Aerolineas Argentinas

PAGE	DATE	CODE
CHAPTER 53 TAB		
FUSELAGE		
EFFECTIVE PAGES		
SEE LAST PAGE OF LIST		
FOR NUMBER OF PAGES		
53-CONTENTS		
R 1	AUG 01/07	ARG.1
2	AUG 01/05	ARG
53-00-00		
1	AUG 01/05	01
2	AUG 01/05	01
3	AUG 01/05	01
4	AUG 01/05	01
53-10-0		
1	DEC 01/04	01
2	BLANK	
53-11-0		
1	DEC 01/04	01
2	DEC 01/04	01
3	DEC 01/04	01
4	DEC 01/04	01
5	DEC 01/04	01
6	BLANK	
53-12-0		
1	DEC 01/04	01
2	BLANK	
53-12-11		
401	DEC 01/04	01
402	DEC 01/04	01
53-13-0		
1	DEC 01/04	01
2	DEC 01/04	01
53-14-0		
1	DEC 01/04	04
2	BLANK	
53-14-0		
R 701	AUG 01/07	01.1
R 702	AUG 01/07	01.1
R 703	AUG 01/07	01.1
R 704	AUG 01/07	01.101
53-21-0		
1	DEC 01/04	04
2	DEC 01/04	04
53-21-0		
R 401	AUG 01/07	01.1
R 402	AUG 01/07	01.1
R 403	AUG 01/07	01.1
404	BLANK	
53-21-0		
801	DEC 01/04	01
802	BLANK	
53-21-11		
801	DEC 01/04	01
802	DEC 01/04	01
803	DEC 01/04	01
804	BLANK	
53-22-0		
1	DEC 01/04	01
2	BLANK	
53-31-0		
1	DEC 01/04	03
2	DEC 01/04	03
53-31-21		
401	DEC 01/04	01
402	DEC 01/04	01
403	DEC 01/04	01
404	DEC 01/04	01
53-31-31		
401	DEC 01/04	02
402	DEC 01/04	01
403	DEC 01/04	01
404	DEC 01/04	01
53-41-0		
1	DEC 01/04	01
2	DEC 01/04	01
3	DEC 01/04	01
4	BLANK	
53-42-0		
1	DEC 01/04	01
2	BLANK	
53-42-11		
701	DEC 01/04	01
702	BLANK	
53-51-0		
1	DEC 01/04	08
2	BLANK	
53-51-11		
401	DEC 01/04	01
402	DEC 01/04	01
53-51-21		
401	DEC 01/04	02
402	DEC 01/04	02
53-52-0		
1	DEC 01/04	01
2	BLANK	
53-52-0		
401	DEC 01/04	01
402	DEC 01/04	01
403	DEC 01/04	01
404	BLANK	
53-52-0		
R 601	AUG 01/07	01.1
R 602	AUG 01/07	01.1
53-52-0		
R 701	AUG 01/07	01.1
R 702	AUG 01/07	01.1
R 703	AUG 01/07	01.1
R 704	AUG 01/07	01.1
705	DEC 01/04	01
R 706	AUG 01/07	01.1
R 707	AUG 01/07	01.1
708	AUG 01/05	01
R 709	AUG 01/07	01.1
R 710	AUG 01/07	01.1
53-52-0		
R 801	AUG 01/07	01.1
802	BLANK	
53-52-21		
801	DEC 01/04	01
802	BLANK	
53-52-31		
401	DEC 01/04	01
402	DEC 01/04	01
53-53-0		
401	DEC 01/04	01
402	DEC 01/04	01

CHAPTER 53 - FUSELAGE

TABLE OF CONTENTS

CHAPTER 53 – FUSELAGE

TABLE OF CONTENTS

FUSELAGE - DESCRIPTION AND OPERATION

1. General
   A. The fuselage is a semi-monocoque structure consisting of skin reinforced by circumferential frames and longitudinal stringers. Major fuselage components are illustrated in figure 1.
   B. A typical section through the fuselage consists of an upper oval lobe and a lower oval lobe which intersect approximately at the floor level. At the intersection the fuselage is reinforced by transverse floor beams. Above this floor structure, which extends from the front pressure bulkhead at body station 178 to the rear pressure bulkhead at body station 1016, the upper lobe of the fuselage encloses the cabin and is basically a continuous shell, with cutouts in the skin for doors and windows. Below the floor the continuity of the lower lobe, which encloses the cargo compartments, is interrupted by several major structural features: the nose landing gear wheel well, the cavity for the center wing box and the main landing gear wheel well. Aft of the rear pressure bulkhead the floor is discontinued and this section of the fuselage, which tapers towards its aft end, supports the vertical fin, the horizontal stabilizer, a tail skid and contains a compartment with fireproof walls for the APU.
   C. The various loads on the fuselage are due to combinations of flight, static, landing and pressure loads. Basically the fuselage resembles a hollow tubular beam supported approximately at the center by the wing. This condition applies an overall bending load, to which may be added torsion applied by various flight maneuvers, and which is further complicated by pressurization loads acting on the whole body shell between stations 178 and 1016. Special design features maintain structural continuity between body stations 540 and 727, where the cavities for the center wing box and the main landing gear interrupt the lower half of the basically tubular fuselage. A keel beam, connects the bottom of the fuselage frame at station 540 with the bottom of the frame at station 664 and passes below the center wing box.
   D. The pressure wall over the center wing box area is formed by the upper surface of the wing itself, which also supports longitudinal cabin floor beams. A keel beam across the main landing gear wheel well connects the fuselage frames at stations 664 and 727. Over this area the floor structure is plated and reinforced to form the pressure wall. A wing to fuselage connection exists by means of two six-flanged chords running between body stations 540 and 664, at buttock line 70.85 along the upper edges of the wing. The fuselage skin attaches to the upper flange of the six-flanged extrusions while the other five flanges are connections for the wing boxes to the center wing box. Main landing gear loads, other than those borne by the wing, are transmitted to the fuselage structure by the inboard ends of the landing gear support beams which are connected to fuselage structure at body station 706. All openings in the fuselage shell, such as those for doors and windows, are reinforced locally to maintain proper distribution of loads around the openings. The whole fuselage structure is designed on the fail-safe principle which provides alternate load paths to ensure that the entire fuselage is not jeopardized by the failure of any one member.

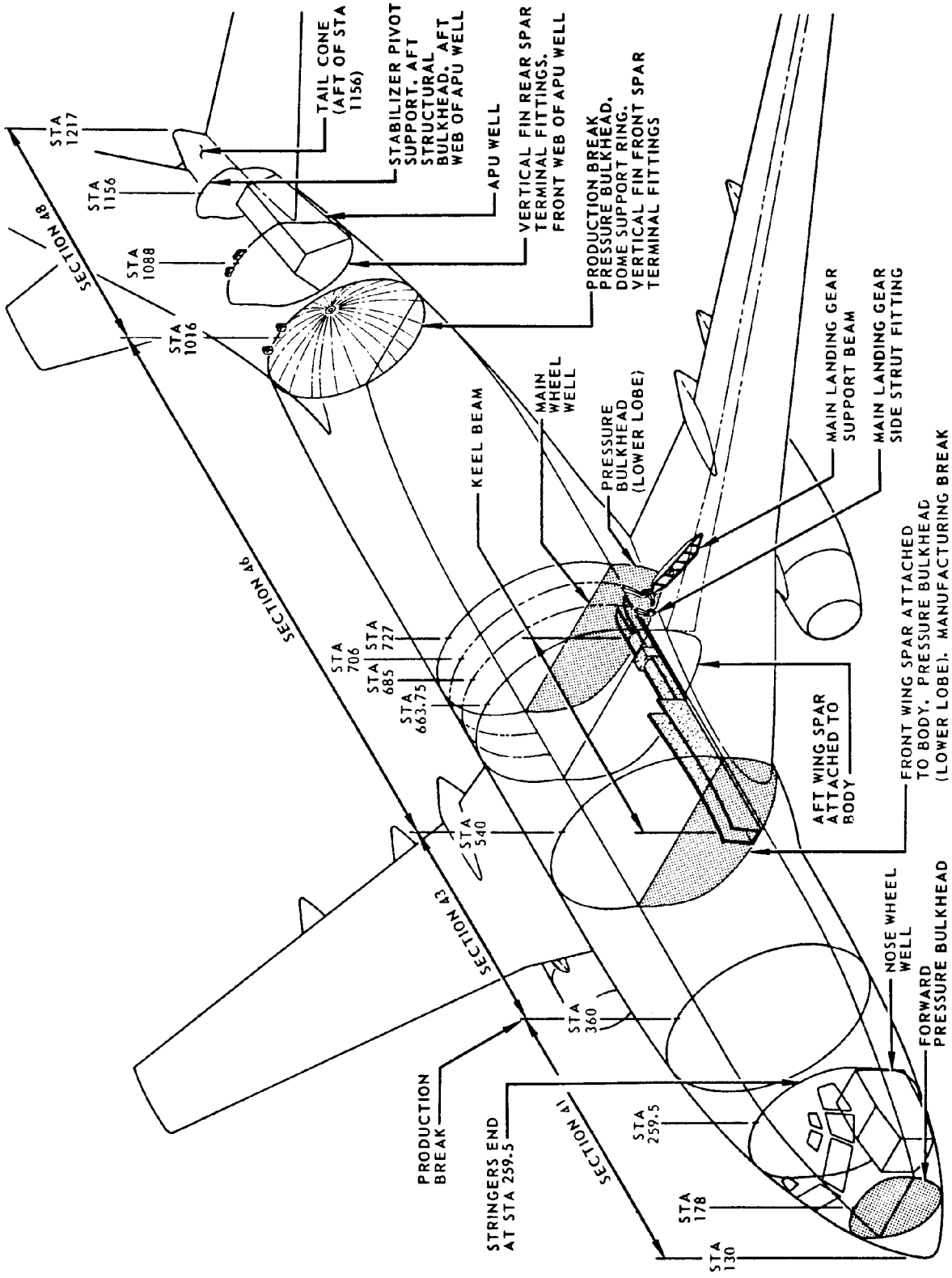
E. The fuselage is manufactured in four body sections, connected by production breaks or manufacturing breaks to form a complete integral structure. The forward three sections form the pressurized shell of the fuselage, and encloses all the passenger, crew, and cargo accommodations. The four sections are described in the following paragraphs.

(1) Section 41 consists of that section of the fuselage between its extreme forward end and body station 360. Above the floor this section of the fuselage includes the control cabin, the forward entry door, and the forward galley door. Below the floor are the nose landing gear wheel well, a lower nose compartment external access door, and the electronic compartment. A bulkhead at body station 178 forms the forward pressure bulkhead of the whole fuselage, forward of which the nose radome is a nonstructural fairing. The frame at body station 360 is the production joint at which this section is attached to the second body section.

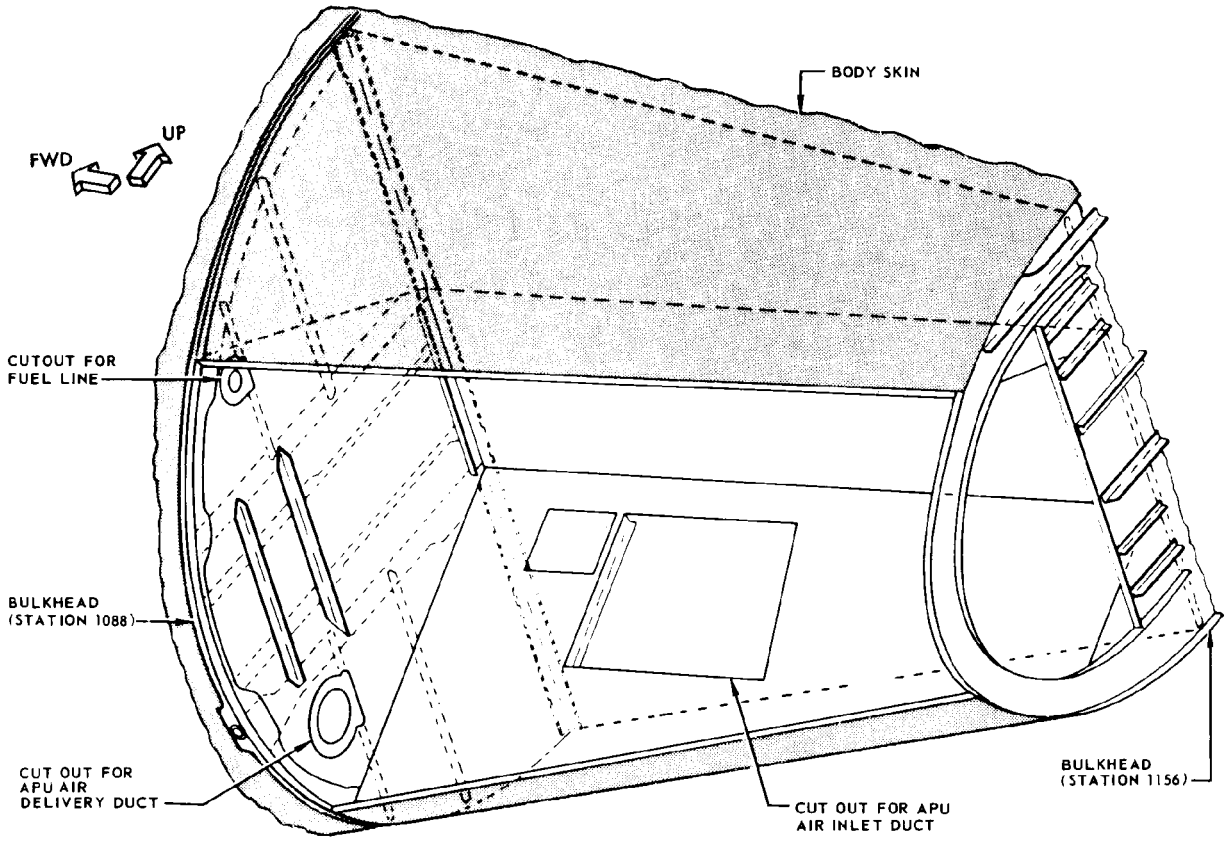
(2) Section 43 is that part of the fuselage between body stations 360 and 540. Above the floor it encloses the forward half of the passenger cabin. Below the floor it encloses the forward cargo compartment whose door is on the lower right side of the fuselage. A cutout in the fuselage on the left side above the floor accommodates the main cargo door.

(3) Section 46 is that part of the fuselage between body station 540 and the rear pressure bulkhead at station 1016. The bulkhead at body station 540 is the joint at which this section is attached to section 43. Above the floor, section 46 encloses the aft half of the passenger cabin, including emergency exit hatches, the aft entry door, and the aft galley door. Below the floor it includes the cavity for the center wing box, the main landing gear wheel well and the aft cargo compartment, whose door is on the lower right side of the fuselage.

(4) Section 48 is not pressurized and extends aft from the rear pressure bulkhead at body station 1016. On top of section 48, at stations 1016 and 1088, the vertical fin attaches to four fittings, two front and two rear. A tail cone extends aft from station 1156. A compartment with fireproof walls in the lower part of the section, below the horizontal stabilizer, allows installation of the APU. (See figure 2.) The right rear torque box is sealed and sound-proofed to act as the APU air inlet duct. The horizontal stabilizer center section truss has its hinge joints by means of fittings attached to the bulkhead at station 1156. The front part of the center section truss protrudes through a cutout in the bulkhead at station 1088 and is moved up and down by a jackscrew unit fastened to the forward side of the station 1088 bulkhead. The left and right outboard sections of the horizontal stabilizer are cantilevered from the center section truss by means of fittings at the front and rear spars. An access and blowout door 3701 is located on the left side. Refer to Chapter 52, Doors, for maintenance practices regarding this door.



