grain sand paper, clean away all remaining adhesive before riveting new assembly in place.
- L. Seal any exposed honeycomb core with PR1436GB-2 Inhibited Sealant.
- M. Align aft fuselage assembly with forward fuselage assembly according to dimensions given in Figures 814 and 815.

NOTE: Rivet spacing dimensions given in Figure 814 and 815 are typical for typical for repairs of the aft fuselage assembly.

- N. Install bolt attaching upper aft fuselage bulkhead to forward fuselage.
- O. On each side of fuselage, install two 3/16 in. diameter bolts (just below W.L. 49) attaching flange of aft fuselage to aft end of forward fuselage side honeycomb panel.
- P. Using CR2248-4-1 Cherry rivets dipped in PR1436GB-2 Inhibited Sealant, rivet flanges of aft fuselage section to forward fuselage side honeycomb panel. (Eighteen (18) rivets required for each side of fuselage. (See Figure 814)
- Q. Using thirty-one (31) CR2249-4-1 Cherry rivets dipped in PR1436GB-2 Inhibited Sealant, rivet bottom flange of aft fuselage section to forward fuselage bottom honeycomb panel. (See Figure 815.)
- R. Align gusset assemblies in place at bottom edges of forward and aft fuselage sections, (See Figure 816), and secure in place as follows:
 - (1) Using CR2248-4-2 Cherry rivets dipped in PR1436GB-2 Inhibited Sealant, rivet gusset to side skin of fuselage. (Thirty-nine (39) CR2248-4-2 Cherry rivets required for each side of fuselage. (See Figure 816 for rivet placement.)
 - (2) Using CR2248-4-3 Cherry rivets dipped in PR1436GB-2 Inhibited Sealant, rivet gusset to side skin of aft fuselage section. (Eight (8) CR2248-4-3 Cherry rivets required for each side of fuselage. (See Figure 816 for rivet placement).
 - (3) Using CR2248-4-4 Cherry rivets dipped in PR1436GB-2 Inhibited Sealant, rivet bottom edge of gusset to bottom skin of aft fuselage section. (Seven (7) CR2248-4-4 Cherry rivets required for each side of fuselage. (See Figure 816 for rivet placement.)
 - (4) Using CR2248-4-2 Cherry rivets dipped in PR1436GB-2 Inhibited Sealant, rivet bottom edge of gusset to bottom skin of forward fuselage section. (Seven (7) CR2248-4-2 Cherry rivets required for each side of fuselage. (See Figure 816 for rivet placement.)
- S. Align reinforcements in place at top edges of forward and aft fuselage sections (See Figure 817) and secure in place as follows:
 - (1) Using CR2249-4-2 Cherry rivets dipped in PR1436GB-2 Inhibited Sealant, rivet reinforcement to side skin of forward fuselage section. (Six (6) CR2249-4-2 Cherry rivets required for each side of fuselage. (See Figure 817 for rivet placement.)
 - (2) Using CR2248-4-2 Cherry rivets dipped in PR1436GB-2 Inhibited Sealant, rivet reinforcement to side skin of aft fuselage section. (Eight (8) CR2248-4-2 Cherry rivets required for each side of fuselage. See Figure 817 for rivet placement.)
 - (3) Using CR2249-4-2 Cherry rivets dipped in PR1436GB-2 Inhibited Sealant, rivet upper aft fuselage (turtle deck) skin to top flange of reinforcement. (Five (5) CR2249-4-2 Cherry rivets required for each side of fuselage. See Figure 817 for rivet placement.)
- T. Align canopy track assemblies in place along top edges of forward and aft fuselage sections (See Figure 813) and secure in place as follows:
 - (1) Install bolt attaching canopy rail to forward fuselage and upper aft fuselage bulkhead.

