Chapter/ Section	Page	Date	Chapter/ Section	Page	Date	Chapter/ Section	Page	Date
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27-30-01	1	OCT 01/00						
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Chapter/ Section	Page	Date	Chapter/ Section	Page	Date	Chapter/ Section	Page	Date
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32-20-01	1	OCT 01/00						
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32-20-02	1	OCT 01/00						
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32-40-01	1	OCT 01/00		2/Blank	OCT 01/00		2/Blank	OCT 01/00
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	3	OCT 01/00						
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Chapter/ Section	Page	Date	Chapter/ Section	Page	Date	Chapter/ Section	Page	Date
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57-00-03	1	OCT 01/00	57-50-01	1	OCT 01/00			
	2/Blank	OCT 01/00		2	OCT 01/00			

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CHAPTER

06

DIMENSIONS AND AREAS

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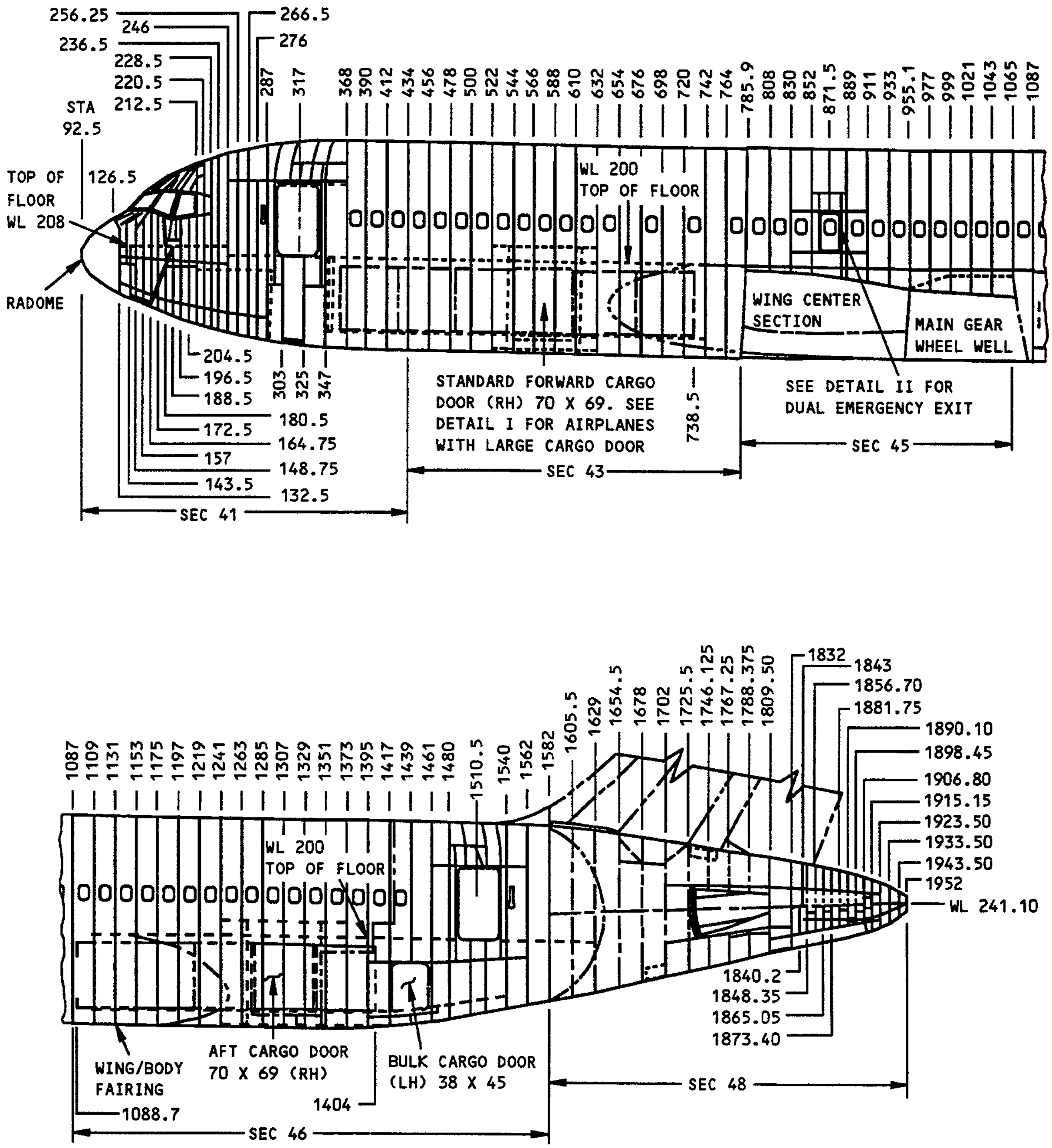
AIRPLANE REFERENCE DATA