Major Fuselage Components
Figure 1



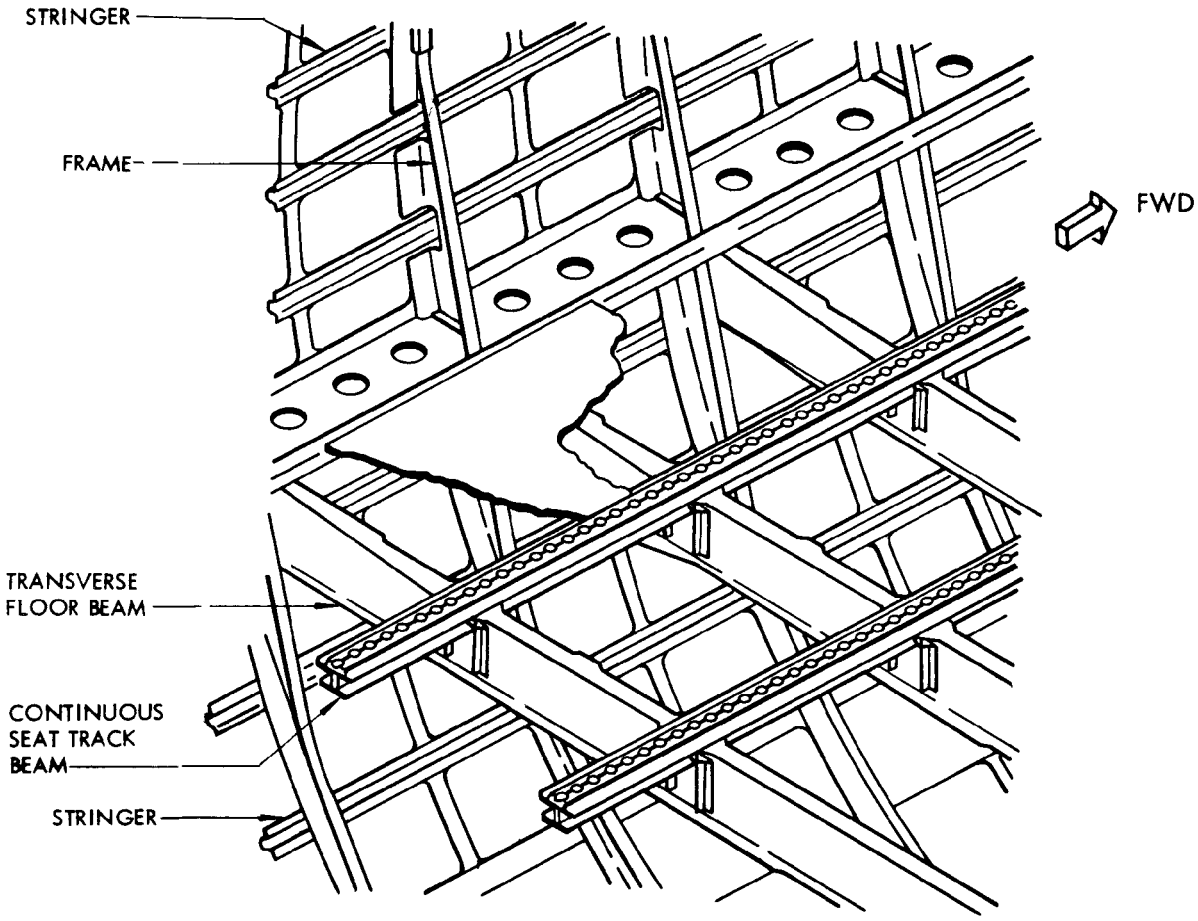
APU Compartment
Figure 2

MAIN FRAME - DESCRIPTION AND OPERATION

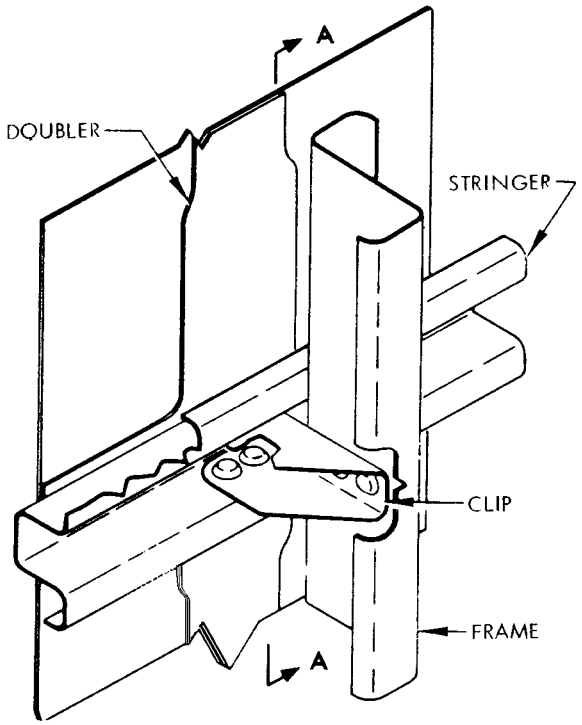
1. General
   A. The main frame includes frames, bulkheads, formers, longerons, stringers, keel and frames around openings. The fuselage structure is monocoque.
   B. The primary structure is that which is essential to the integrity of the airplane. The primary structure is the main frame, and includes floor beams and skin.
   C. On Passenger/Cargo Convertible Airplanes, structural components such as skin, stringers, frames and floor beams, are in some areas of heavier construction than the same components on Standard Passenger Airplanes.
2. Primary Structure
   A. The frames and the bulkheads are primary structural components of the fuselage. Each frame is a zee-section circumferential member carrying pressure loads in hoop tension. The frames are generally spaced at twenty-inch intervals along the fuselage. The bulkheads consist of webs that fit the sectional contours of the airplane. These bulkheads are reinforced by beams attached to the webs.
   B. The floor beams are primary structural components of the fuselage. Each floor beam carries a tension load and is attached at its ends to a frame.
   C. The stringers are primary members. They are hat-section extensions which extend longitudinally along the fuselage. Other longitudinal members considered primary are the crease beams and the keel beams.
   D. Skin and reinforcing structure around openings is primary. Basic structure associated with the wheel wells is primary.

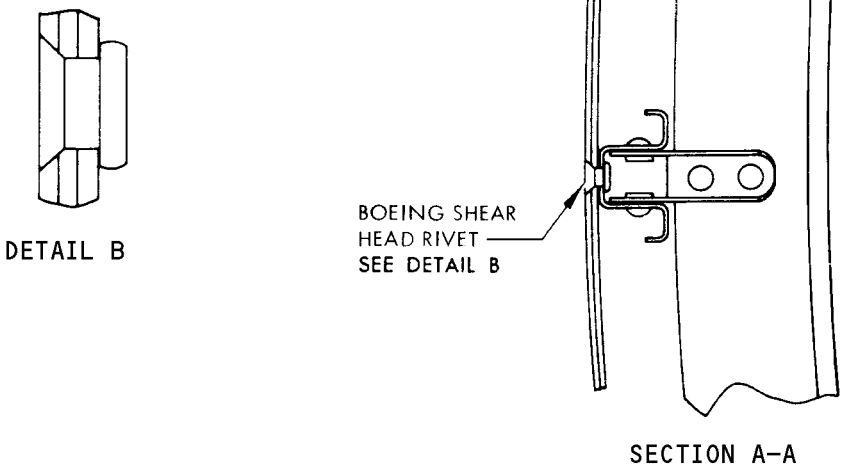
FRAMES AND BULKHEADS - DESCRIPTION AND OPERATION

1. General
   A. A typical fuselage frame is illustrated in figure 1. Each frame is a zee-section circumferential member, with increased web depth at floor level. The frames are generally spaced at twenty-inch intervals along the fuselage.
   B. The bulkhead at body station 178 is the forward end of the pressure cabin, and is composed of four vertical beams and a flat pressure web which the beams divide into small panels.
   C. At body station 227.8 a frame, with a web extending across the lower part of it, is installed. The web forms the forward wall of the nose landing gear wheel sell. At body station 294.5 another frame, with a web extending across the lower part of it, is installed. This web forms the aft wall of the nose landing gear wheel well.
   D. At body station 259.5 a frame with increased web depth marks the aft end of the control cabin. The transverse floor beam at body station 259.5 lying across the top of the nose landing gear wheel well ceiling has its web extended downwards between the fuselage skin and the nose landing gear wheel well sidewalls. On Passenger/Cargo Convertible Airplanes, lightening in the web are sealed with rubber diaphragms.
   E. At body station 360 a bulkhead extends across the fuselage from floor level and down to form the forward wall of the forward cargo compartment.
   F. At body station 540 a bulkhead extends across the fuselage from floor level and down. This bulkhead serves as the aft wall of the forward cargo compartment and the front spar of the center wing box.
   G. At body station 664 a bulkhead extends across the fuselage from floor level and down. This bulkhead serves as the aft spar of the center wing box and the forward wall of the main landing gear wheel well.
   H. At body station 727 a bulkhead extends across the fuselage from floor level and down. This bulkhead serves as the aft wall of the main landing gear wheel well and the forward wall of the aft cargo compartment.
   I. The pressure bulkhead at body station 1016 is a curved web extending aft like a dome in the vertical plane. The web is reinforced with radii stringers all originating at the center of the web. The web forms the aft end of the pressurized cabin. The vertical fin front spar attach fittings are at the top of the fuselage at body station 1016. See figure 2.
   J. The bulkhead at body station 1088 incorporates the vertical fin rear spar attach fittings. A rectangular cutout in the web allows the forward part of the horizontal stabilizer center section truss to protrude through it. The horizontal stabilizer jackscrew mechanism is attached to the forward side of the bulkhead web.



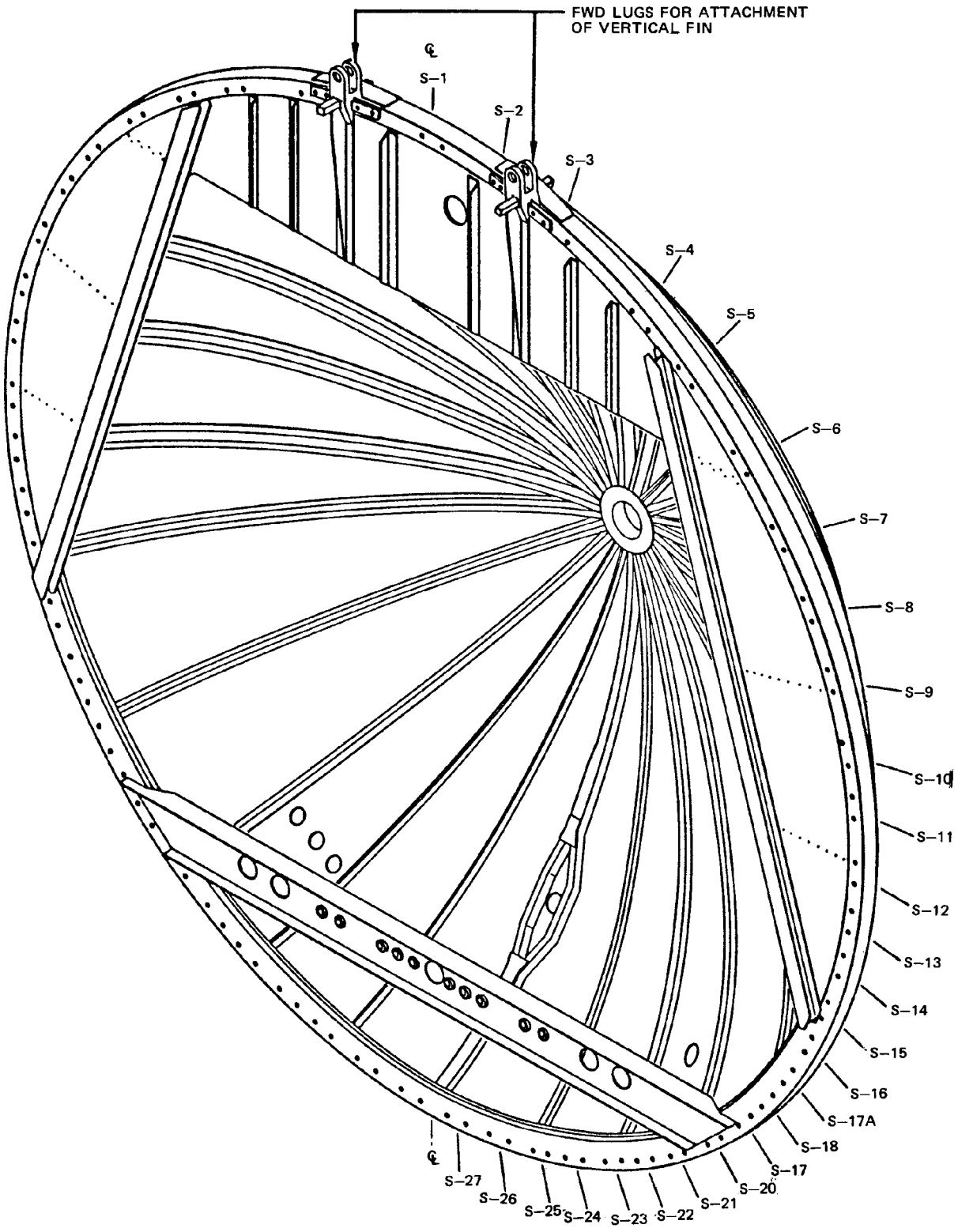
Typical Fuselage Structure
Figure 1 (Sheet 1)





Typical Fuselage Structure
Figure 1 (Sheet 2)

K. The bulkhead at body station 1156 incorporates the horizontal stabilizer center section truss hinge joints. Elevator control mechanisms are attached to the aft side of the bulkhead. The lower part of the bulkhead is cut away to allow for the APU exhaust pipe.



Aft Pressure Bulkhead
Figure 2

STRINGERS AND OTHER LONGITUDINAL MEMBERS - DESCRIPTION AND OPERATION

1. General
   A. The fuselage stringers, which start at body station 259.5, are hat-section members along the entire fuselage. Refer to Chapter 53 of the Structural Repair Manual for stringer identification.
   B. Typical attachments of stringers to skin and frames are shown in 53-11-0. Some stringers just above and below the floor beams are attached to the frames by an additional fitting. The continuity of the stringers is maintained across the production joints in the fuselage structure by terminating the stringers on each section at a fitting which is attached to the production joint frame.
   C. A horizontal beam extends along each side of the fuselage level with the top of the floor. These beams are known as the crease beams because they are attached to the fuselage skin at the "crease" formed by the intersection between the upper and lower lobes of the fuselage cross-section. Along their outboard edges the crease beams are attached to the skin by a continuous chord, or stringer. The inboard chord of each beam consists of a continuous angle attached to the inboard edges of the frames and the upper edges of the floor beams. Between its continuous outboard and inboard chords the crease beam consists of a series of webs which individually extend from frame to frame.
   D. The keel beams comprise the beam between the main landing gear wheel wells and the beam which passes beneath the center wing box. The beam between the wheel wells is a reinforced box structure which carries pressurization loads originating on the sealed floor structure across the wheel well area. Both of the beams carry the bending loads acting along the lower fuselage across the cavities for the center wing box and the wheel well. A blowout panel is in the lower surface of the keel beam forward of the main wheel well.

KEEL BEAM BLOWOUT PANEL - REMOVAL/INSTALLATION

1. General
   A. The keel beam blowout panel is located on the centerline of the airplane forward of the main wheel well. The function of the panel is to relieve excess pressure inside the keel beam due to a ruptured APU duct. The panel will blowout when special attaching rivets are sheared. On early airplanes, the panel is attached with special rivets and will blow out when the rivets are sheared (Refer to paragraph 2.) On later airplanes, the panel is hinged and will blow open when special attaching rivets are sheared. In addition, the panel on later airplanes incorporates a deflector to keep the panel open in flight (Refer to paragraph 3.) On all airplanes decals specify replacement rivets.
2. Keel Beam Blowout Panel R/I (Airplanes having blowout panel without hinge)
   A. Equipment and Materials
      (1) Rivets, MS20470A, 1/8-inch diameter and MS20470B, 1/8-inch diameter
      (2) Sealant, BMS 5-79 class B8, and parting agent (Ref 10-30-11)
      (3) Solvent, methyl ethyl ketone (Ref 20-30-31)
      (4) Wooden or plastic spatula
   B. Remove Keel Beam Blowout Panel
      (1) If door has blown out partially, remove door by drilling out the remaining rivets.
      (2) If door has blown out completely, clean debris as required to prepare opening for new door.
   C. Prepare for Installation
      (1) Clean old sealant from faying surfaces (AMM 51-31-0/201) and then cleaning with solvent.

          CAUTION: OBEY THE INSTRUCTIONS IN THE PROCEDURE TO REMOVE THE SEALANT. IF YOU DO NOT OBEY THE INSTRUCTIONS, DAMAGE TO THE AIRPLANE SURFACE CAN OCCUR.

      (2) Apply parting agent to the outside faces of the fairing faying surfaces. Refer to Chapter 51, Seals and sealing - Maintenance Practices).
      (3) To prevent blowout panel from rocking and assist in panel seating apply BMS 5-79, Class B-2, sealant to the inside faces of the panel faying surfaces just prior to installing panel. Apply as a continuous or broken seal. Refer to Chapter 51, Seals and Sealing - Maintenance Practices.

          CAUTION: APPLY HAND PRESSURE TO SEAT PANEL. DO NOT DISTORT OR PRELOAD PANEL DURING INSTALLATION. REMOVE ALL EXCESS SEALANT FROM INSIDE AND OUTSIDE OF PANEL. USE MINIMUM AMOUNT TO PREVENT A PANEL OUT OF FAIR CONDITION.

   D. Install Keel Beam Blowout Panel
      (1) Check attachment clips for damage.

(2) Install panel with two MS20470A 1/8-inch diameter rivets aft and two MS20470B 1/8-inch diameter rivets forward.

CAUTION: PROPER FUNCTIONING OF THE BLOWOUT PANEL DEPENDS ON USE OF RECOMMENDED RIVETS.

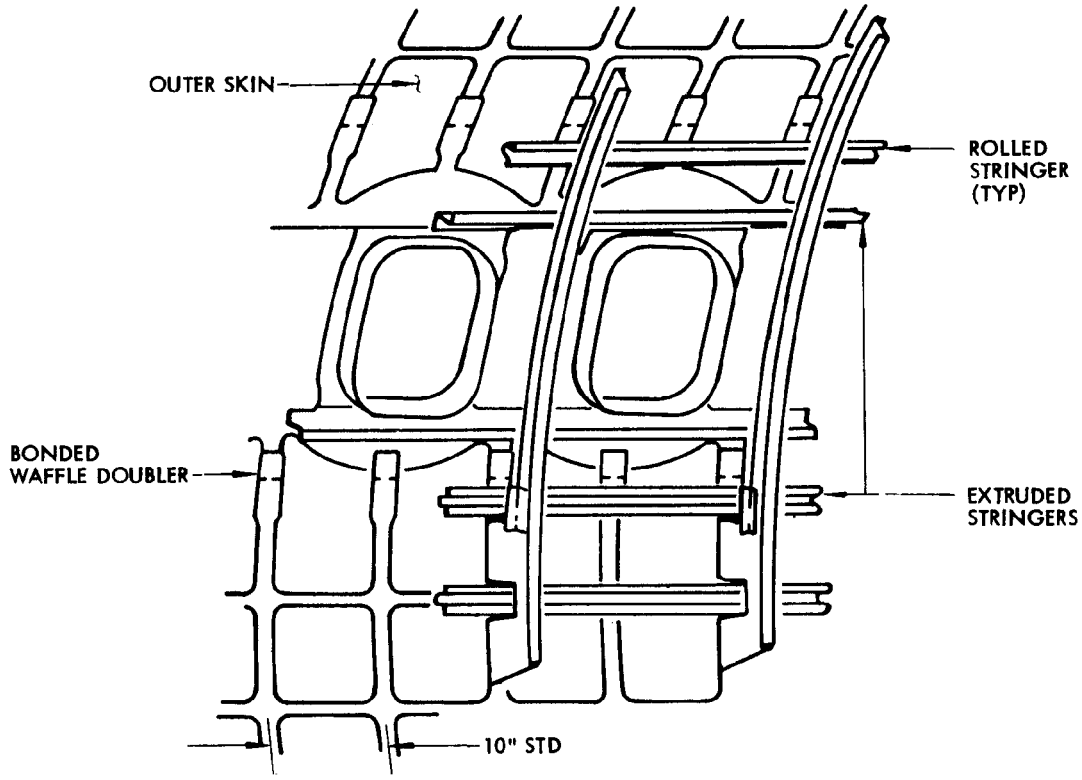
NOTE: It is recommended that early airplanes using four MS20470A 1/8-inch diameter rivets be modified to use rivets as specified in paragraph 2.D.(2) and at the same time revise rivet decal to show recommended rivet configuration.