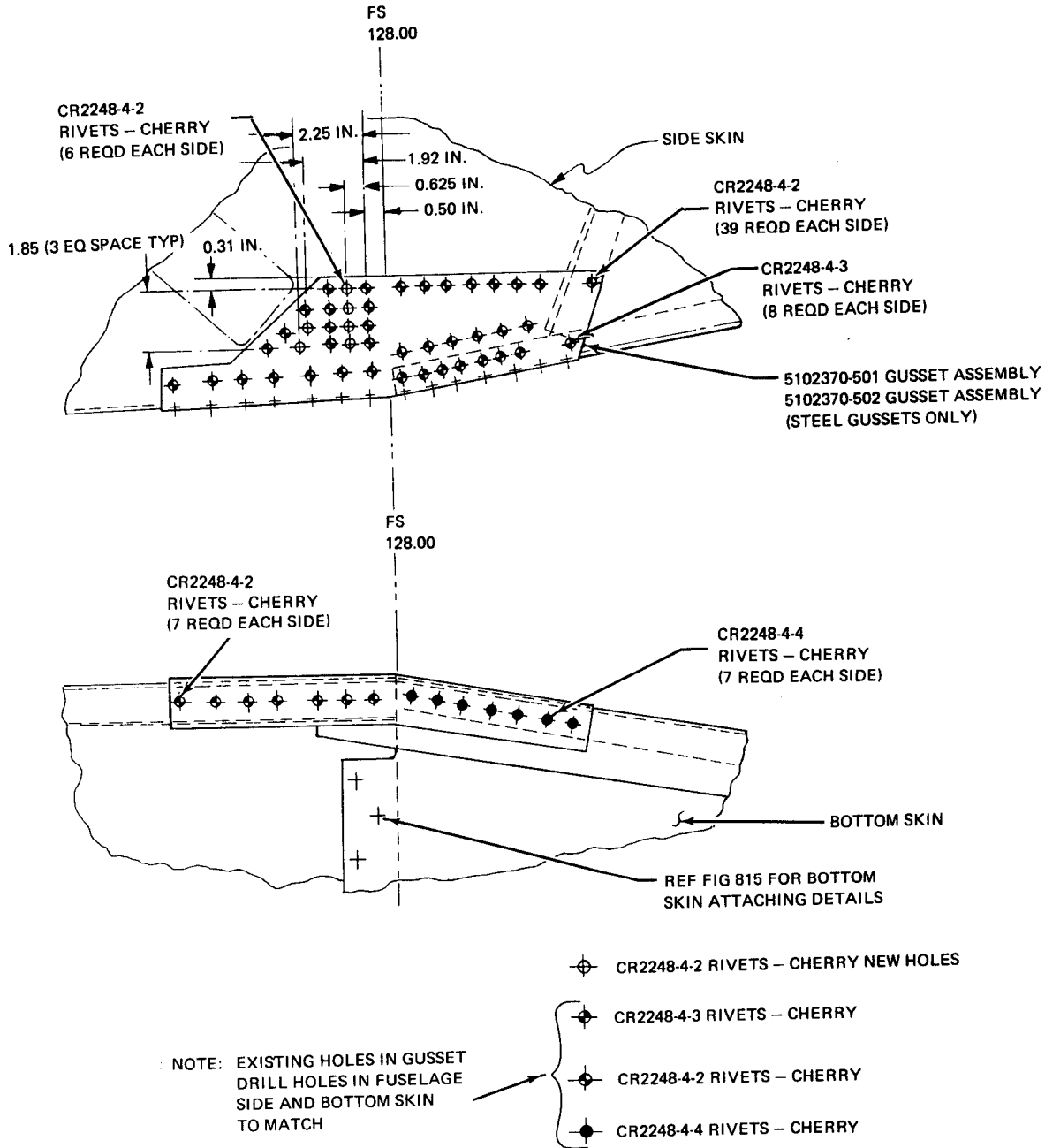
AA-5 SERIES
MAINTENANCE MANUAL



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Bottom Skin Attachment Details
Figure 815