1. General

   A. The following is a list of figures in section 06-00-01

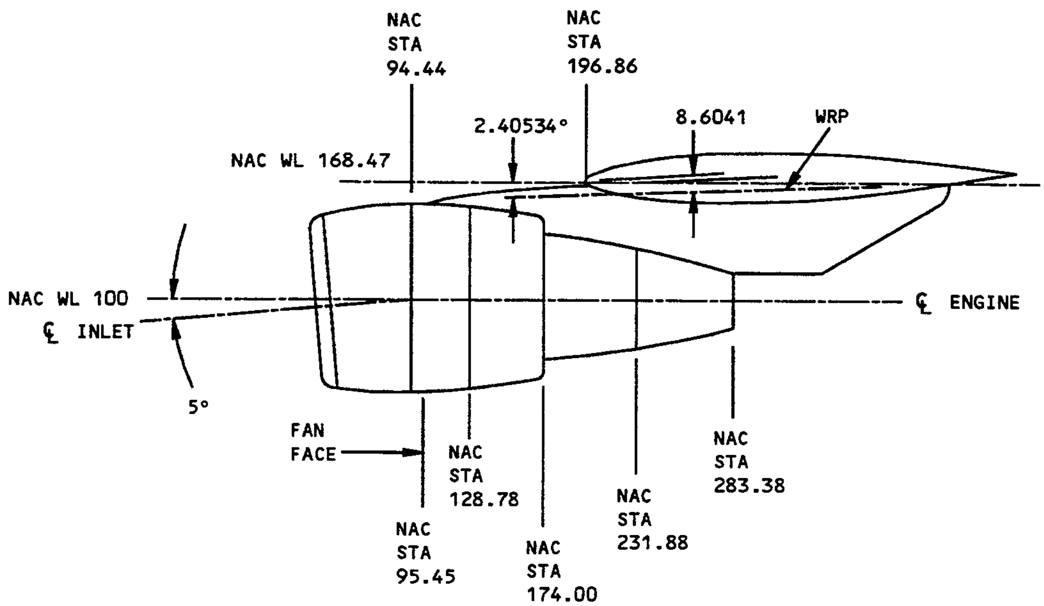
AWG	American Wire Gage	MRB	Maintenance Review Board
BBL	Body Buttock Line	NAC BL	Nacelle Buttock Line
BRP	Body Reference Plane	NAC STA	Nacelle Station
BS or B STA	Body Station	NAC WL	Nacelle Water Line
CMM	Component Maintenance Manual	OD	Outside Diameter
CRES	Corrosion Resistant Steel	NDT	Nondestructive Test
CRT	Cathode Ray Tube	NLG	Nose Landing Gear
DIA	Diameter	NOM	Nominal
DME	Distance Measuring Equipment	OHM	Overhaul Manual
ELEV STA	Elevator Station	R or RAD	Radius
ENG STA	Engine Station	RH	Right-hand
FIN STA	Fin Station	RSS or RS STA	Rear Spar Station
FIN WL	Fin Water Line	RUD STA	Rudder Station
FSS or FSS STA	Front Spar Station	SB	Service Bulletin
H & D	Herter and Driffield	SFD	Source-to-Film Distance
ID	Inside Diameter	SL	Service Letter
kHz	Kilohertz	SLAT STA	Slat Station
KV	Kilovolt	SRM	Structural Repair Manual
LE	Leading Edge	STA	Station
LE STA	Leading Edge Station	STAB STA	Stabilizer Station
LH	Left-hand	TR STA	Thrust Reverser Station
MA	Milliamperes	WBL	Wing Buttock Line
MAS	Milliamp Seconds	WL	Water Line
MHz	Megahertz	WS or W STA	Wing Station
MLG	Main Landing Gear		Centerline
MPD	Maintenance Planning Data (or Document)		Generator Position
NDI	Nondestructive Inspection		