3. Keel Beam Blowout Panel Removal/Installation (Airplanes having blowout panel with hinge)
   A. Equipment and Materials
      (1) Refer to paragraph 2.A., except only MS20470A 1/8-inch diameter rivets needed.
   B. Remove Keel Beam Blowout Panel
      (1) Clean debris as required.
   C. Prepare for Installation
      (1) Refer to paragraph 2.C.
   D. Install Keel Beam Blowout Panel
      (1) Check attachment clips for damage and door for free motion at hinge line.
      (2) Install panel with two MS20470A 1/8-inch rivets.

CAUTION: PROPER FUNCTIONING OF THE BLOWOUT PANEL DEPENDS ON USE OF RECOMMENDED RI

STRUCTURE AROUND OPENINGS - DESCRIPTION AND OPERATION

1. General
   A. The fuselage structure around all door openings is reinforced to ensure adequate distribution of fuselage loads around the opening.
   B. The passenger window openings are reinforced by doublers forming part of the inner waffled skin. (See figure 1.)
   C. The control cabin window frames are reinforced fabrications of extruded sections.
   D. Around all entry, cargo and access door openings additional inner skins are applied, together with additional stringers and frames as local design conditions have demanded.



Fuselage Window Cutout
Figure 1

WHEEL WELLS - DESCRIPTION AND OPERATION

1. General
   A. The main landing gear wheel wells are on either side of the keel beam and between the fuselage frames at body stations 664 and 727. The upper surface of the wheel wells is formed by a solid web. The web attaches to the lower flanges of the floor beams. The web and the lower lobe of the frame at station 727 are pressure walls.
      (1) Deleted.
      (2) Screens are installed in the main wheel well for protection of equipment against tire burst.
   B. The nose landing gear wheel well is in the lower forward fuselage between body station 227.8 and 294.5. The well is a rigid box structure consisting of a ceiling, two sidewalls, and a forward and aft wall. The ceiling web is attached to the underside of the control cabin floor structure. The webs of the frames at body stations 227.8 and 294.5 form the forward and aft walls. The sidewall webs are attached to frame structure. The entire box is a pressure wall.

WHEEL WELLS - CLEANING/PAINTING

1. General
   A. Pressure application of the cleaners is essential to effective corrosion inhibitor and contamination removal, particularly in inaccessible areas of the wheel well. However, the use of pressure cleaning must be strictly controlled to preclude possible damage to wheel well components and finishes. The pressure equipment in par. 2. or equivalent units may be used provided the pressure on the airplane surfaces does not exceed 50 psi. For equipment listed in par. 2., effective cleaning is accomplished at 12 to 20 inches distance between the pressure unit nozzle and airplane surfaces. The equipment shall not be used at distances less than 12 inches between nozzle and airplane surfaces.
   B. This section describes the application and removal of corrosion inhibitor (removable with an alkaline cleaner) effective against corrosion and contamination such as dirt, engine exhaust residue, grease or oil. The corrosion inhibitor may be used to maintain clean wheel wells.
2. Equipment and Materials
   A. Cleaning Solutions (Fig. 701)
   B. Pressure Application Equipment
      (1) Pro-1 Cleaning Compound Proportioning Unit - B & B Chemical Co., Inc., Miami, Florida, or equivalent
      (2) Hydroblitz Unit - Oakite Products Co., New York, New York, or equivalent
   C. Sponges, Cellulose - L-S-626
   D. Heavy Duty Cleaners
      (1) Airshow W
      (2) Navee 427
   E. Soft-Bristle Fiber Brushes
   F. Soft wipers, cheesecloth, surgical gauze, new white rags, or equivalent. All wiping materials shall contain less than 0.75% by weight of oil and shall be free of silicone.
   G. Toluene
   H. Corrosion-Inhibiting Compound - BMS 3-23 or LPS 3 (AMM 20-30-21)
   I. Masking Tape
   J. Respiratory Protection Equipment
3. Wheel Well Corrosion Inhibitor Removal
   A. Remove tire burst protection screens and clean separately.

B. Spray apply the cleaning solution on all of the surfaces of the wheel well (Fig. 701).

NOTE: Keep cleaning solution from contacting bearing surfaces.

C. Allow the cleaning solution to soak 10 to 15 minutes. Keep the surfaces wet with the solution during soak.
D. After soaking, pressure spray additional cleaning solution on the surfaces to flush off the dissolved contamination. Clean the ceiling of the wheel well first. Clean the wheel well in sections: half the ceiling surfaces, etc., flushing away from cleaned areas.
E. Pressure spray rinse thoroughly with clean water. Complete removal of the cleaning materials is essential for reapplication of the corrosion inhibitor.
F. Dry by sponging and blowing out all excess water around wheel well components with clean, dry air.
G. If additional cleaning is necessary, proceed per par. 4.

Remover	Dilution - 1 Part Remover to the Following Parts Water
GMC 528B	3
Kelite 28	4
CeeBee 280	4
Oakite 204	4
Pennsalt 2271R	3
Turco Jet Clean C	5
DuBois C-1102	4
Calla 301	4
Tec No. 1	4
Pacific Chemical B-B2	3
Aerowash	5
Metaclean AC	4
Airshow W	5
Navee 427	5

4. Wheel Well Cleaning
   A. Heavy Duty Cleaning

      NOTE: Light duty cleaning should be accomplished per AMM Chapter 12, Cleaning and Washing. Do not use rinse water or cleaning solutions at temperatures greater than 120°F. Keep cleaning solution from contacting bearing surfaces.

      (1) Scrub small areas at a time with heavy duty cleaners, then remove by rinsing the loosened contamination.
          (a) Clean the ceiling of the wheel well first then the sides from the top down to prevent soiling of cleaned areas.
          (b) Apply the cleaning solution to areas not being scrubbed and allow to soak to loosen the contamination before scrubbing.
          (c) After all areas have been cleaned, rinse thoroughly to remove all cleaning solution. Complete rinsing can be facilitated by pressure cleaning with a dilute solution (1 part cleaner to 15-20 parts water) of the cleaners in Fig. 701, followed by clean water rinsing.
      (2) Wheel well surfaces must be dry before protective coating application. Remove all excess rinse water by sponging, and blow out all water around wheel well components using clean, dry air.
      (3) Lubricate all control cables per AMM Chapter 12, Cable Lubrication. When spot cleaning is all that is required prior to coating, inspect control cables for lubricant. If lubricant has been removed by cleaning, the control cables must be relubricated.

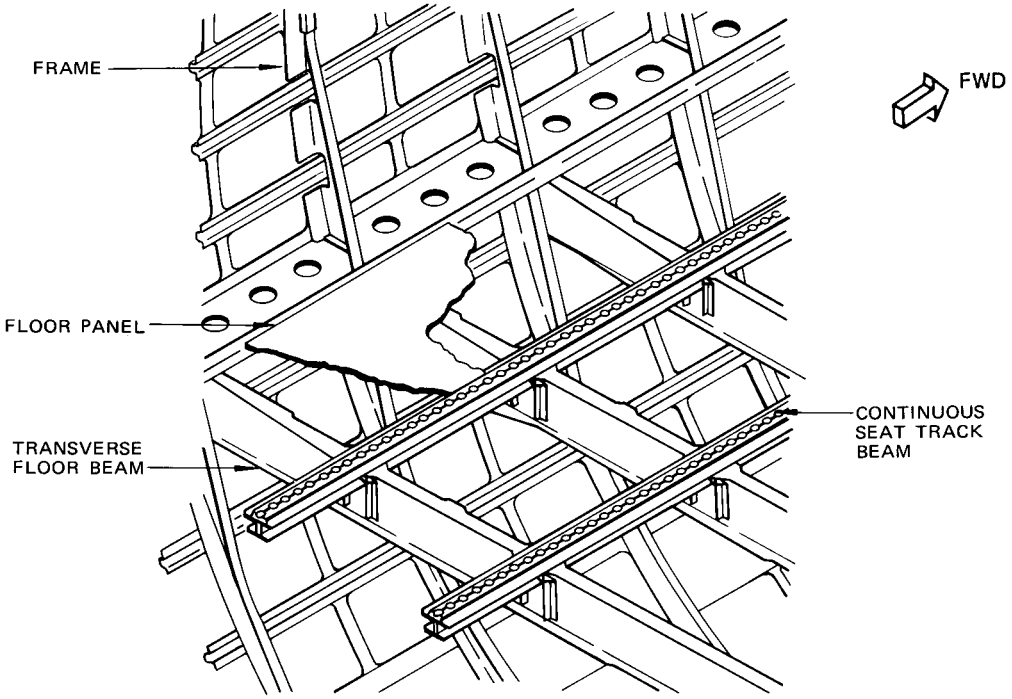
5. Wheel Well Corrosion Inhibitor Application
   A. Mask all plastic and glass gauge covers, light lenses, and all exposed bearing surfaces to prevent damage from solvents during application and curing. Mask bearing surfaces to preclude any buildup that might interfere with operation of the component.
   B. Thin the corrosion inhibitor to obtain the proper spray, viscosity and to aid in the application of a thin continuous film.

      CAUTION: THE CORROSION INHIBITOR IS FLAMMABLE. PRIOR TO THE APPLICATION TO THE WHEEL WELL AREAS AND DURING CURE ALL POWER TO THE AIRPLANE MUST BE OFF AND THE AIRPLANE MUST BE PROPERLY GROUNDED PER AMM CHAPTER 20, STATIC GROUNDING.

C. Replace the tire-burst protection screens. The screens shall be coated with the removable coating.

PASSENGER CABIN FLOORS - DESCRIPTION AND OPERATION

1. General
   A. The cabin floor consists of panels which lie between the longitudinal seat tracks and are supported by these tracks and by the transverse floor beams beneath them. (See figure 1.) The panels are installed with a peripheral tape to provide a liquid barrier between the passenger cabin and lower compartments. On Passenger/Cargo Convertible Airplanes, the floor panels are of heavier construction than those on Standard Passenger Airplanes. Floor panels on Standard Passenger Airplanes have lifting straps.
   B. The floor beams in any part of the fuselage between body stations 178 and 1016, excluding the portion over the center wing box, consist of transverse horizontal beams attached at their ends to the fuselage frames. Each beam carries a tension load when the fuselage is pressurized, in addition to its normal function of supporting the four longitudinal cabin seat tracks and the floor panels. Over the center wing box the cabin seat tracks and floor panels are supported by four longitudinal floor beams attached directly to the upper skin of the center wing box. Short transverse floor beams connect the most outboard of these beams to the fuselage frames in this area.



Typical Floor Structure
Figure 1

PASSENGER CABIN FLOORS - REMOVAL/INSTALLATION

1. Passenger Cabin Floor Panel Removal/Installation
   A. General
      (1) Special procedures to seal and apply finishes are necessary for the floor panels that are below galleys and lavatories. Special procedures to seal and apply finishes are necessary for the wet areas of the entry and exit doorways. These special procedures will prevent water damage and corrosion.
      (2) The wet areas extend a minimum of 20 inches around the galleys and the lavatories. The wet areas also extend the width of the body a minimum of 20 inches forward and aft of the entry and exit doorways.
   B. Equipment and Materials
      (1) Sealant removal tool - Hardwood, or Plastic
      (2) Sealant - BMS 5-95 (AMM 20-30-11)
      (3) Sealant - Flexane 80 (AMM 20-30-11)
      (4) Tape - BMS 8-283A Type 1 (AMM 20-30-51)
      (5) Tape mystic 7300 (AMM 20-30-51)
      (6) Grease - BMS 3-24 (AMM 20-30-21)
      (7) Corrosion-Inhibiting Compound - BMS 3-26 (AMM 20-30-21)
   C. Remove Passenger Cabin Floor Panel
      (1) Break seals.
         (a) If water barrier is installed, gain access to panel fasteners per Water Barrier - AR.
         (b) If nylon cord is imbedded in sealant, pull nylon cord to break seal.
         (c) Seals without nylon cord may be broken with a removal tool.
      (2) Remove fasteners.
      (3) Remove panel.
      (4) If you removed the panels over the center fuel tank, do these steps:
         (a) Make sure you do not change the routing and clamping of the wires over the center fuel tank.

            NOTE: CDCCL - Refer to the task: Airworthiness Limitation Precautions (AMM 28-00-00/201), for important information on Critical Design Configuration Control Limitations (CDCCLs).

(b) Before you install the panels over the center tank, do this task: External Wires Over the Center Tank Inspection (AMM 28-11-00/601).

NOTE: CDCCL - Refer to the task: Airworthiness Limitation Precautions (AMM 28-00-00/201), for important information on Critical Design Configuration Control Limitations (CDCCLs).

D. Install Passenger Cabin Floor Panel

(1) Rectify all damage to finish on support structure.
(2) Under a galley, toilet, entryway or service doorway area, spray upper and lower surfaces of support structure attachment flanges and for about 2 inches down vertical members with Anticorrosion Compound.
(3) Allow solvent to flash off, then spray same area with Anticorrosion Compound.
(4) Spray all attachment clip nuts with Anticorrosion Compound.
(5) Allow solvent to flash off, then spray nuts with Anticorrosion Compound and install them on structure attachment flanges while solvent is still wet.
(6) Install rubber seals on bottom of floor panel, so that they will be above support structure and of correct thickness throughout.
(7) Before installing Boeing floor panels under a galley, toilet, entryway or service doorway area, countersink all bolthead and fastener locations.
(8) Between body stations 178 and 277, apply faying surface seal BMS 5-95 between floor webs, straps, and floor structure components. Do not apply seal on removable panels installed with nutplates.
(9) Replace damaged tapes.
(10) Treat holes in floor beams with brush alodine and primer (AMM 51-21-41/701).
(11) Apply a layer of grease to the floor beam holes before you install the floor panel fasteners.
(12) Coat floor panel fasteners with grease and secure panel by installing fasteners. Install and start all screws in panel before tightening.
(13) Torque floor panel screws as follows:
(a) Panels using two-piece insert, 20 to 25 pound-inches.

NOTE: Recheck torque prior to installing floor covering.

(b) Panels using one-piece insert, 30 to 35 pound-inches.

NOTE: Allow panel dishing at fastener of -0.005 to +0.030 inch. No recheck of torque required.

(14) Install seals.

(a) Do these steps to apply sealant to all edges in the wet areas, along the seat tracks, and between the panels:

1) Apply one layer of masking tape to the edge of the joints that are adjacent to and along the full length of the seam that you will fill.
2) Refer to the instructions on the container to prepare the Flexane-80 sealant.

NOTE: The pot life of the Flexane-80 sealant kit is approximately 15 minutes. You must apply the compound before the pot life ends.

3) Fill the lower half of the seam with the Flexane-80 sealant.
4) Fill the upper position of the seam with the Flexane-80 sealant.
5) Remove all unwanted sealant from the seam.
6) Let the sealant dry. Make sure the sealant is smooth and constant. The recommended dry times are as follows:

Temperature (°F)	Time Range (Hours)
80° or over	4 to 6
70° - 80°	6 to 8
60° - 70°	8 to 10

7) Remove the masking tape after the sealant has dried.
8) Replace all the equipment that was removed to get access to the panel.

PASSENGER CABIN FLOORS - APPROVED REPAIRS

1. Repair Floor Panel Tapes
   A. Equipment and Materials
      (1) Tape - BMS 8-283A Type 1 (Ref 20-30-51)
      (2) Tape Mystic #7300 (Ref 20-30-51)
   B. Floor panels in the passenger cabin (and the control cabin) are installed with a peripheral tape to provide a liquid barrier between the cabin and the lower compartments.
   C. If inspection of tape shows deterioration or damage due to floor panel removal, install new tape per Chapter 51, Seals and Sealing.
   D. Replace damaged tapes

WATER BARRIER - APPROVED REPAIRS

1. General
   A. The water barrier consists of mylar sheets (transparent), vinyl sheets (nontransparent) or 18 inch wide strips of vinyl tape bonded to floor panels. This section describes how to cut the water barrier in order to remove a floor panel and how to repair the water barrier after the floor panel is installed.
   B. Self-adhesive vinyl tape (Ref 20-30-51) applied at right angles to the seat tracks with a 1-inch overlap is the preferred replacement of the water barrier.
   C. Cutting the water barrier is accomplished by locating the edges of the floor panel and cutting through the water barrier around the edges of the floor panel to allow removal of the floor panel. Floor panel fasteners covered by vinyl may be exposed by peeling back the vinyl. Floor panel fasteners covered by mylar may be exposed by cutting away circular patches for each fastener. Remove floor panels per Passenger Cabin Floor - Removal/Installation.
2. Vinyl Water Barrier Approved Repairs (Tape)
   A. Equipment and Materials
      (1) Tape - Permacel 306, 10 mil thick by 18 inches wide (Ref 20-30-51)
      (2) Sealant - Dow Corning 30-079 (Ref 20-30-11)
   B. Repair Vinyl Water Barrier
      (1) Apply tape at right angles to seat tracks with a one-inch overlap minimum.
      (2) Edge - seal tape overlap with sealant.