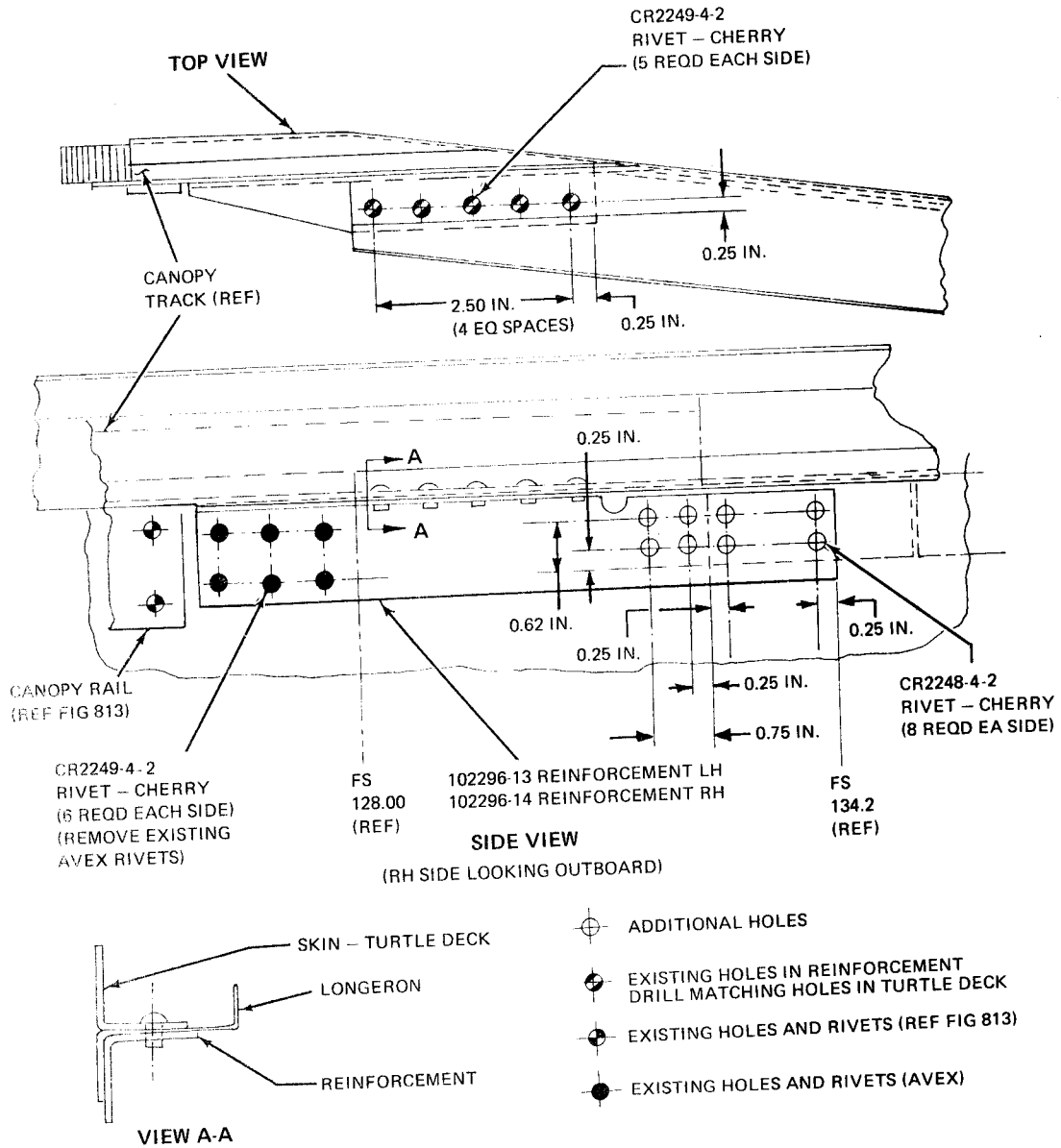
**AA-5 SERIES
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3418

Gusset Attachment Details (L. H. Side)
Figure 816

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MAINTENANCE MANUAL



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Reinforcement Attachment Details
Figure 817

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MAINTENANCE MANUAL**

- (2) Using CR2249-4-2 Cherry rivets dipped in PR1436GB-2 Inhibited Sealant, rivet canopy rail to forward fuselage. (Twenty-four (24) CR2249-4-2 Cherry rivets required for each side of fuselage. See Figure 813 for rivet placement.)
- (3) Using MS20470-AD-5 rivets dipped in PR1436GB-2 Inhibited Sealant, rivet canopy rail to upper aft fuselage skin. (Twelve (12) MS20470-AD-5 rivets required for each side of fuselage. See Figure 813 for rivet placement.)
- (4) Install .062 ϕ roll pins on canopy rail. (Four (4) roll pins required for each rail. See Figure 813 for placement of pins.)

- U. Fill over all exterior rivets with epoxy filler and smooth before applying primer.
- V. Coat all repaired areas with zinc chromate primer prior to application of exterior finish paint.
- W. Connect flap actuator motor to motor bracket.
- X. Install vertical and horizontal stabilizers. (See Chapter 55.)
- Y. Connect all rigging cables (see Chapter 27), electrical wiring, and vacuum system tubing at rear seat section of fuselage.
- Z. Rivet two side braces in place connecting the two bulkhead assemblies at rear seat section of fuselage.
- AA. Install wing roots and wings. (See Chapter 57.)
- AB. Install canopy. (See Chapter 52.)
- AC. Install forward and aft side panel interiors. (See Chapter 25.)
- AD. Install rear seat. (See Chapter 25.)