Abbreviations and Symbols
Figure 1



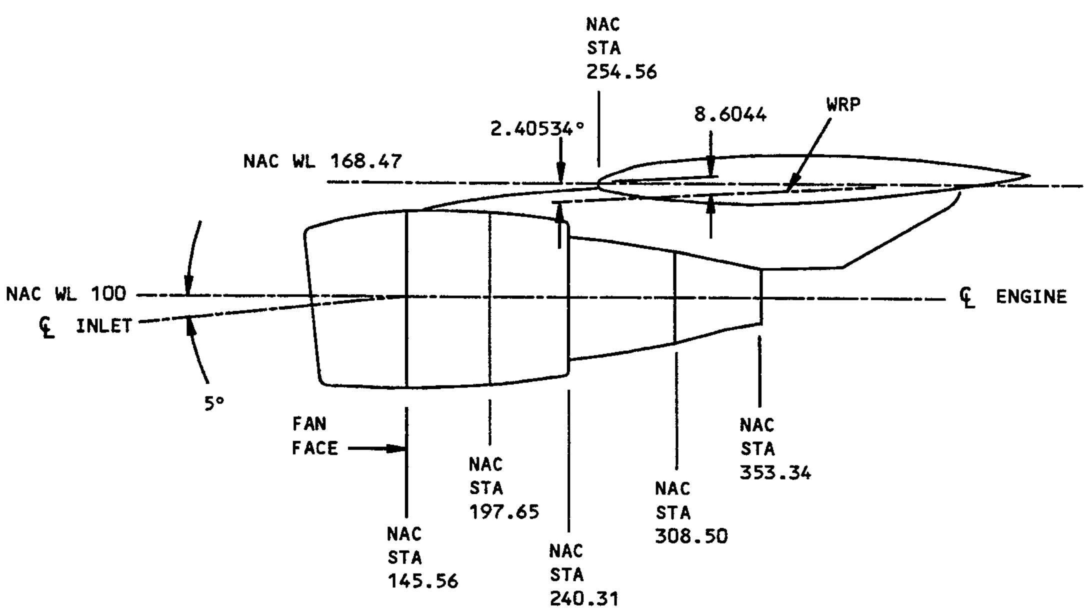
Fuselage Station Diagram
Figure 2

310T3000



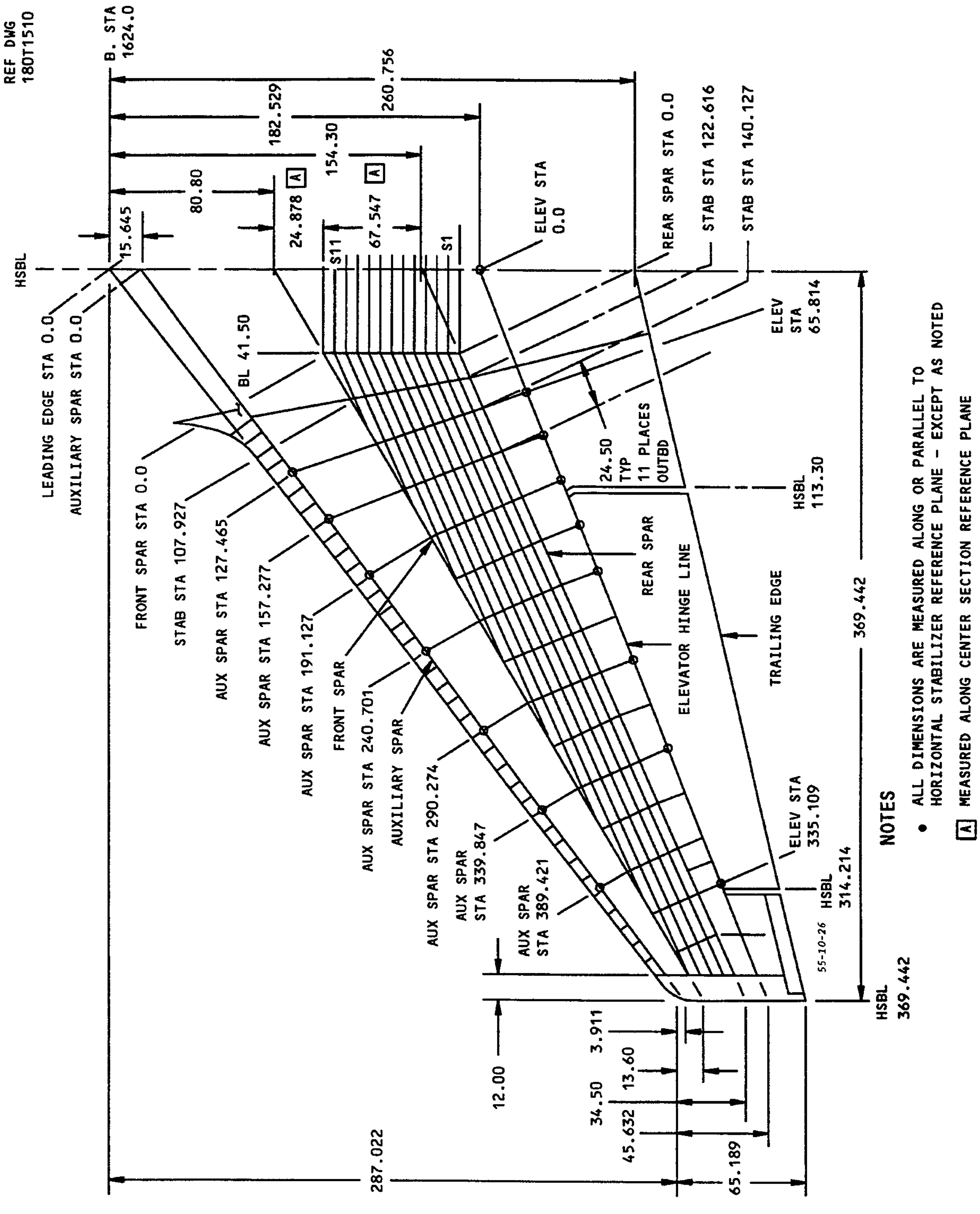
LEFT SIDE VIEW OF NACELLE FOR JT9D-7R4 ENGINE