          NOTE: Three-inch wide tape centered over edge of overlap may be used in lieu of edge-seal sealant.

3. Vinyl Water Barrier Approved Repairs (Sheet)
   A. Equipment and Materials
      (1) Solvents
          (a) Solvent - Final Cleaning of Metal Prior to Non-structural Bonding (Series 88) (Ref AMM/SOPM 20-30-88)
          (b) Aliphatic naphtha (Ref 20-30-31)
      (2) Thinner - methyl ethyl ketone (Ref 20-30-31)
      (3) Adhesive
          (a) BMS 5-30B: EC1458, Anchor weld 0308 (Ref 20-30-11)
      (4) Vinyl sheet
   B. Prepare for Repair
      (1) Install floor panel (Ref Passenger Cabin Floor - Removal/Installation).
      (2) Cut out strips of vinyl to splice edges of floor panel. Splice must overlap 3/4 inch on both sides of edges of floor panel.

(3) Mix adhesives
(a) BMS 5-30: Mix adhesive thoroughly before using. Adhesive which has thickened excessively or gelled shall not be used. When thinning is necessary, use MEK. Unless stored in airtight containers and kept under continuous agitation, thinned adhesive shall be used within 4 hours.
(4) Clean faying surfaces.
(a) Clean faying surfaces between vinyl water barrier and floor panel with solvent, Series 88 (Ref AMM/SOPM 20-30-88).
(b) Clean faying surfaces between vinyl splice and vinyl water barrier with aliphatic naphtha.

C. Repair Vinyl Water Barrier
(1) Repair of Vinyl Sheet Water Barrier
(a) Brush apply adhesive to each faying surface between vinyl water barrier and floor panel.
(b) Allow adhesive to dry until it is tacky but no longer transfers to the knuckle when touched lightly. Optimum drying time will depend on temperature and humidity.
(c) Progressively, from center of floor panel, bond vinyl water barrier to floor panel.
(d) Wipe away any squeezed-out adhesive with a clean rag dampened with solvent, Series 88 (Ref AMM/SOPM 20-30-88).
(2) Repair of Vinyl Splice
(a) Clean again faying surfaces between vinyl splice and vinyl water barrier with aliphatic naphtha.
(b) Apply a thin, uniform brush coat of adhesive to both faying surfaces between vinyl splice and vinyl water barrier.
(c) Allow adhesive to dry tack-free and reactivate by lightly wiping one surface with a clean cheesecloth saturated with solvent, Series 88 (Ref AMM/SOPM 20-30-88).
(d) Join faying surfaces, applying sufficient pressure to ensure intimate contact. Care must be taken to avoid entrapping air pockets.

D. Restore Airplane to Normal
(1) Excess adhesive may be removed with solvent, Series 88 (Ref AMM/SOPM 20-30-88).

4. Mylar Water Barrier Approved Repairs
A. Equipment and Materials
(1) Solvent - aliphatic naphtha (Ref 20-30-31)
(2) Adhesive - Pro-Seal 501 with Pro-Seal 501-A Accelerator (Ref 20-30-11).
(3) Mylar Sheet - Type A, 0.010-inch thick

B. Prepare for Repair
(1) Install floor panel (Ref Passenger Cabin Floor - Removal/Installation).

(2) Cut out strips of mylar to splice edges of floor panel. Splice must overlap fastener line and adjoining floor panel 3/4 inch.
(3) Clean faying surfaces with aliphatic naphtha.
(4) Combine 100 parts by weight of Pro-Seal 501 with 30 parts by weight of Pro-Seal 501-A accelerator. Mix thoroughly by hand for approximately 5 minutes using a spatula or similar tool. If adhesive is mixed in original can, it is recommended that rim be cut out of can to make mixing easier.

NOTE: Adhesive should be applied and spread as soon as possible after mixing. Heat of reaction of mixed material in a container will shorten work life. Work life is 20 minutes at 77°F. Amount of adhesive to be used should be calculated on basis of 50 (± 5) grams per square foot of surface to be covered. Too little adhesive will make removal of air bubbles difficult.

C. Repair Mylar Water Barrier
(1) Apply adhesive to faying surface of splice.
(2) Bond splice to water barrier.
(3) Remove squeezed-out adhesive by wiping with naphtha dampened cloth. If any edge shows signs of delaminating, weight or tape it down until adhesive has cured.

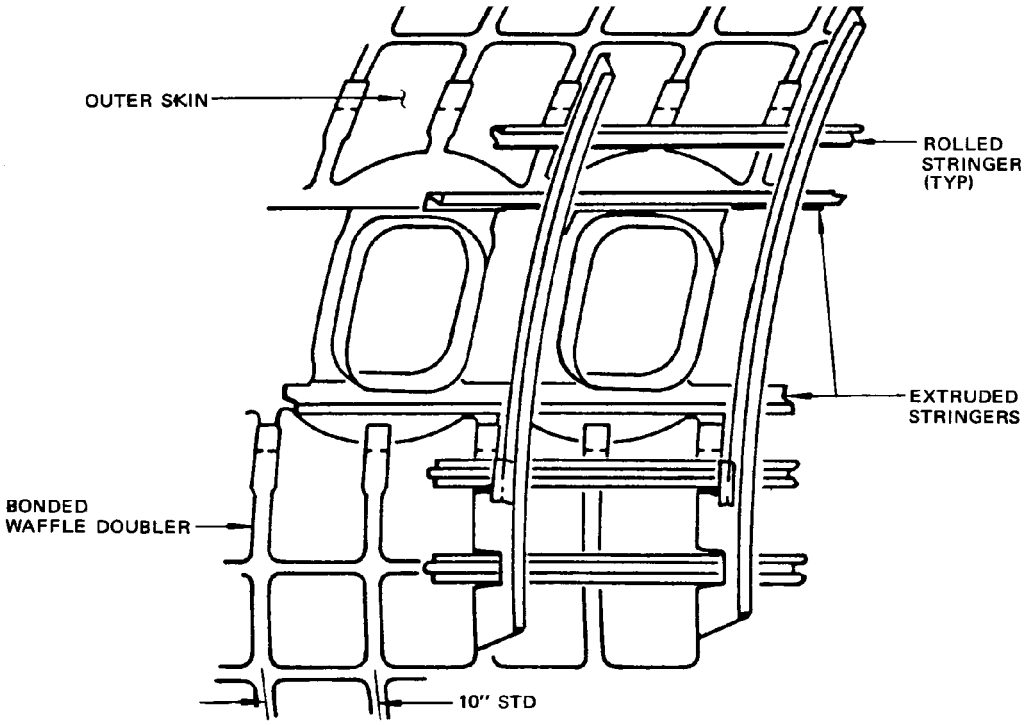
D. Restore Airplane to Normal
(1) Allow adhesive to cure undisturbed for 2 hours minimum. Complete cure takes 12 hours or more.

FIXED PARTITIONS - DESCRIPTION AND OPERATION

1. General
   A. The control cabin partition divides the control cabin from the forward end of the passenger cabin. A rearward-opening door is in the center of the partition. The right side of the partition is of sheet metal, the left side is of fiberglass.
   B. The lavatory compartments are enclosed by fixed partitions, and each is equipped with a door opening inboard. The partitions are of fiberglass with a phenolic core. The door has fiberglass skin with paper honeycomb.

SKIN - DESCRIPTION AND OPERATION

1. General
   A. The fuselage skin varies in thickness according to the loads it must bear in any given area, and it is designed with fail-safe features to ensure alternate load paths in the event of a local failure. Refer to Chapter 53 of the Structural Repair Manual for skin identification.
   B. The thickest skin panels are those over the area where the lower fuselage is cut away to accommodate the wing and the main landing gear wheel well. In this area the skin panels are machined from thick sheets.
   C. Many of the skin panels are attached to each other by bonded longitudinal lap joints, which provide pressure seals in addition to being structural joints. Circumferential skin splices exist aft of the control cabin, at the front spar bulkhead, at the bulkhead aft of the wheel well and at the aft pressure bulkhead.
   D. The skin is reinforced by means of doublers bonded to the inside of the outer skin. (See figure 1.) These doublers function as tear stoppers by forming a complete, integral fail-safe, circumferential and longitudinal "waffle" grid.
   E. Left and right rows of vortex generators are installed on the fuselage below the horizontal stabilizer. The function of the vortex generators is to improve airflow.



Typical Skin Reinforcements
Figure 1

VORTEX GENERATORS - REMOVAL/INSTALLATION

1. Equipment and Materials
   A. Hardwood stick

   B. Solvent - Final Cleaning of Metal Prior to Non-structural Bonding (Series 88) (Ref AMM/SOPM 20-30-88).
   C. Adhesive - BMS 5-19, Class B-1/2, Type 44 (Ref 20-30-31)
   D. Vortex Generator Installation Tool - MIT69-58847-43 (Left Side) MIT69-58847-44 (Right Side)
2. Remove Vortex Generator
   A. Drill out rivets, or remove bolts.
   B. Pry off vortex generator with hardwood stick.
3. Prepare for Installation
   A. Remove residual bonding agent (AMM 51-31-0/201).

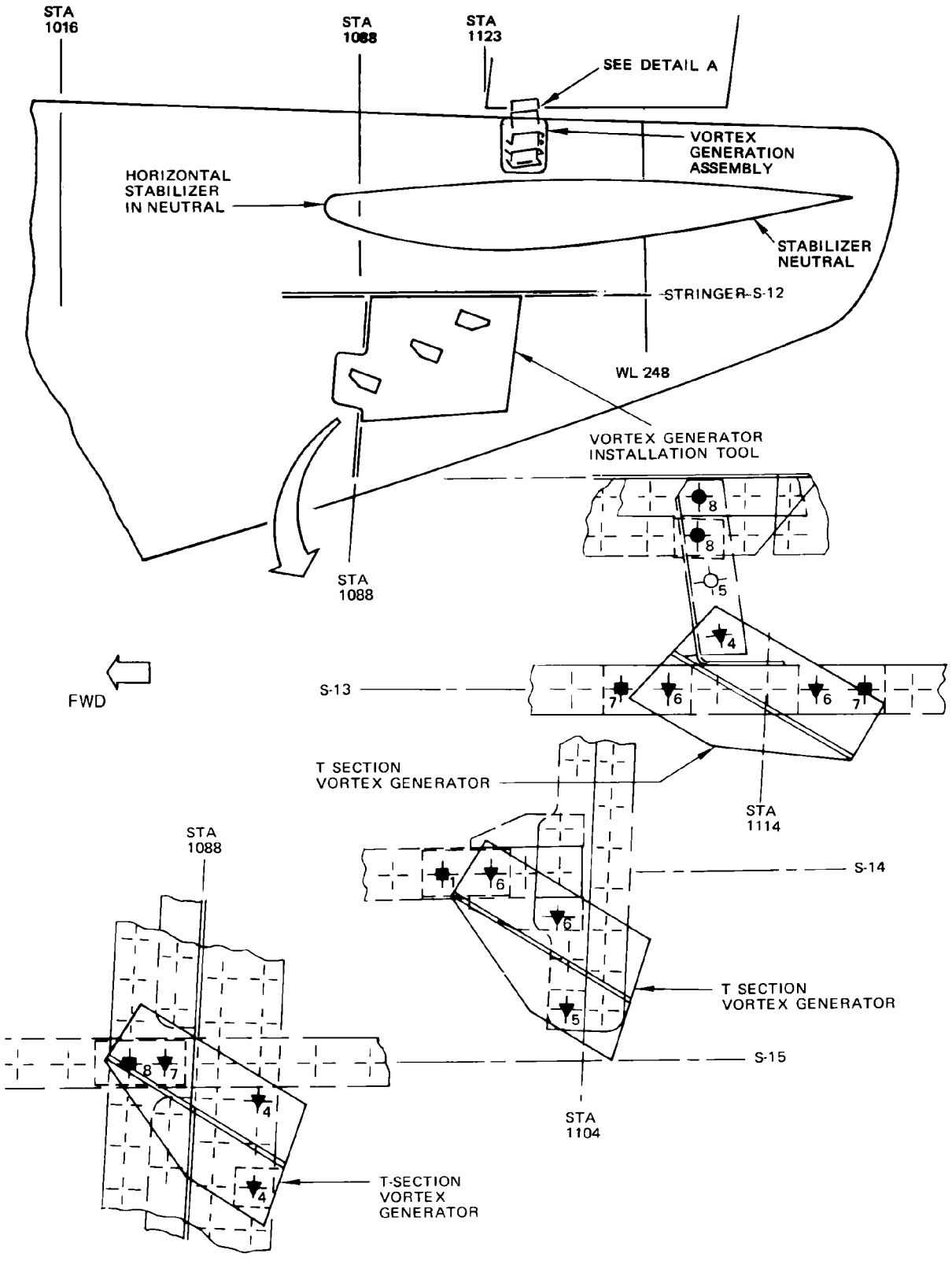
      CAUTION: OBEY THE INSTRUCTIONS IN THE PROCEDURE TO REMOVE THE BONDING. IF YOU DO NOT OBEY THE INSTRUCTIONS, DAMAGE TO THE AIRPLANE SURFACE CAN OCCUR.

   B. Clean faying surfaces with solvent.
4. Install Vortex Generator
   A. If installing lower vortex generators, locate generators.
      (1) Orient vortex generator installation tool along skin trim lines at stringer S-12 and station 1088 per Fig. 401.
      (2) Check edge distance of holes where fasteners were removed and orient tool to provide best edge distance for new fasteners. Secure tool with tape.
      (3) Measure offset between upper and lower edges of tool and edge of skin at station 1088. Ensure difference between these measurements is less than 0.68 inch.
      (4) Locate vortex generator in tool cutouts.
   B. If installing upper vortex generator, orient vortex generator per Fig. 402.
   C. Bond vortex generator or vortex generator assembly to fuselage surface with 100% coverage. Form 0.05 by 0.05 inch fillet around edge with excess adhesive.
      (1) Thoroughly blend base compound with activator according to manufacturer's instructions. Do not thin adhesive.
      (2) Apply thin, uniform coat of blended adhesive to each faying surface.
      (3) Assemble immediately, applying sufficient pressure to ensure complete contact of faying surfaces. A continuous bead of extruded adhesive usually indicates proper contact.
   D. Remove installation tool.

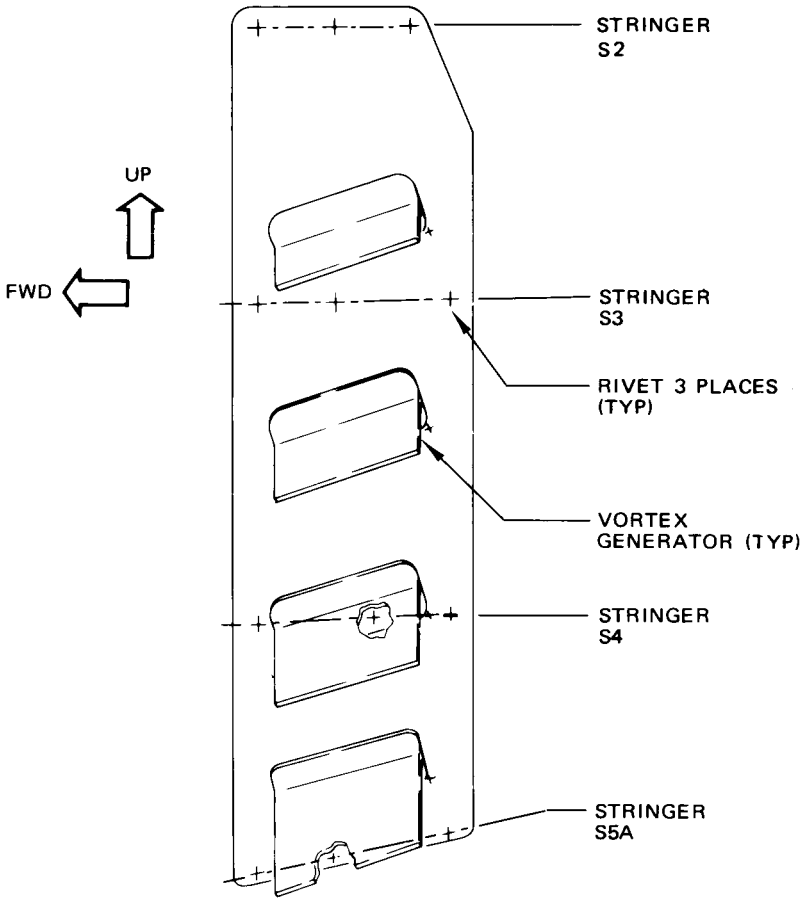
E. Install rivets, or bolts.
   (1) Rivet vortex generator assembly to stringers S-2, S-3, S-4, and S-5A.

   NOTE: Installation of rivets will hold vortex generator in place and it is not necessary to wait for full cure of sealant before dispatching airplane. Airplane may be dispatched after sealant has set until it is firm. Although not fully cured, the sealant will not be blown out by the airstream.