12. Aft Fuselage Bulkhead Replacement

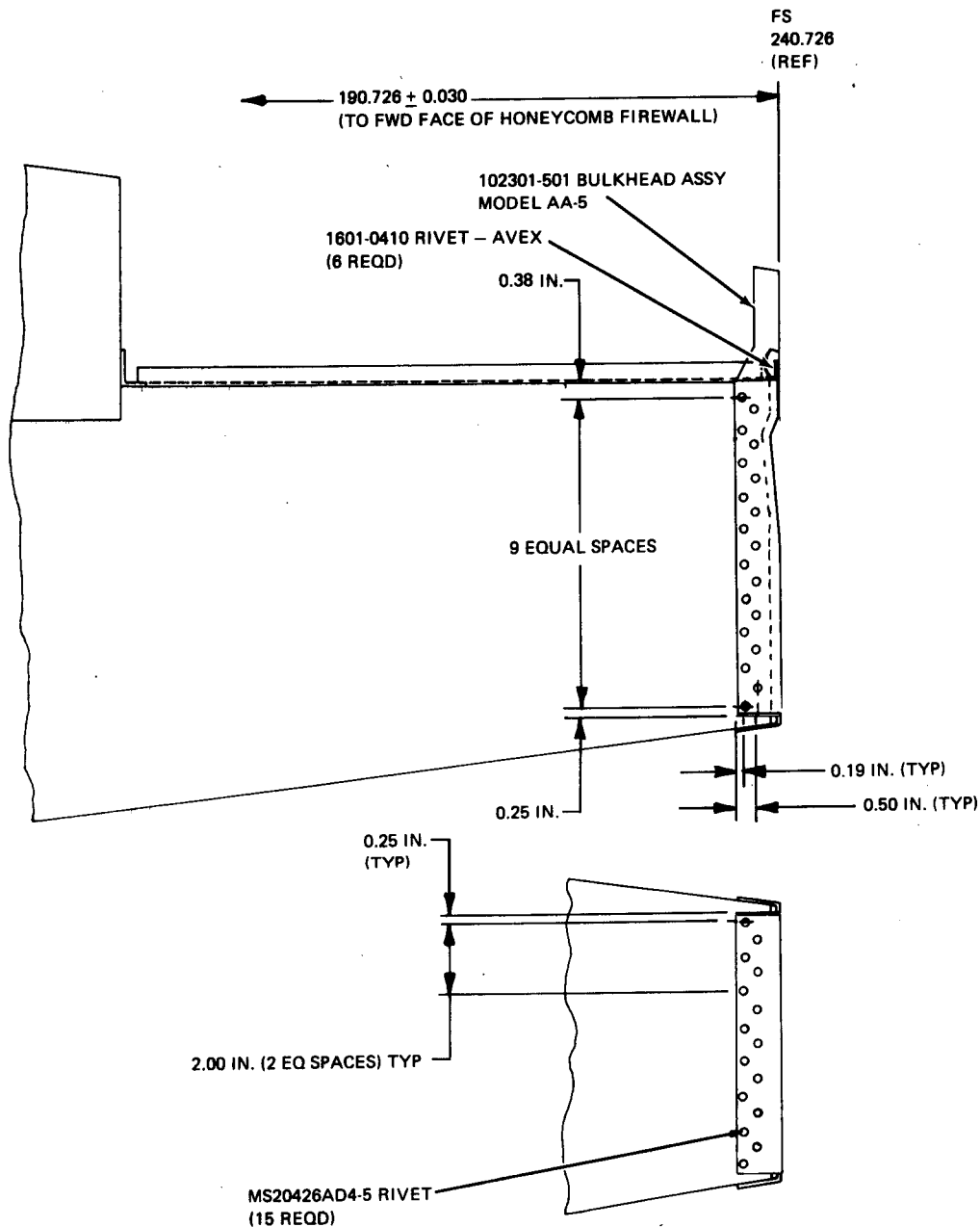
Replace the entire aft fuselage bulkhead (Figure 818) as follows:

- A. Remove rivets attaching aft fuselage bulkhead to ELT mounting bracket and fuselage structure.
- B. Scrape out bond between bulkhead and fuselage structure.
- C. Remove damaged aft fuselage bulkhead.
- D. Using fine grain sand paper, clean away all remaining adhesive before riveting new bulkhead in place.
- E. Coat all joints with zinc chromate primer.

NOTE: Rivet spacing dimensions given below are typical for repairs of the aft fuselage bulkhead.

- F. Secure new bulkhead assembly to fuselage with MS20426AD4-5 rivets installed wet with zinc chromate primer. (Install 19 rivets to right fuselage side, 19 rivets to the left side, and 15 rivets to bottom side.)
- G. Secure new bulkhead assembly to panel assembly flanges with six (6) 1601-0410 Avex rivets installed wet with zinc chromate primer.
- H. Fill over exterior rivets with epoxy filler and smooth before applying primer.
- I. Coat repaired area with zinc chromate primer prior to application of exterior finish paint.