F. Cure at 75 to 80°F.
   (1) The time to obtain handling strength is 16 hours. Full cure is not obtained for a week or more.
      (a) Curing may be accelerated by applying heat not to exceed a bond line temperature of 120°F. As a rough rule of thumb the cure time will be reduced 50% for each 20°F rise in temperature. Conversely, temperatures below 75°F will greatly increase the required cure time.



Fuselage Vortex Generator Installation
Figure 401 (Sheet 1)



DETAIL A

Fuselage Vortex Generator Installation
Figure 401 (Sheet 2)

448268

STABILIZER TO BODY FRONT SPAR SLIDING SEAL - REMOVAL/INSTALLATION

1. General

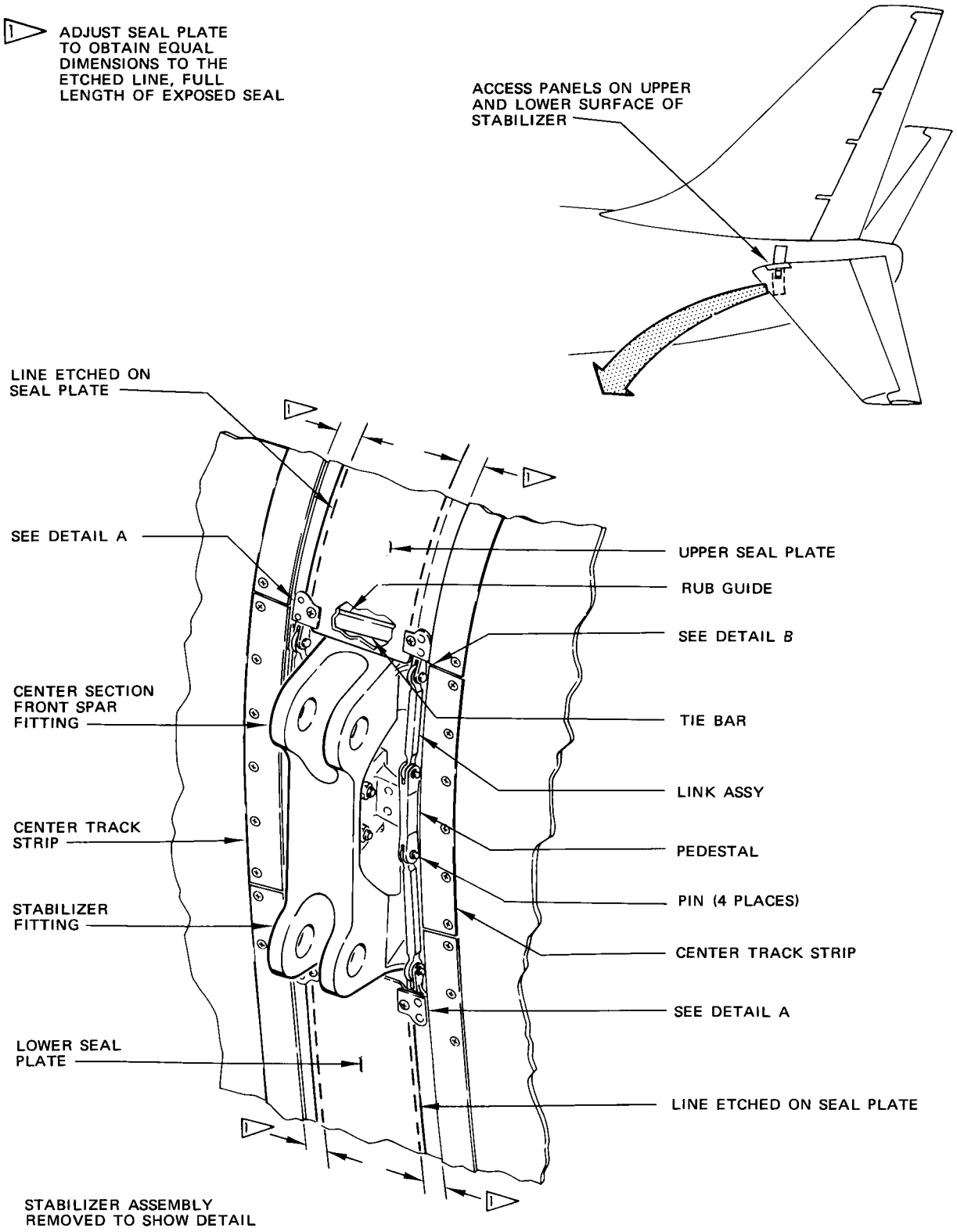
   A. The stabilizer to body front spar sliding seal covers the opening where the forward stabilizer attach fitting travels. Approved repair of the seal may be accomplished by removing the seal plates and applying a spray coating of abrasion resistant teflon finish per 51-21-81, Abrasion Resistant Teflon Finish - Application.

2. Prepare to Remove Sliding Seals
   A. Remove center track strips (Sheet 1, Fig. 401).
   B. Remove upper and lower gap panels on stabilizer. Panels 9119 and 9120 on left side and 9219 and 9220 on right side (Ref 12-31-81, Removal/Installation).

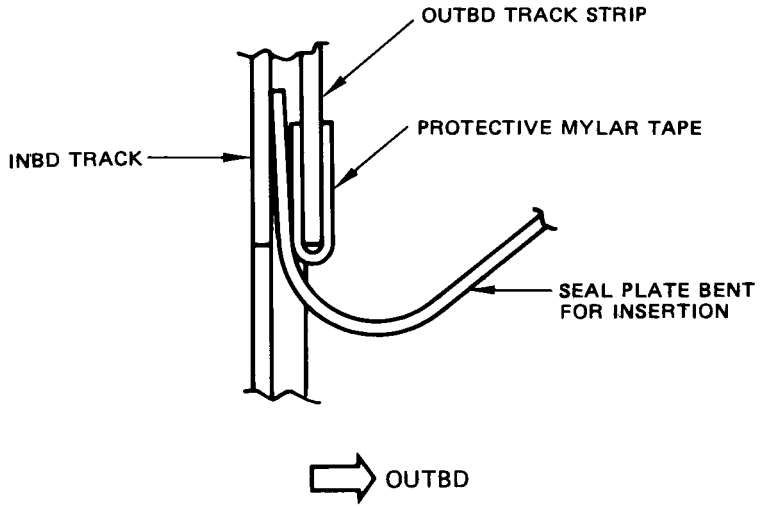
      NOTE: For better access, leading edge bullnose fairing (panels 9117 and 9217) may also be removed (Ref 12-31-81, Removal/Installation).

3. Remove Sliding Seal Plates
   A. To remove lower seal plate, move stabilizer to full up position. To remove upper seal plate, move stabilizer to full down position.
   B. Remove pins securing link assemblies to pedestal (Fig. 401).
   C. Pull out sliding seal plate.
   D. Remove all hardware from seal plate. Retain link assembly and corner plates for reinstallation.

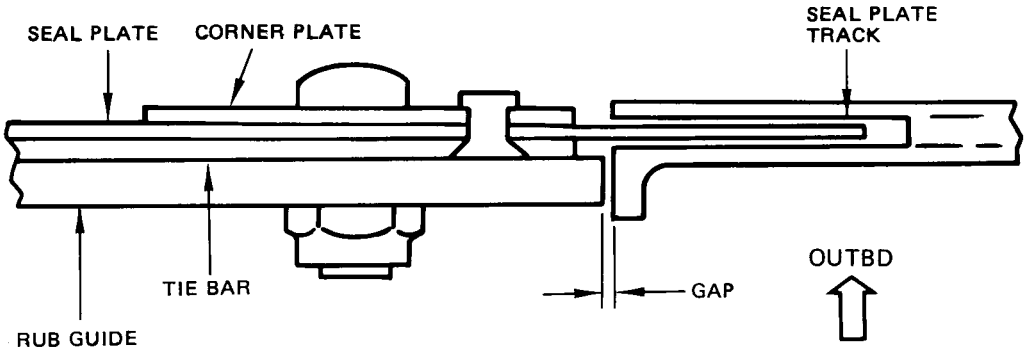
4. Install Replacement Sliding Seals
   A. Center the link assembly retained during removal onto replacement seal plate. Assure that tie bar lugs are clear of seal plate edges and edge margins will be satisfactory. Mark location of tie bar on seal plate with pencil for future index.
   B. Clean tracks and immediate area to remove debris.
   C. Temporarily pin the link assembly to pedestal. Do not install the cotter pins (Fig. 401).
   D. Wrap protective Mylar tape around end of track strip as shown in detail A, sheet 2, Fig. 401 to protect seal plate from damage during installation.
   E. Insert seal plate into tracks. Plate must be bent in reverse direction during installation to clear stabilizer (detail B).
   F. Position seal plate on link assembly using index mark per step A and lightly clamp seal plate to tie bar.
   G. Move seal plate fore or aft as required to obtain equal dimensions between etched line on seal plate and edges of track strip along full length of exposed track (sheet 1).



Stabilizer to Body Front Spar Sliding Seal Installation
Figure 401 (Sheet 1)



DETAIL A



Stabilizer to Body Front Spar Sliding Seal Installation
Figure 401 (Sheet 2)

H. Tape all track openings to prevent drilling chips from entering track.

CAUTION: IF CHIPS ENTER TRACKS, TEFLON SEAL MAY BECOME DAMAGED.

I. Tighten clamps. Back drill a minimum of two holes through holes in tie bar into seal plate. Install temporary Cleco fasteners in holes.
J. Remove pins securing link assembly to pedestal.
K. Remove seal plate with attached link assembly.
L. Bench assemble (rivet) seal plate, link assembly, and corner plates using existing holes in tie bar for drilling locations.
M. Insert seal assembly into tracks per step E.

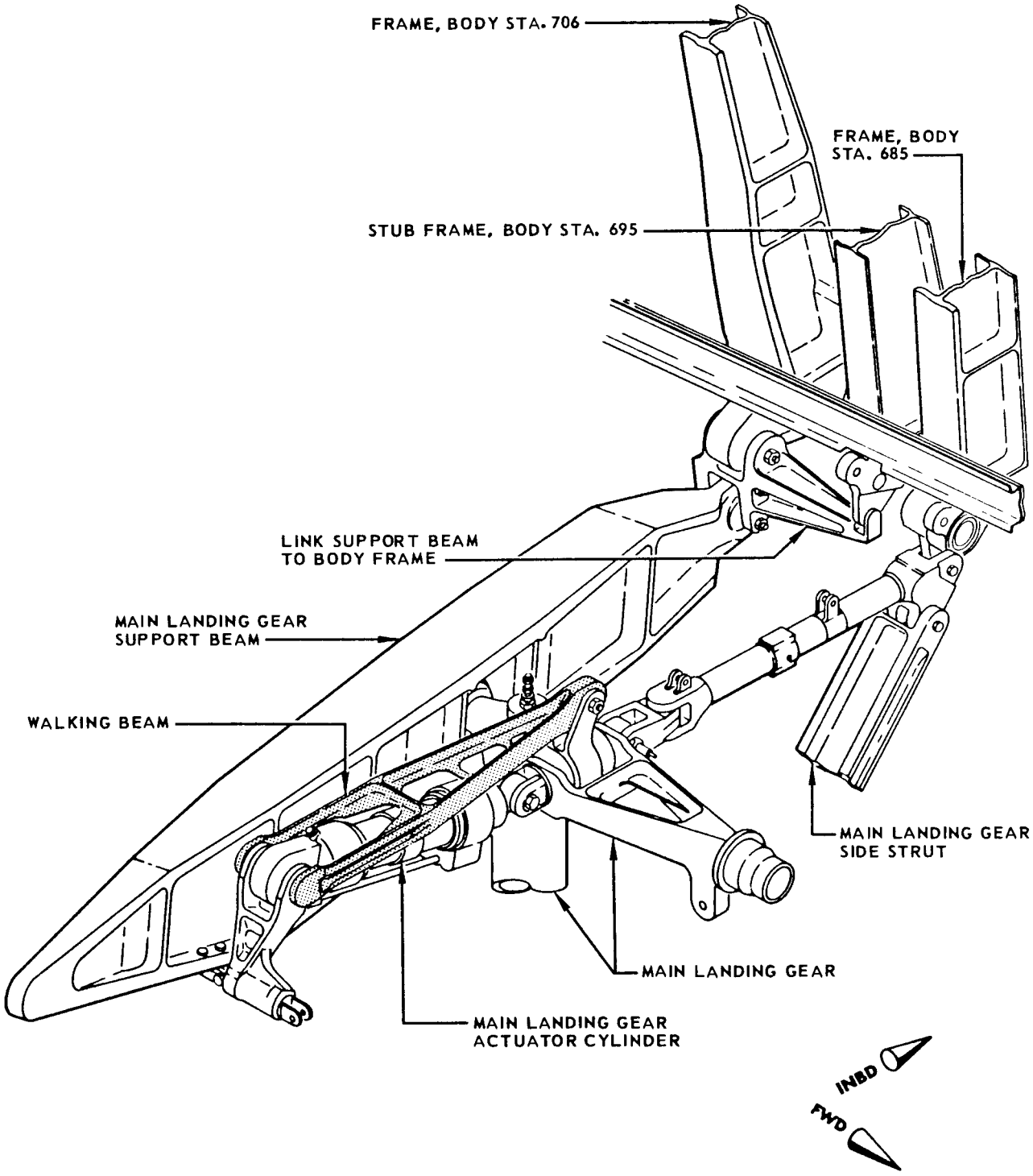
CAUTION: ASSURE THAT MYLAR TAPE OF STEP D IS STILL IN PLACE, PRIOR TO INSERTION.

N. Slide seal up and down. Force to move seal should not exceed 20 pounds and the seal should move freely.
O. Attach link assembly to pedestal with pins and markers. Install cotter pins.
P. Install rub guide. Adjust and trim ends of rub guide as required to maintain 0.03 ±0.01 inch clearance between each end of rub guide and track.
Q. On upper seal only, manually position leading edge of stabilizer full up. Check for clearance between uppermost rivet at corner plates and body structure. If rivet interferes, shave driven head to clear.

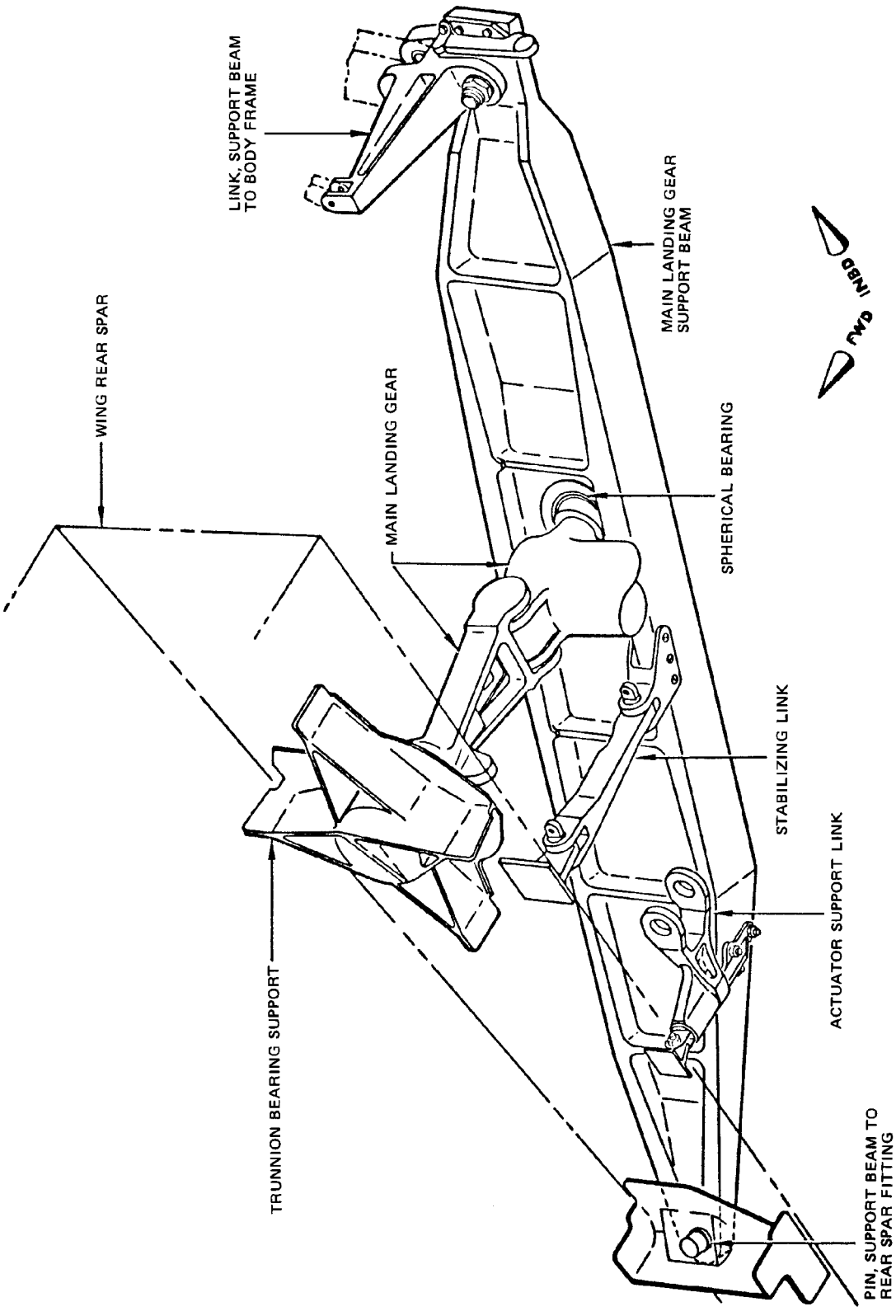
5. Restore Airplane to Normal
A. Remove all protective tapes and covers. Clean up area.
B. Install center track strips. (See figure 401.)
C. Install upper and lower gap panels on stabilizer where applicable. Refer to 12-31-81, Stabilizer Access Panel - Removal/Installation.