**AA-5 SERIES
MAINTENANCE MANUAL**



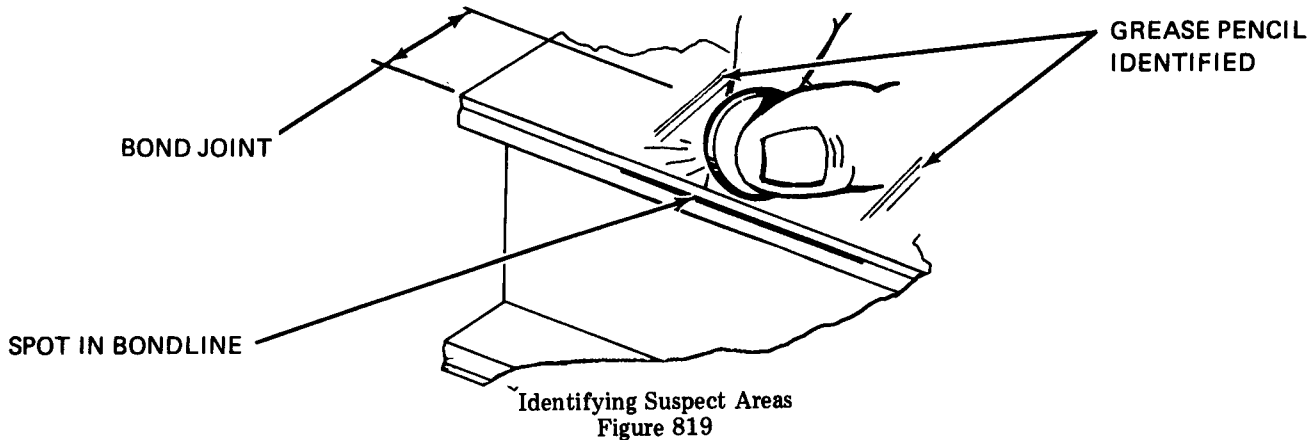
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**Aft Fuselage Bulkhead Replacement
Figure 818**

13. Bondline Repair

If inspection of joint edges determine the existence of hairline cracks between two layers of bonded metal, perform the following steps:

- A. Identify the location of any cracks with a grease pencil as shown in Figure 819 below:



- B. Gently tap the bondline with a coin or similar metal object to verify the existence of a bondline separation. Slowly move along the bondline while tapping, and listen for a change in tone as the suspect area is traversed. A bondline separation will produce a flat or hollow sound when "tapped" directly in the damaged area.
- C. If the results of Step B above are questionable, insert a 0.004 inch to 0.006 inch feeler gauge into the bondline to verify that a separation exists.

WARNING: WHEN USING TRICHLOROETHANE, ENSURE THAT THE WORKING AREA IS WELL VENTILATED AND THAT PROTECTIVE EQUIPMENT (GLOVES, EYE PROTECTION) IS WORN. AVOID BREATHING FUMES. KEEP AWAY FROM FLAMES.

- D. If the results of Steps B and C are negative, the hairline should be wiped with Trichloroethane and sealed with paint. Also, any bare bondline edges should be sealed with paint. If the results of either Steps B or C are positive, order Service Kit No. SK-125 from your authorized Grumman American Dealer or Distributor and make the repairs accordingly.

14. Main Gear Strut Repair

The following main gear strut repair procedure covers surface delaminations which do not extend more than one ply into the surface of the strut and corner delamination which are smaller than 1/16 x 1/16 inch in size throughout their length.

- A. Remove delaminated material.
- B. Smooth out minor paint chips or stone bruises with No. 150 Tri-Mite.

WARNING: WHEN USING TRICHLOROETHANE, ENSURE THAT THE WORKING AREA IS WELL-VENTILATED AND THAT PROTECTIVE EQUIPMENT (GLOVES, EYE PROTECTION) IS WORN. AVOID BREATHING FUMES. KEEP AWAY FROM FLAMES.

- C. Clean unpainted areas thoroughly with Trichloroethane.
- D. Seal minor surface or corner delaminations with a two-part epoxy adhesive to seal out moisture from the damaged area.
- E. Clean strut with wax and grease remover.
- F. Prime with two light coats of zinc chromate primer per MIL-P-8585 and paint to match aircraft color.

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15. Damaged or Delaminated Spar Collar Repair

The following repair is applicable to all AA-5 aircraft. The repair is for any forward or aft rib to spar collar and may be used separately, or in conjunction with other approved repairs providing that no spar damage has occurred. If collar is not delaminated from spar, refer to Paragraph 2., this Section for repair.

If collar is delaminated from spar, repair as follows:

CAUTION: DO NOT USE STEEL WOOL OR SILICON GRIT ABRASIVES. USE EXTREME CARE NOT TO SCRATCH OR GOUGE SPAR.

- A. Clean area to be repaired by removing loose bonding material using aluminum wool, 3-M ELEKTRO-CUT cloth or aluminum oxide paper. Thoroughly clean area using a vacuum cleaner or other suitable means.

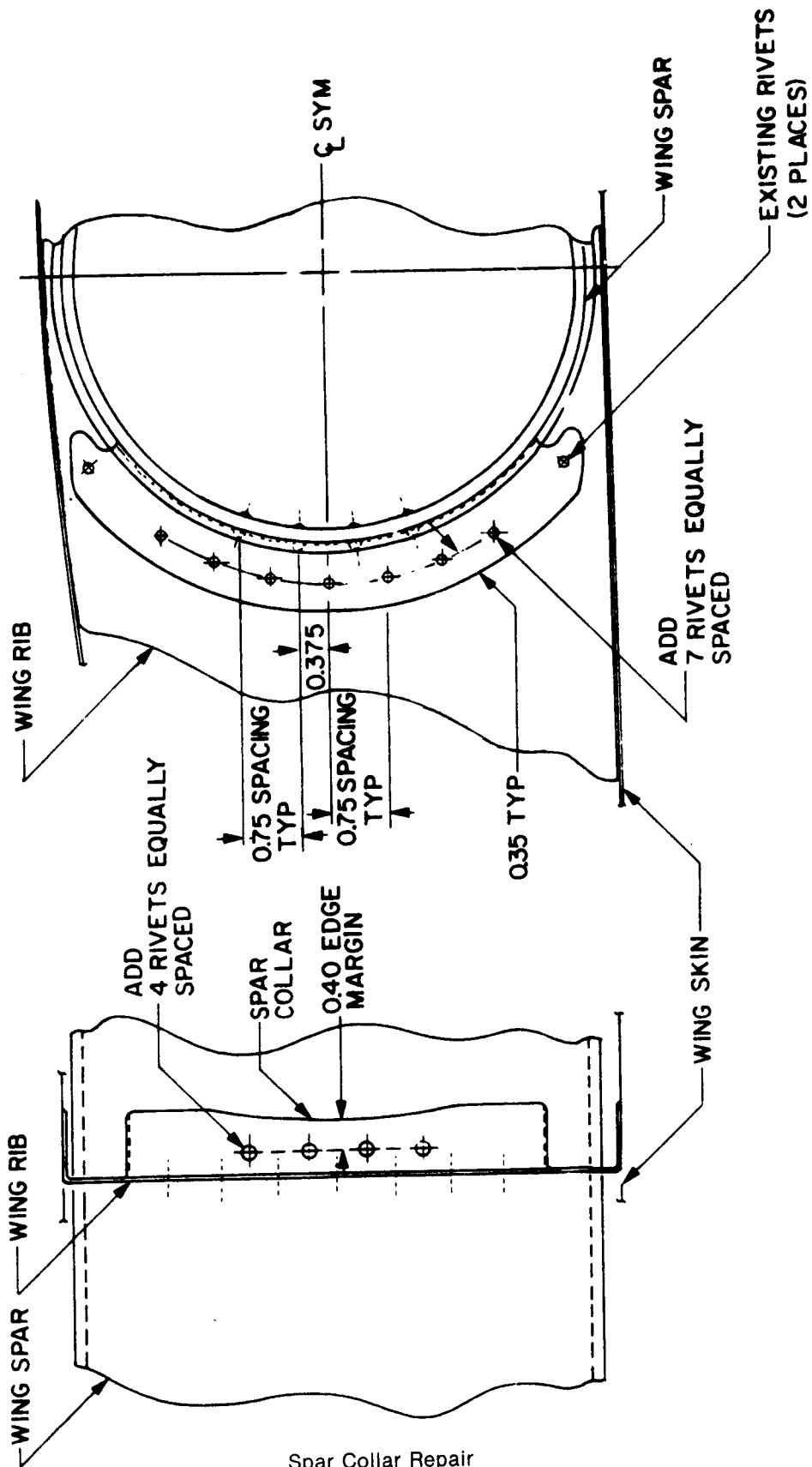
WARNING: USE CLEANING SOLVENTS IN A WELL VENTILATED AREA. AVOID BREATHING FUMES. KEEP AWAY FROM FLAME.

- B. Clean area with a lint-free cheese cloth dampened with MEK, alcohol (99% Isopropyl), or acetone until cloth shows no sign of smudge or stain.
- C. Inspect collar for damage and replace if required. If using old collar, ensure it is clean.
- D. Locate collar in correct position and drill (as shown in Figure 820) for MS20470AD4 or NAS1919B04 (or equivalent) rivets.
- E. Remove collar and deburr holes.

CAUTION: OBSERVE ALL PRECAUTIONS NOTED IN KIT INSTRUCTIONS IN THE USE OF SEALANTS, AND WORKINGS IN FUEL TANK AREAS.

- F. Prepare sealant per Single Engine Service Kit No. SK-125A, or if in fuel tank area per SK-140A. Coat mating surface with sealant and rivet into place. Coat rivets with proper sealant before insertion.

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Spar Collar Repair
Figure 820

**AA-5 SERIES
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PREPARATIONS FOR PAINTING - DESCRIPTION

1. General

The three basic steps involved in the preparation of the aircraft for painting are stripping, cleaning and priming. The directions given in this section are intended to establish procedures for preparing the aircraft for painting. Procedures for the stripping, cleaning, and application of a metal conditioner are presented in this section.