STRUCTURE ATTACHMENT FITTINGS - DESCRIPTION AND OPERATION

1. General
   A. This section describes the fittings on the fuselage used for the attachment of landing gear and doors.
2. Landing Gear Attachment Fittings
   A. The nose landing gear attachment fittings are incorporated in the nose landing gear wheel well structure.
   B. The main landing gear attachment fittings included in the fuselage structure consist of the fittings to which the landing gear side struts and support beams are attached. The upper member of the landing gear side struts connect to the fuselage at body stations 685 and 695. Each landing gear support beam is connected to the fuselage by means of a swinging link fittings. The lower end of this link is connected to the landing gear support beam and its upper end is connected to two fuselage fittings, one at station 695 and the other at station 706. See figure 1.
3. Door Attachment Fittings
   A. The openings for the forward entry and the galley doors are provided with hinge fittings, guide plates, and latch and stop fittings.
   B. The openings for the aft entry door and for both cargo doors are provided with hinge, latch, and stop fittings.
   C. The openings for the emergency exit hatches are provided with latch and stop fittings.
   D. The opening for the lower nose compartment external access door is provided with hinge and latch fittings.
   E. The opening for the electronic compartment external access door is provided with latch fittings and a pair of rails on which the door slides clear when it is opened.
   F. The nose landing gear wheel well doors are hinged from fittings on the lower edges of the wheel well.



Landing Gear Attachment Fittings
Figure 1 (Sheet 1)



Landing Gear Attachment Fittings
Figure 1 (Sheet 2)

EQUIPMENT ATTACHMENT FITTINGS - DESCRIPTION AND OPERATION

1. General
   A. This section describes the fittings on the fuselage used for the attachment of seats and miscellaneous equipment.
2. Seat Attachment Fittings
   A. Four seat tracks extend over the length of the passenger cabin. The tracks are attached to the tops of the floor beams and allow the seats to be installed at any of the closely spaced locations provided in the tracks. The fore and aft spacing between the seats can thus be varied to arrange different classes of accommodation. The two tracks on one side of the airplane support all the seats on that side of the airplane.
   B. The forward flight attendant's seat is attached to the partition forward of the forward entry door. The aft flight attendant's seat is attached to the forward side of the aft lavatory partition.
   C. The flight crew seat mountings are attached directly to the control cabin floor structure.
3. Miscellaneous Equipment Attachment Fittings
   A. Fittings are provided on the fuselage structure for the attachment of the air conditioning and electronic equipment, instrument panels, galley and toilet equipment, water tanks, APU and cargo retaining nets.

PASSENGER CABIN AND CARGO COMPARTMENT TRACKS - CLEANING/PAINTING

1. Passenger Cabin and Cargo Compartment Track Cleaning
   A. General
      (1) The passenger cabin and cargo compartment tracks require a minimum of care if kept clean and free of moisture. The following cleaning procedure should be used whenever any corrosion has been found.
   B. Equipment and Materials
      (1) Clear Chemical Conversion Coating per MIL-C-5541
      (2) Solvent, Aliphatic Naptha - TT-N-95
      (3) 320 grit aluminum oxide paper
      (4) Corrosion Preventive Compound - MIL-C-23411 (LPS)
   C. Clean Track
      (1) Manually clean track with solvent and remove any oil or grease.
      (2) Remove corrosion by sanding with 320 grit aluminum oxide paper.
      (3) Remove sanding residues with vacuum cleaner.
      (4) Clean the reworked surface again with naphtha.
      (5) Treat the surface with clear chemical conversion coating and apply finish as necessary.

          WARNING: SINCE THE CLEAR CHEMICAL CONVERSION COATING CONTAINS CHROMIC ACID, CARE SHOULD BE TAKEN TO AVOID SKIN CONTACT. DO NOT ALLOW COATING SOAKED CLOTHS TO DRY OUT BEFORE DISPOSING OF THEM, SINCE SPONTANEOUS COMBUSTION MAY OCCUR.

          CAUTION: THE CLEAR CHEMICAL CONVERSION COATING MAY STAIN FABRICS, THEREFORE COVER NEARBY CARPETS WHILE APPLYING COATING.

      (6) Under galleys, apply corrosion preventive compound in seat tracks. Refer to Chapter 51, Water Displacing Corrosion Preventive Compound.

FILLET FAIRINGS - DESCRIPTION AND OPERATION

1. General
   A. This section describes those parts of the fuselage which serve as aerodynamic fairings.
2. Wing-to-Body Fairings
   A. The wing-to-body fiarings are attached to the wing surface and the fuselage skin. A cutout in the fairing allow for the passage of the main landing gear. Other cutouts with panels or doors are provided as access to equipment within the fairing.
      (1) A blowout panel on each wing-to-body lower fairing protects the airplane skin in that area from excessive pressure buildup. Each panel is held by a hinge and secured by shear rivets, with an energy absorbing retaining strap to limit panel opening. An aerodynamic deflector is included to hold panel open and prevent uncontrolled buffeting, if the panel opens.

WING-TO-BODY FAIRING BLOWOUT PANEL - REMOVAL/INSTALLATION

1. General
   A. On airplanes NOT incorporating hinged blowout panels, the panels are secured to fairings with shear rivets through panel clips. On airplanes incorporating hinged blowout panels, panels are hinged one-side and secured with shear rivets through panel clips on the other.
2. Equipment and Materials
   A. Sealant - Pro-Seal 898 (optional: BMS 5-79, Class B)
   B. Parting Agent - Delco X-769 or equivalent
   C. Solvent - Final Cleaning Prior to General Sealing (Series 92) (Ref AMM/SOPM 20-30-92)
   D. Wooden or plastic spatula
   E. Rivets - MS20470A, 3/32-inch diameter, and MS20470B, 1/8-inch diameter (panels not hinged) or MS20470A (hinged panels)
3. Remove Wing-to-Body Fairing Blowout Panel
   A. If panel has blown out partly or completely, open underwing fairing and remove rivets by drilling.
4. Prepare to Install Wing-to-Body Fairing Blowout Panel
   A. Clean old sealant from faying surfaces and then cleaning with solvent (AMM 51-31-0/201).

      CAUTION: OBEY THE INSTRUCTIONS IN THE PROCEDURE TO REMOVE THE SEALANT. IF YOU DO NOT OBEY THE INSTRUCTIONS, DAMAGE TO THE AIRPLANE SURFACE CAN OCCUR.

   B. Apply abrasion resistant finish and parting agent to the outside face of the fairing lip (Ref Chapter 51, Maintenance Practices).
   C. Remove sealant from gap between the blowout panel and panel cut out.
   D. To prevent blowout panel from rocking and assist in panel seating, apply sealant (Pro-Seal 898138, or BMS 5-79, Class B) just prior to installing panel to inside face of the panel lip as a fillet (Ref Chapter 51, Maintenance Practices).

      CAUTION: APPLY HAND PRESSURE TO SEAT PANEL. DO NOT DISTORT OR PRELOAD PANEL DURING INSTALLATION. REMOVE ALL EXCESS SEALANT FROM INSIDE AND OUTSIDE PANEL. USE MINIMUM AMOUNT TO PREVENT A PANEL OUT OF FAIR CONDITION.

   E. After sealant has cured, open and close panel to ensure there is no sealant bonding panel to fairing.
5. Install Wing-to-Body Fairing Blowout Panel
   A. Check attachment clips for damage.

B. On airplanes NOT incorporating hinged panels, install panel with rivets four places, using one MS20470A rivet of 3/32-inch diameter at the aft outboard attach point and MS20470B, 1/8-inch diameter rivets at the remaining attach points.

CAUTION: PROPER FUNCTIONING OF THE BLOWOUT PANEL DEPENDS ON USE OF RECOMMENDED RIVETS.

NOTE: It is recommended that early airplanes using four MS20470A 3/32-inch diameter rivets be modified to use rivets as specified in par. B and at the same time revise rivet decal to show recommended rivet configuration.

C. On airplanes incorporating hinged panels, install panels with rivets two places using one MS20470A rivet of 3/32-inch diameter in the aft outboard attach point and one MS20470A rivet of 1/8-inch diameter on the forward outboard attach point.

CAUTION: PROPER FUNCTIONING OF BLOWOUT PANEL DEPENDS ON USE OF RECOMMENDED RIVETS.

D. Close and latch fairing.

AFT WING-TO-BODY FAIRING - REMOVAL/INSTALLATION

1. Remove Aft Wing-to-Body Fairing
   A. Disconnect ADF sense antenna coupler per Chapter 34, ADF Sense Antenna Couplers - Removal/Installation.
   B. Open overwing emergency exit light circuit breakers on P18 and disconnect wiring at light assembly in fairing.
   C. Remove fairing fasteners.

      NOTE: Different types of fasteners are used to attach the fairing panels. Stainless steel fasteners and dimple washers fasten the panel and also provide electrical bonding. Make sure you install these fasteners in the same locations from where you removed them.

   D. Remove fairing.

      NOTE: The spring seal between the aft fairing panel and the torque tube cutout panel is not permanently attached. The seal may fall loose during removal.

2. Install Aft Wing-to-Body Fairing
   A. Install fairing by installing fasteners.
      (1) Examine the mating surfaces of the structure and the fairing panel.
         (a) Make sure all mating surfaces are clean and free of any contamination or painting.
      (2) Apply the corrosion preventative compound to all of the mating surfaces of the airplane structure that touch the wing-to-body fairing panels.
      (3) Examine the fasteners and the area around the fastener holes to make sure they are clean and free of any contamination.

         NOTE: Stainless steel fasteners are usually located at four locations per panel, one at each corner.

      (4) Use aliphatic naphtha to clean the fasteners and area on the fairing panel around the fastener holes.
      (5) Remove any paint or prime covering the conductive surface of the panel in the area of the dimple washers.
      (6) Prepare the surface for the anti-static coating.
         (a) Apply anti-static coating over the exposed areas.

            NOTE: Make sure the spring seal is in place between the aft fairing panel and the torque tube cutout panel during installation.

(b) Install the fasteners (stainless steel bolts and dimple washers).

1) Install the stainless steel bolts and dimple washers in the same locations on the fairing panel as they were when you removed the panel.

NOTE: If you install different hardware in these locations you can get an unacceptable electrical bond.

(c) Measure the electrical bonding resistance between the conductive fasteners and the conductive surface of the fairing panel.

NOTE: You should make the resistance measurement before you paint the panel and the mounting hardware. If the fairing panel and bolts have been covered with paint, you may not get a correct measurement. In this case, use two sharp probes and make sure the probes contact the conductive surface of the panel and the structure. Then, measure the resistance.

1) Make sure the maximum resistance is not more than 300,000 ohms.

(7) Touch up the finish.

B. Connect emergency exit light wiring at light assembly and close circuit breakers.

C. Connect ADF sense antenna coupler per Chapter 34, ADF Sense Antenna Couplers - Removal/Installation.

D. Perform operational check of emergency exit light per Chapter 33, Emergency Lighting.

E. Perform operational check of ADF system per Chapter 34, Automatic Direction Finder Systems - Adjustment/Test.

F. Use aliphatic naphtha to clean the areas that you will seal.

G. Apply sealant to the fairing panel joints.

NOSE RADOME - DESCRIPTION AND OPERATION

1. General
   A. The nose radome extends forward from body station 178. The two main functions of the radome are to serve as a fairing and to house the weather radar antenna and the glide slope antenna director bar.
   B. The radome is a cone-shaped structure of fiberglass and is hinged at two places to the top side of the bulkhead at body station 178. Further attachment of the radome is by fasteners which screw into clips on the bulkhead at body station 178. In the open position the radome is supported by rods.
   C. The weather radar antenna is cantilevered from the bulkhead at body station 178.
   D. The nose of the radome is equipped with erosion protection. The radome is provided with lightning diverter strips on the exterior surface (not on all airplanes).
   E. The glide slope antenna director bar is a passive element of the glide slope antenna used to alter the glide slope radiation antenna patterns such that the navigation units have maximum glide slope sensitivity. The bar consists of a 13-inch strip of pressure-sensitive aluminum foil tape installed horizontally inside the nose radome approximately 22 inches forward of the aft edge of the nose radome top centerline.

NOSE RADOME - REMOVAL/INSTALLATION

1. Equipment and Materials
   A. Micro-ohmmeter capable of measuring up to 0.001 ohm
   B. Resistance Measuring Probe - F70328-1
   C. Antiseize Compound - MIL-C-16173C, Grade 2 (Ref 20-30-21)
2. Remove Nose Radome (Fig. 401)
   A. Open WEATHER RADAR AC and WEATHER RADAR DC circuit breakers on panel P18.
   B. Remove screws attaching aft edge of radome to clips on fuselage bulkhead.
   C. Open radome and support in open position by installing support rods on each side.

      CAUTION: DO NOT OPEN RADOME IF WINDS EXCEED 15 KNOTS.

   D. Disconnect either end of bonding jumper at radome hinge.
   E. Remove bolts attaching hinge arms to hinge fittings on radome and remove radome from fuselage.

      NOTE: When removing bolts, be prepared to catch shims installed between hinge arms and hinge fittings. Observe installed positions of shims to facilitate installation of same radome.

3. Install Nose Radome (Fig. 401)
   A. Prepare radome for installation (new radome).
      (1) Install erosion protection as required.
      (2) Install hinge brackets, serrated plates, and fillers on radome with attachment screws, and position brackets so that they bear against flange of reinforcement angle. Tighten bolts.
   B. Open WEATHER RADAR AC and WEATHER RADAR DC circuit breakers on panel P18.
   C. Support radome adjacent to fuselage bulkhead so that hinge brackets may be engaged with the hinge arms on the bulkhead. Install shims, as necessary, between hinge brackets and hinge arms, and install hinge attachment bolts.
   D. Lower radome carefully to closed position, and check to ensure that top aft edge does not interfere with fuselage skin. If an interference exists, raise and support radome in open position, slacken hinge bracket attachment screws, slide brackets forward relative to radome, and tighten screws. Repeat this procedure as many times as is necessary to eliminate interference between top, aft edge of radome and fuselage skin.

      CAUTION: EXTREME CARE SHOULD BE EXERCISED WHEN LOWERING RADOME TO CLOSED POSITION AFTER INSTALLATION OF HINGES BECAUSE TOP AFT EDGE OF RADOME MAY INTERFERE WITH AND DAMAGE FUSELAGE SKIN.

E. Check the seal.

NOTE: Make sure that the seal ends do not touch at the bottom of the bulkhead. There must be an opening of 8.5 ±0.2 inches at the bottom of the bulkhead to allow radome compartment drainage, i.e., there is no seal material obstructing the lower cutout.

F. Check attachment clips on fuselage bulkhead, especially those adjacent to hinges, for binding on radome when radome is moved to closed position. If adjustment is necessary, slacken attachment bolts on appropriate clips and move clips inboard. Lower radome to closed position and install screws. Tighten screws sufficiently to bring clips into contact with inside face of radome and then remove screws.

G. Open radome carefully to avoid disturbing position of adjusted clips. Tighten clip attachment bolts 100 to 125 pound-inches.

NOTE: If pressure sealant is disturbed on clip attachment bolts, sealant must be reapplied to ensure an adequate seal (Ref Chapter 51, Seals and Sealing).

H. If electrical interference in ADF system has been reported, check that bonding resistance between each clip and airplane structure is not more than 0.001 ohm.

NOTE: Any clip failing this test should be removed and reinstalled after cleaning faying surface between clip and structure to remove whatever sealant or foreign matter was causing high resistance.

I. Check that mating surfaces are clean and bright and connect bonding jumper to proper attachment at either side of radome hinge. If electrical interference in ADF system has been reported, check that bonding resistance between bonding jumper and radome does not exceed 0.001 ohm.