The requirements specified in this section shall apply to all polyurethane coated aircraft manufactured by the Grumman American Aviation Corporation. Any deviation from or modification of these directions shall be approved by the Customer Service Department.

Because paint strippers are formulated to remove a synthetic substance, it must be understood that they are detrimental to all substances of the synthetic family. For this reason, the following procedure has been prepared and must be carefully followed to ensure against damage to synthetic components on the aircraft.

PREPARATIONS FOR PAINTING — CLEANING/PAINTING

1. Stripping and Cleaning Procedure

Reference Specifications:

MIL-R-25134B — Paint and Lacquer, Solvent Type Remover.

GAPS-1057 (GAAC) — Application of Protective and Decorative Coatings

WARNING: WHEN USING TRICHLOROETHANE, ENSURE THAT THE WORKING AREA IS WELL-VENTILATED AND THAT PROTECTIVE EQUIPMENT (GLOVES, EYE PROTECTION) IS WORN. AVOID BREATHING FUMES. KEEP AWAY FROM FLAMES.

CAUTION: LONG TERM EXPOSURE OR BOND JOINTS TO PAINT STRIPPERS WILL AFFECT THE INTEGRITY OF THE BOND STRENGTH. ALL AREAS MUST BE COMPLETELY SEALED TO PREVENT THE STRIPPER FROM CONTACTING BOND JOINTS OR GETTING INTO INTERNAL AREAS OF THE AIRCRAFT. IF STRIPPER DOES INADVERTENTLY CONTACT THE BOND JOINT, FLUSH THOROUGHLY WITH TAP WATER WITHIN 1-1/2 HOURS.

- A. Wipe all bondlines and areas with Trichlorethane or a suitable substitute so that they will be free of dust, oily material, wax, cleaning agents or other foreign material.

CAUTION: APPLY PROTECTIVE TAPE TIGHTLY TO ENSURE AGAINST SEEPAGE OF STRIPPER INTO THE AREAS MENTIONED IN B AND C BELOW.

- B. Using 2 inch wide aluminum tape, mask windows, windshield, wing tips, stabilizer tips, wing roots, nose cowl, tailcone, propeller, main landing gear, drain holes, fasteners and all bondlines as shown in the shaded areas of Figure 701.
- C. Encase antennas, lights, beacons, tires, radar domes, windows, windshield and all fiberglass or plastic parts in a double layer of aluminum foil as indicated by cross hatching in Figure 701.
- D. Apply approved polyurethane stripper with a suitable paint brush with slow easy strokes so as not to apply stripper on any undesired areas. Allow the stripper to work for 5 to 15 minutes.

NOTE: Acceptable material sources for polyurethane strippers per MIL-R-25134B are:

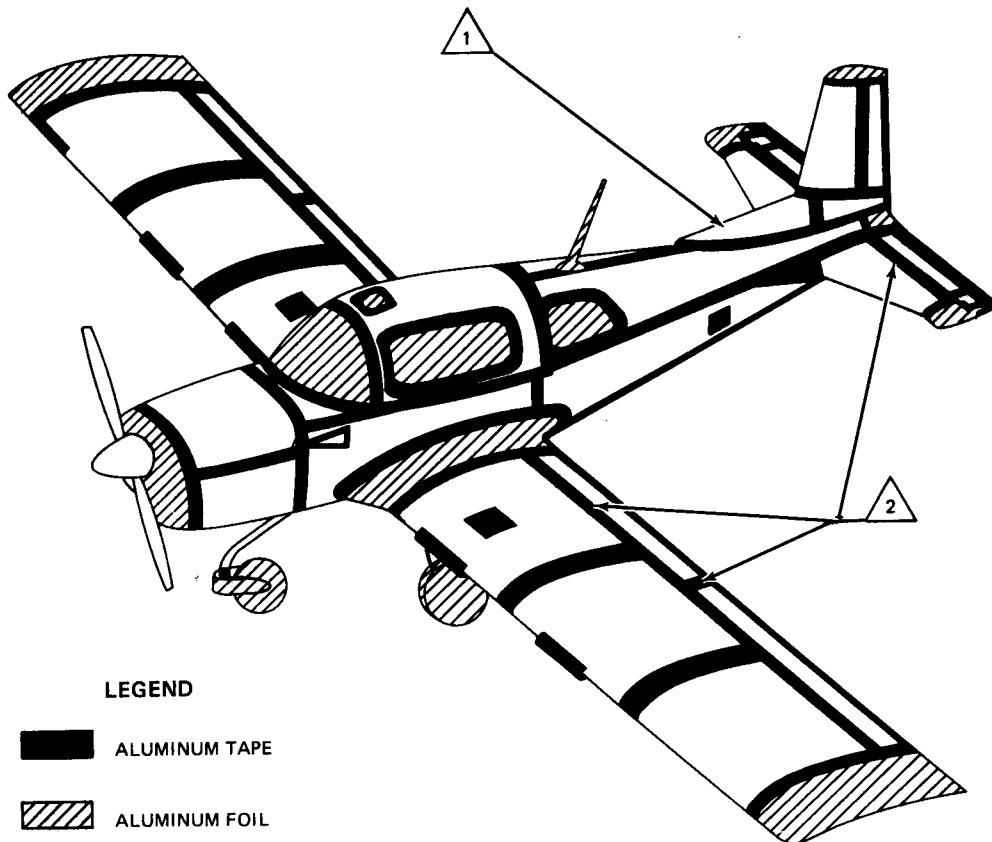
- (1) Strip-prep No. 66
Amchem Products, Incorporated
2300 Gainsboro
Ferndale, Michigan 48220
- (2) Methylene Chloride Based Paint Stripper No. 3403
W. M. Barr and Company
2336 S. Lauderdale
Memphis, Tennessee 38106

- E. Flush removed paint and excess stripper with tap water, using a pressure nozzle, being sure that all stripper residue is thoroughly removed.
- F. Remove the aluminum tape and protective foil from all areas. Inspect these areas carefully to be sure all stripper residue has been removed.



NOTE: It is permissible to sand the paint completely from the bond lines; however, for best bondline protection, it is recommended that these areas be lightly sanded.

- G. After removing the tape and protective foil, sand and feather the paint edge in all areas which had been protected from the stripper.



AA-5 SERIES
MAINTENANCE MANUAL



LEGEND

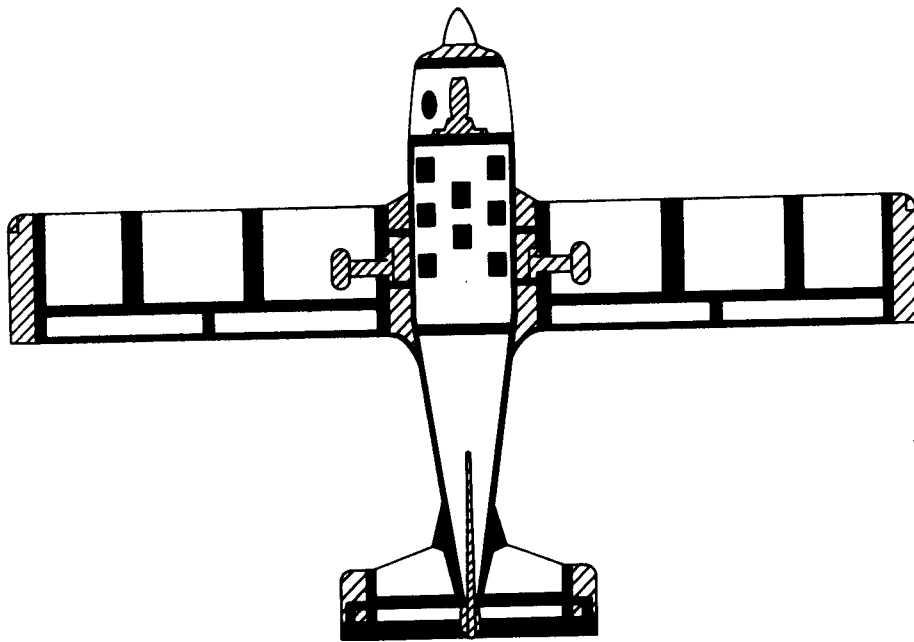
-  ALUMINUM TAPE
-  ALUMINUM FOIL

3102

-  IF AIRCRAFT HAS PLASTIC DORSAL FIN (1974 AND ON), IT MUST BE PROTECTED WITH ALUMINUM FOIL.
-  SEAL ALL GAPS BETWEEN SURFACES AS SHOWN PRIOR TO APPLICATION OF STRIPPER.

Aircraft Stripping (Sheet 1 of 2)
Figure 701

AA-5 SERIES
MAINTENANCE MANUAL



BOTTOM VIEW

3103

-  ALUMINUM TAPE
-  ALUMINUM FOIL

Aircraft Stripping (Sheet 2 of 2)
Figure 701

2. Metal Conditioner Application

A. Prepare metal conditioner solution (See Note below) using manufacturer's instructions.

NOTE: Acceptable material sources for metal conditioners are:

(1) Dupont 225 Metal Conditioner

(2) Magnus No. 852 (wipe off) Metal Conditioner
Economics Laboratory, Incorporated
Magnus Division
Osborn Building St. Paul, Minnesota 55102

B. Apply the conditioner by wiping or brushing the solution on all surfaces to be painted. This compound is safe for use on bond joints. Do not allow conditioner to contact the windshield or windows.

C. Allow the conditioner to work for 2 to 10 minutes depending on the degree of surface cleanliness.

D. Remove the conditioner per manufacturer's instructions.