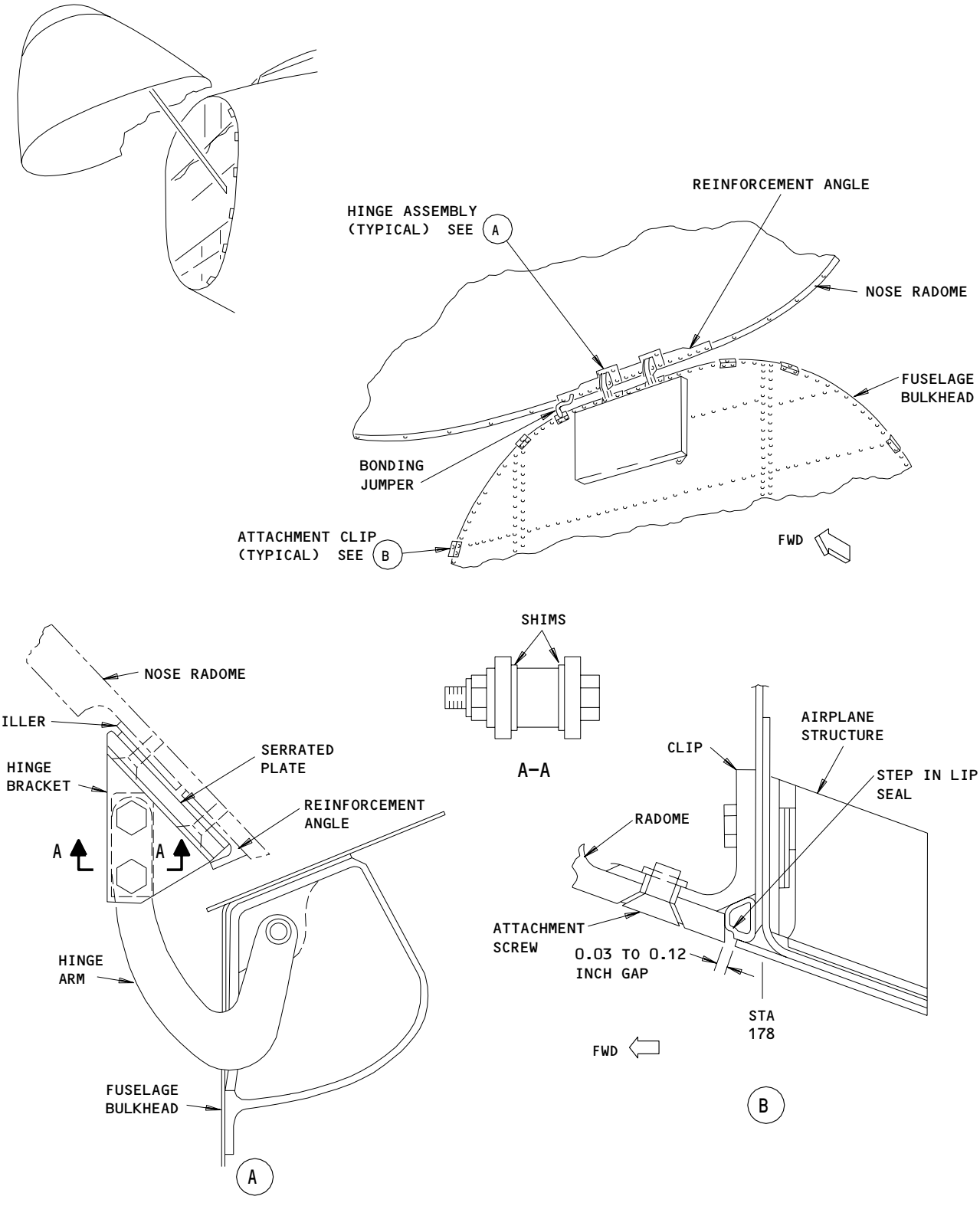
J. With radome in closed position, check alignment of radome attachment screw holes with holes in attachment clips. If adjustment is necessary, insert a mandrel or similar tool of suitable diameter in appropriate screw holes in radome and clip and apply leverage to ease holes into alignment, taking care not to damage radome or clip by use of excessive force.

K. Install screws with antiseize compound in aft edge of radome.

NOTE: The torque of the bolts is 150 inch-pounds.

L. Inspect radome for contact with seal and gap (Fig. 401, Detail B).

M. Close weather radar circuit breakers.



Nose Radome Installation
Figure 401

NOSE RADOME - INSPECTION/CHECK

1. General
   A. The nose radome requires a check for security of installation and a check for evidence of lightning strikes (AMM 5-51-151).
2. Equipment and Materials
   A. Detector - Moisture Register (Model, A8-AF, P/N MRC 005574) Penta Engineering, Moisture Register Products, P.O. Box 369, La Verne, CA 91750-0369, Phone (714) 392-5833, Fax (714) 392-5838
   B. Milliohmmeter - 0 to 0.1 ohm range
3. Check Nose Radome
   A. Check for holes, scuffs, cracks, blisters, and delamination.

      NOTE: Delamination can be detected by tapping the radome skin with a small metallic object. For example, a short socket extension.

   B. Check for moisture.

      NOTE: The moisture register detects moisture by measuring conductivity of radome material. The register consists of two major parts: the gun which contains electrodes and oscillator circuits, and the case containing ON-OFF switch, meter zeroing control, and batteries.

      (1) Position gun part of register at least 3 inches from any object.

          NOTE: Any object close to gun will influence meter zeroing adjustment.

      (2) Press ON-OFF pushbutton switch on case of register to ON.
          (a) Register must remain on throughout entire check.

              NOTE: Allow register a few seconds to stabilize. With the adjustment knob to left of handle, adjust needle to exactly "0" on the dial.

      (3) Open radome and position gun part of register so that gun electrodes contact inner surface of radome. Make sure all eight electrodes contact radome surface.
      (4) Move gun over entire inner surface of radome and observe meter on case.
          (a) Meter indication must stay within GOOD (0-5) range.

RADOME CONDITION	COLOR	NUMERICAL SCALE
Good	Green	0 to 5
Fair	Yellow	5 to 10
Poor	Orange	10 to 20
Unacceptable	Red	20 to 50

(5) Move gun around areas (spots) having meter indications.
(6) If there is any indication of the presence of moisture (above 5 on scale), the area should be dried out and resealed.
(7) Repair damage, if any (AMM 53-52-0/801).

C. Check Conductor Straps and Diverter Strips
(1) Check visually.
(a) Check thin gage aluminum conductor strips for tears, lifting, looseness, burned areas, general deterioration and security under bonding screws.
(b) Check aluminum diverter strips for security of mounting, burns, burned areas, and corrosion.

NOTE: Sharp corners or points anywhere along a conductive strip will tend to cause radio interference.

(2) Check conductivity.
(a) With radome open, measure resistance between forward end of diverter strips and conductor strip. Resistances should be 0.1 ohm or less. A test probe with a sharp tip should be used to penetrate paint or epoxy on strip.
(b) With radome closed, measure resistance between diverter strips on radome and body structure skin. Maximum resistance not to exceed 0.1 ohm.
(3) If damage exists, replace radome (AMM 53-52-0/401).

D. Check Glide Slope Antenna Director Bar
(1) Check glide slope antenna director bar for damage and security of adhesion. If necessary, replace bar (AMM 53-52-31/401).

E. Check nose radome seal. Replace seal if necessary (AMM 53-52-0/401).

RADOME – CLEANING/PAINTING

1. Nose Radome Painting
   A. General
      (1) Three paint systems are used on the nose radome: Prestec enamel, Super Koropon Antistatic Coating and BMS 10-60, Type II enamel.
      (2) On airplanes incorporating radomes with antistatic exterior finish refer to Nose Radome Painting. Nose radome tip erosion coating is applied from nose tip to station 138.6 per AMM 53-52-21/801.
   B. Nose Radome Painting - Prestec Enamel
      (1) General
         (a) The Prestec enamel is a white polyester paint.
         (b) The Prestec paint system is to be applied to bare fiberglass.
         (c) Bare (uncoated) fiberglass surfaces should not be exposed to outdoor weathering and moisture. Radomes in this condition, however, may be kept on the airplane during transportation providing total time of outdoor exposure does not exceed 7 days.
         (d) Cleanup of equipment
            1) Prior to expiration of the pot life, thoroughly clean the spray gun with acetone or methylene chloride.
      (2) Equipment and Materials
         (a) Erosion Coating - Prestec Enamel - No. 2381 (AMM 20-30-41)
         (b) Siphon Spray Gun - DeVilbiss JGA-502, No. 30 cap, No. AV-15-EX tip, or equivalent
         (c) Mixing Cup - No. 2 Zahn
         (d) Initiator - MIL-M-81351 (MEK peroxide) (AMM 20-30-31)
         (e) Solvent, Methylene Chloride - MIL-D-6998 (AMM 20-30-31)
         (f) Solvent, Acetone - O-A51 (AMM 20-30-31)
         (g) Solvent, Aliphatic Naphtha - TT-N-95 (AMM 20-30-31)
         (h) Abrasive paper
         (i) Cheesecloth
      (3) Prepare for Painting
         (a) Prestec enamel consists of base component only with catalyst and thinner to be supplied separately.

(b) Agitate Prestec base thoroughly just before mixing.
(c) Measure required amount of Prestec base into cup of a siphon spray gun.
(d) Thin base for 25 to 35 seconds in a mixing cup with methylene chloride.
(e) When ready to begin spraying, slowly add 2.0 ±0.5% by volume methyl ethyl ketone (MEK) peroxide to thinned base while stirring base. Do not add base to catalyst. Stir catalyzed material for 1 to 2 minutes to ensure a homogeneous mixture.

WARNING: MEK PEROXIDE IS AN OXIDIZER. AVOID BREATHING VAPOR. DO NOT GET IN EYES, ON SKIN, OR ON CLOTHING. KEEP AWAY FROM HEAT, SPARKS, AND OPEN FLAMES. DO NOT ALLOW CONTACT WITH COMBUSTIBLES.

(f) Record the time of adding the catalyst to the Prestec base and the temperature of the paint facility. The material should be used and the spray gun emptied and flushed prior to expiration of the pot life. Pot life at various temperatures is listed below:

Temperature	Pot Life (Minutes)
62°	57
67°	40
72°	30
77°	20
82°	15
87°	11

(g) All loose and damaged paint shall be removed by sanding with 280 grit or finer abrasive paper or Scotch-Brite pads. Do not expose fiber reinforcement.

(h) All areas of bare fiberglass shall be sanded with 280 grit or finer abrasive paper or Scotch-Brite pads to remove gloss. Feather all paint edges using 280 grit or finer abrasive paper. Do not abrade the glass fiber reinforcement.

(i) Remove sanding dust by cleaning, using naphtha followed immediately by wiping with a dry, clean cheesecloth. Repeat until all sanding residue has been removed.

(j) If any pinholes exist, fill per AMM Chapter 51, Prepaint Cleaning and Pretreatment. Do not allow solvents to contact the applied static conditioner as they will remove it from pinholes.

(k) As soon as possible apply Prestec enamel so as to blend in with the surrounding surfaces. If further blending is required allow the enamel to cure approximately 3 hours then blend in using 280 grit or finer abrasive paper with aliphatic naphtha or water.

NOTE: If balling up on the paper occurs, the paint film is not sufficiently cured and additional curing time must be allowed.

(4) Paint Nose Radome

(a) For application use a DeVilbiss JGA-502 siphon spray gun, No. 30 cap and No. AV-15-EX tip or equivalent.

(b) Use 35 to 40 pounds per square-inch air pressure at the gun.

(c) Apply one light cross-coat of Prestec to radome surface. After 10 minutes or one-half of pot life has expired (whichever is less), apply a second wet cross-coat of Prestec to obtain a total dry film thickness of 2.5 ±0.5 mils.

(d) In areas where one enamel color overlaps another, total dry enamel thickness shall not exceed 5 mils.

(e) Allow coating to dry 24 hours or more at 70°F or higher before exposing coating to rain or outdoor temperatures below 70°F.

(f) Dry-to-tape time is 6 hours at 70°F. This drying time is dependent on temperature and humidity and is given here as a guide only. This time may be varied providing tape after removal has had no visible effects on enamel film. Exact time can best be determined on practice panels under shop conditions identical to those under which radome is painted.

(g) Install nose radome tip rain erosion protection as required (AMM 53-52-21/801).

C. Nose Radome Painting - Super Koropon Antistatic Coating

(1) Equipment and Materials

(a) Abrasive paper - 280 grit or finer

(b) Solvents, Aliphatic Naphtha - TT-N-95 (AMM 20-30-31)

(c) Masking Tape

(d) Antistatic Coating - Super Koropon Fluid Resistant, base component 528-T-202, curing solution 910-006, DeSoto, Inc., Berkeley, California

(e) Vacuum Tube Multimeter - Model No. 427A, Hewlett-Packard Company, Palo Alto, California

(f) Probe, Surface Resistivity Measurement - ST895A-3 (preferred), or conductive electrical tape (AMM 20-30-51) (alternate)

(2) Prepare for Painting

(a) Prepare surface.

1) Abrade and solvent clean as necessary. If any pinholes exist, fill per AMM Chapter 51, Prepaint Cleaning and Pretreatment.

2) Mask areas not to be painted.

3) Perform final cleaning with naphtha.

(b) Mix paint.

1) Antistatic coating is supplied in two component kits consisting of DeSoto 528-T-202 base material and DeSoto 910-006 curing solution. Mix material in accordance with the following:

a) Agitate base material thoroughly prior to mixing.

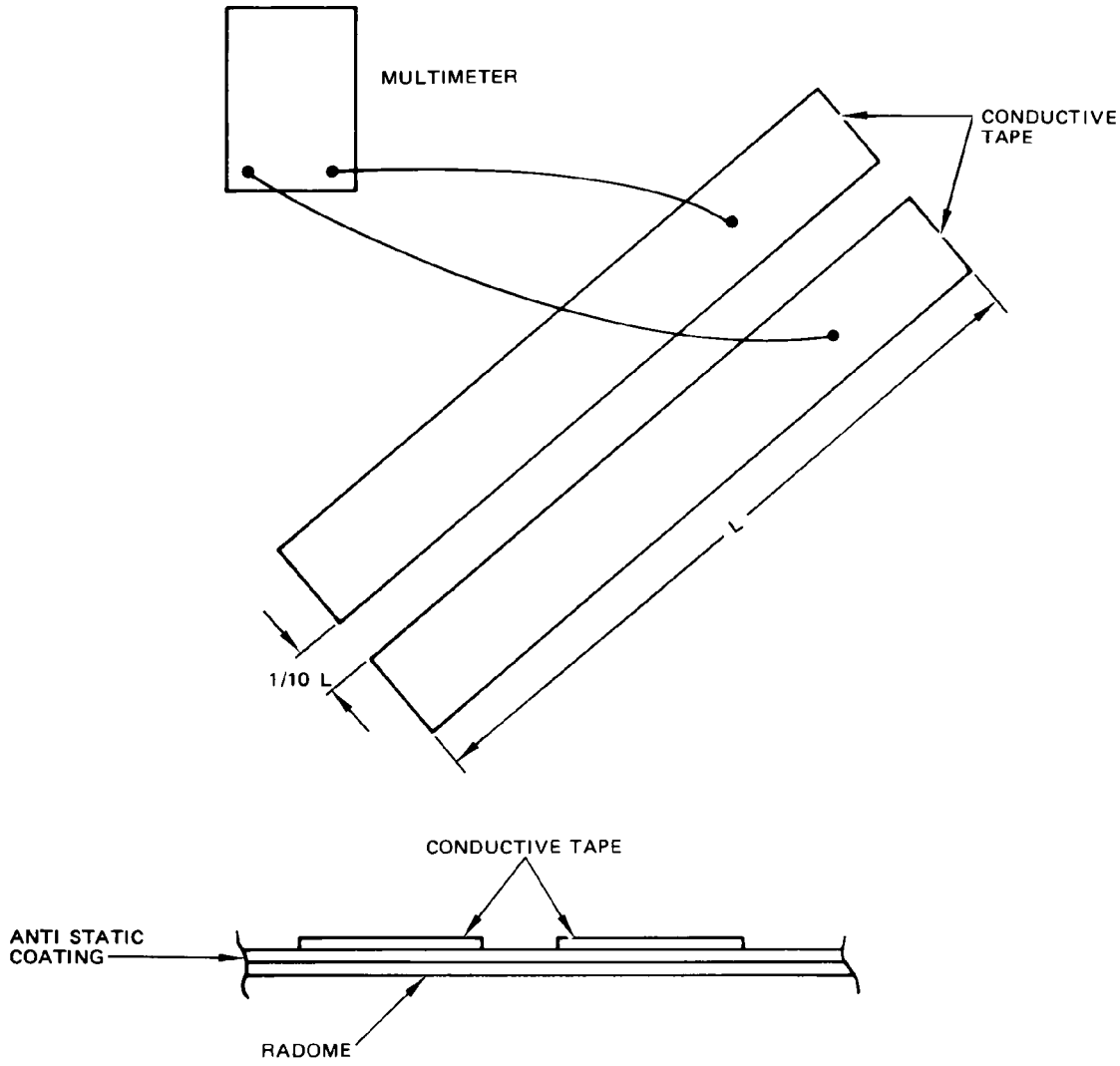
b) Add one part by volume catalyst to one part by volume base material while stirring base material.

c) Allow mixture to stand at least 1 hour before using.

d) Immediately after mixing, mark container with a label stating date and hour of mixing, name of workman doing mixing and pot life expiration time.

e) Mixed material has a usable pot life of 3 hours at room temperature 70 ±5°F.

f) Scrap all mixed material whose pot life has expired.



Resistance Measurement
Figure 701

(3) Paint Nose Radome
(a) Apply coating by brush or spray to a dry film thickness of 0.8 ±0.2° mil.
(b) Allow coating applied to countersink areas to dry at least 20 minutes before installation of fasteners.
(c) Allow coating to dry at least 4 hours before overcoating or before resistance measurements are taken.

NOTE: To measure resistance of antistatic coating in the following steps, use the surface resistivity measurement probe (preferred) or use a multimeter and conductive electrical tape (alternate).

(d) Measure resistance of antistatic coating as follows using a multimeter and the surface resistivity measurement probe (preferred).
1) Connect probe to multimeter and press probe firmly against surface of radome.
2) Take a minimum of 5 measurements per quadrant. Find average of 20 readings and multiply by 10.
3) Measurement should fall between 1 and 100 megohoms.
(e) Measure resistance of antistatic coating as follows, using a multimeter and conductive electrical tape (alternate method).
1) Place two strips of conductive electrical tape 1 inch wide by 4 inches long, 0.4 inch apart (Fig. 701).

NOTE: Place two strips of tape in each quadrant of radome. Use tape only once.

2) Connect multimeter to tape and measure resistance. Take a minimum of five measurements per quadrant.
3) Find the average of the 20 readings and multiply by 10. Measurement should fall between 1 and 100 megohms.
(f) If measurement does not fall between 1 and 100 megohms, proceed as follows:
1) Sand with 280 grit or finer abrasive

D. Nose Radome Painting - BMS 10-60, Type II enamel
(1) Equipment and Materials
(a) Masking tape
(b) Multimeter - 1-100 megohm range, commercially available
(c) Paint Spray Equipment
(d) Erosion Coating - Prestec Enamel, No. 2381
(e) Primer - BMS 10-79, Type II
(f) Enamel - BMS 10-60, Type II
(g) Filler - Static Conditioner 28-C-1
(h) Surfacer - Dexter 8-W-5

(i) Antistatic Paint, Black DeSoto - BMS 10-21, Type II
(j) Solvent, Aliphatic Naphtha - TT-N-95

(2) References
(a) AMM 20-30-31, Cleaners and Polishes
(b) AMM 20-30-41, Finishing Material
(c) AMM 51-21-21-7, Prepaint Cleaning and Treatment
(d) AMM 51-21-71-7, Conductive Coating for Exterior Fiberglass and Kevlar
(e) AMM 51-21-171-7, Decorative Exterior Paint System

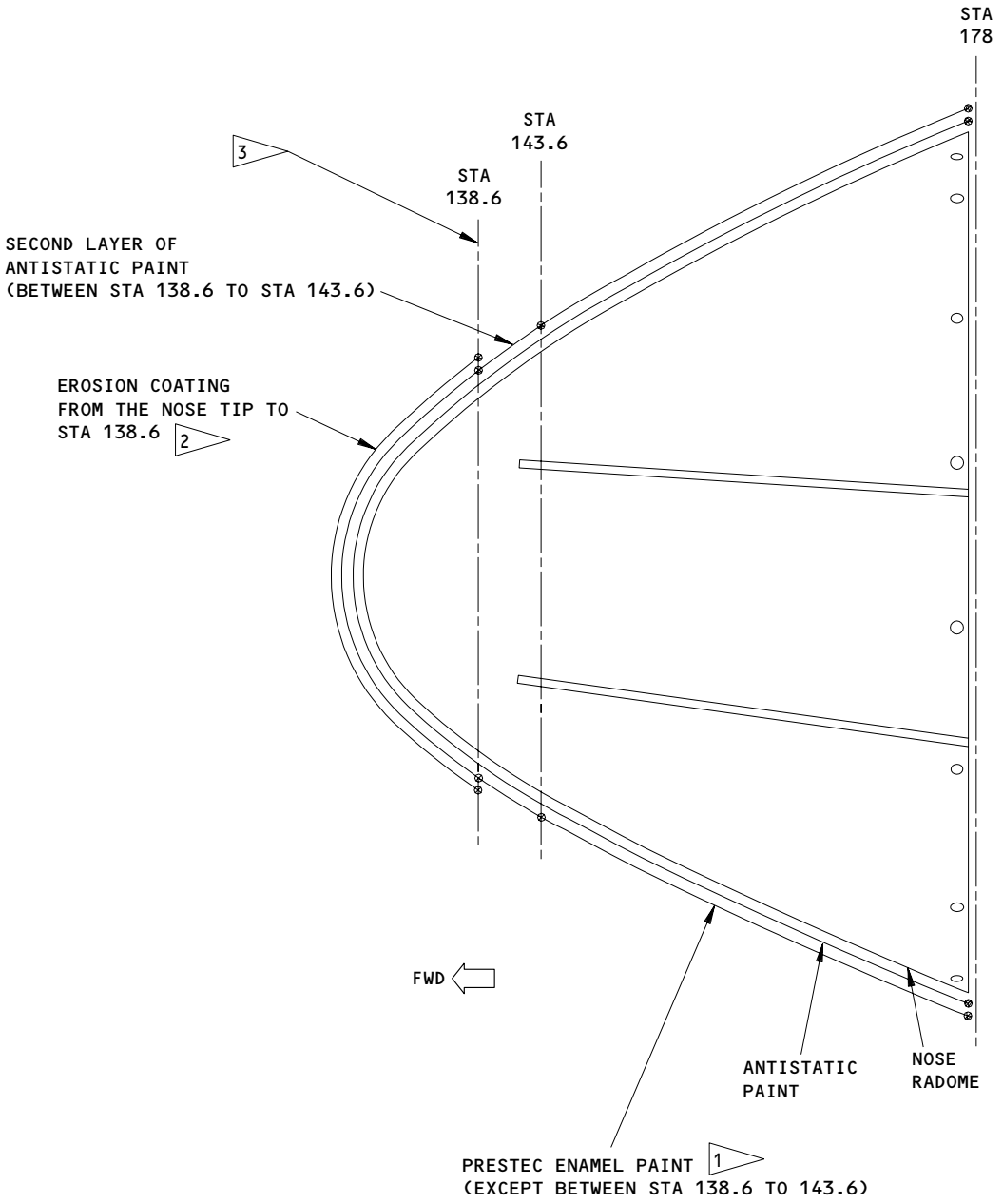
(3) Prepare the nose radome surface (Fig. 702).
(a) Remove all lightning diverter strips from the nose radome.
(b) Identify the lightning diverter strips for subsequent installation.
(c) Clean the nose radome (AMM 53-52-0/701).
(d) If there are surface defects, do the steps that follow:
1) Apply the static conditioner filler to the surface defects with your hand.

NOTE: Use the static conditioner filler to fill the small surface defects such as pinholes. Do not use this filler to smooth the surface. A continuous layer of this filler will cause an unsatisfactory paint bond.

2) Let the filler dry for 30 minutes at temperatures between 70 to 90°F, or until the filler becomes white.
3) Remove the remaining filler with a dry cheesecloth.

NOTE: Do not use solvents to remove the remaining filler. Solvents will remove the static conditioner on touch.

(e) If there are remaining surface defects that you cannot fill with the filler, use the 8-W-5 surfacer.



1 OPTIONAL FINISH
0.3–0.8 MILS OF BMS 10–79, TYPE II, THEN APPLY 1–2 MILS OF BMS 10–60 TYPE II ENAMEL.

2 OPTIONAL FINISH
8–10 MILS OF BMS 10–60, TYPE II ENAMEL.

3 IT IS ACCEPTABLE TO PAINT OVER THE BUMBLE BEE STRIPE FROM STA 138.6 TO 143.6 IF REQUIRED BY THE OPERATORS APPROVED LIVERY SCHEME.

Nose Radome – Cleaning and Painting
Figure 702

(4) Procedure - Mixing and Application Instructions (Table I)
(a) Mix the base component.
(b) Add the catalyst to the base component while you mix the solution.
(c) Permit an induction time for the solution.
(d) Add a thinner to the solution if it is necessary.
(e) Apply the solution with the spray equipment.

NOTE: Obey the pot life of the paint as shown (Table I).

(f) Let the paint dry before you apply the top layer (Table I).

TABLE I - APPLICATION CHART

MATERIAL	MIX RATIO	POT LIFE (HRS)	SINGLE LAYER DRY FILM THICKNESS (MILS)	DRY TIMES (70 - 90°F)
BMS 10-79 TYPE II PRIMER Base Catalyst Thinner	 1 1 None	8	0.5 - 0.8	The minimum time before you apply tape is 2 hours. The minimum time between layers is 2 hours. The maximum time before you can apply the top layer is 24 hours.
BMS 10-60 TYPE II ENAMEL Base 822-T-203 Catalyst 910-152 Thinner	 2 1 None	4	1.4 - 1.8	The minimum time before you apply tape is 5 hrs at 90°F to 7 hrs at 70°F. The minimum time before you can use the airplane is 48 hours. The dry times decrease with increased temperatures.

(5) Procedure - Apply Paint to the Nose Radome
(a) Apply 0.8 mils of the antistatic paint (Black DeSoto BMS 10-21, Type II).

NOTE: It is acceptable to paint over the bumble stripe from STA 138.6 to 143.6 if required by the operators approved livery scheme.

(b) Install the lightning diverter strips on the nose radome.

(c) Apply a vertical band of masking tape all around the radome from STA 138.6 to 143.6.

(d) If you use prestec enamel paint, do the step that follows:

1) Apply 4 mils of prestec enamel paint to the nose radome except the area between STA 138.6 to 143.6.

(e) If you use BMS 10-60, Type II enamel, do the steps that follow:

1) Apply 0.3 to 0.8 mils of BMS 10-79, Type II, except the area between STA 138.6 to 143.6.

2) Apply 1 to 2 mils of BMS 10-60, Type II enamel, except the area between STA 138.6 to 143.6.

NOTE: Decorative paint can be applied to the antistatic paint stripe from STA 138.6 to 143.6. This can affect the antenna performance.

(f) Remove the masking tape.

(g) Apply second coat of 0.8 mils of the antistatic paint (Black DeSoto BMS 10-21, Type II) between STA 138.6 and 143.6 only.

1) Measure the surface resistance of the antistatic paint as follows:

a) Find five pairs of equidistant points in each quadrant of the antistatic paint band (20 total pairs).

b) Push the multimeter probes to each pair of the points on the antistatic paint.

c) Make sure that the multimeter indications is 1-100 megohms at each point.

d) If the surface resistance is less than 1 megohm remove and apply the antistatic paint again.

e) If the surface resistivity is more than 100 megohms, dry the antistatic paint and measure the resistance again.

(h) Apply 8.0 mils erosion coating from the nose tip to STA 138.6.

1) Use the optional finish as follows:

a) Apply 8-10 mils of BMS 10-60, Type II enamel from the nose to STA 138.6.

NOSE RADOME - APPROVED REPAIRS

1. Equipment and Materials
   A. Tape - Scotch Brand No. 850 (clear), No. 853, or Permacel P95
2. Repair Nose Radome
   A. Temporary Repair
      (1) Repair 1 square-inch damage at earliest available opportunity, provided damage is sealed from moisture by use of tape.
      (2) Holes larger than 1 square-inch must be repaired permanently.
   B. Permanent Repair
      (1) Permanent repair of nose radome must be made per SRM Chapter 51, Fiberglass Cloth Reinforced Plastics Repair.

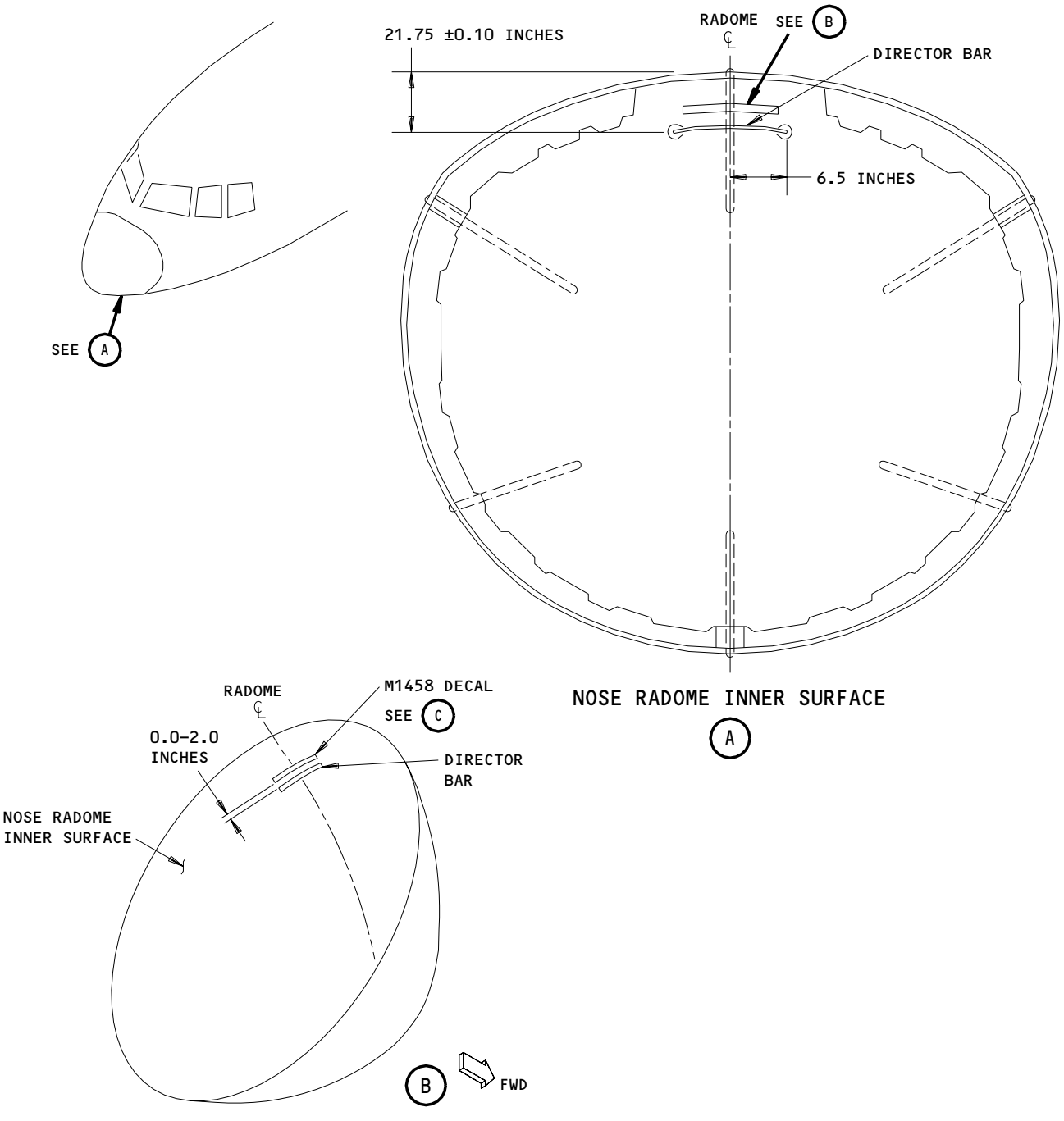
NOSE RADOME EROSION COATING - APPROVED REPAIRS

NOSE RADOME EROSION COATING - APPROVED REPAIRS

1. Repair Nose Radome Erosion Coating
   A. Prestec paints No. 2301 (black) or No. 2300 Series (gray) are used as an erosion coating. Apply three to four mils (0.003 to 0.004 inch) of Prestec paint per Nose Radome - Cleaning/Painting. Application of black or gray Prestec is the same as application of white Prestec.

GLIDE SLOPE ANTENNA DIRECTOR BAR - REMOVAL/INSTALLATION

1. General
   A. The director bar is an aluminum foil pressure-sensitive tape attached to the inner surface of the nose radome. It alters the glide slope radiation antenna patterns.
2. Equipment and Materials
   A. Aliphatic Naphtha (Ref 20-30-31)
   B. 1/2 inch wide aluminum foil pressure sensitive tape - No. 425, BAC5801 (Ref 20-30-51)
   C. Primer BMS 10-11 Type I (Ref 20-30-41)
   D. Solvent BMS 3-2 Type I (Ref 20-30-31)
3. Remove Director Bar (Fig. 401)
   A. Open nose radome (Ref 53-52-0 R/I)
   B. Remove director bar by peeling off tape.
4. Install Director Bar (Fig. 401)
   A. Using aliphatic naphtha, clean surface where director bar will be installed.
   B. Apply one coat of primer to areas where director bar will be installed.
   C. Clean primed and cured surface with solvent.
   D. Cut strip of Aluminum Foil Tape 13.00 inches long.
   E. Apply tape per Fig. 401 and press firmly in place.
   F. Install M1458 decal inside radome as shown in Fig. 401, if not already installed.
   G. Close nose radome (Ref 53-52-0 R/I)



GLIDESLOPE ANTENNA DIRECTOR BAR -M1458

C

Glide Slope Antenna Director Bar Installation
Figure 401

TAIL CONE - REMOVAL/INSTALLATION

1. Equipment and Materials
   A. Suitable Stand
   B. Protective Plastic Shield
2. Prepare to Remove Tail Cone
   A. Move stabilizer to leading edge down position and elevators to up position. Install protective plastic shields with tape on tail cone where elevators might cause interference.
   B. Open ACC COMP LITS circuit breaker on panel P18. On airplanes with a tail cone oscillating navigational light, open OSC NAV LT circuit breaker on P18.
   C. Remove access panels 3801 and 3802 (Ref Chapter 12).
   D. Remove aft fairing and exhaust duct (Ref Chapter 49, Aft Fairing - R/I and Exhaust Duct - R/I).
   E. If additional clearance is desired, position stabilizer to neutral (3 1/2 units) and disconnect both elevator control pushrods (Ref 27-31-11). Tag elevator controls DO-NOT-MOVE.
   F. One elevator may be removed (Ref 27-31-11 R/I), if required, to obtain greater tail cone removal clearance.
   G. Add alignment marks (or masking tape) to facilitate reinstallation of tail cone in exact same location.
3. Remove Tail Cone
   A. Disconnect wire bundle at electrical connector located on bulkhead at body station 1156.
   B. Remove fasteners and washers attaching tail cone to bulkhead.
   C. Remove tail cone.

      NOTE: It will be necessary to press together front end of tail cone slightly to facilitate removal.

   D. If new tail cone is to be installed, remove elevator index plates and rudder index plate (Ref Chapter 27, Elevator Index Plate - R/I and Rudder Index Plate - R/I).
4. Install Tail Cone
   A. Check that ACC COMP LITS circuit breaker on P18 is open. On airplanes with a tail cone oscillating navigational light, check that OSC NAV LT circuit breaker on P18 is open.
   B. Place tail cone on bulkhead making sure that alignment marks align and install washers and fasteners.
   C. Remove protective plastic shields.
   D. If new tail cone is being installed, install elevator index plates and rudder index plate (Ref Chapter 27, Elevator Index Plate - R/I and Rudder Index Plate - R/I).
   E. Connect wire bundle at electrical connector located on bulkhead at body station 1156.

5. Restore Airplane to Normal Configuration
   A. If removed, connect elevator control pushrods or install elevator (Ref 27-31-11 R/I).
   B. Install exhaust duct and aft fairing (Ref Chapter 49, Exhaust Duct - R/I and Aft Fairing - R/I).
   C. Install access panels.
   D. Close circuit breakers.