REF DWG
310T1000

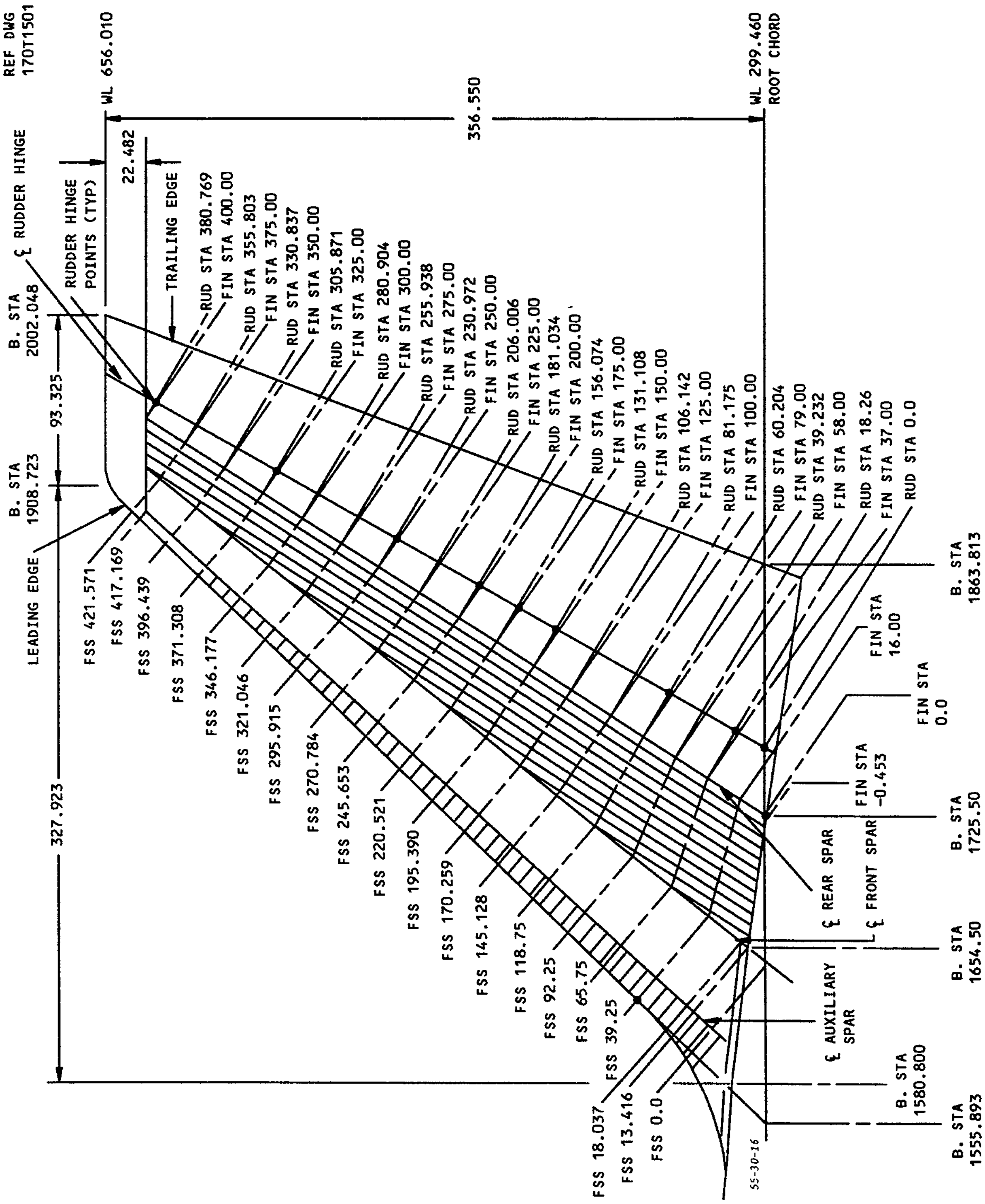


LEFT SIDE VIEW OF NACELLE FOR CF6-80A ENGINE

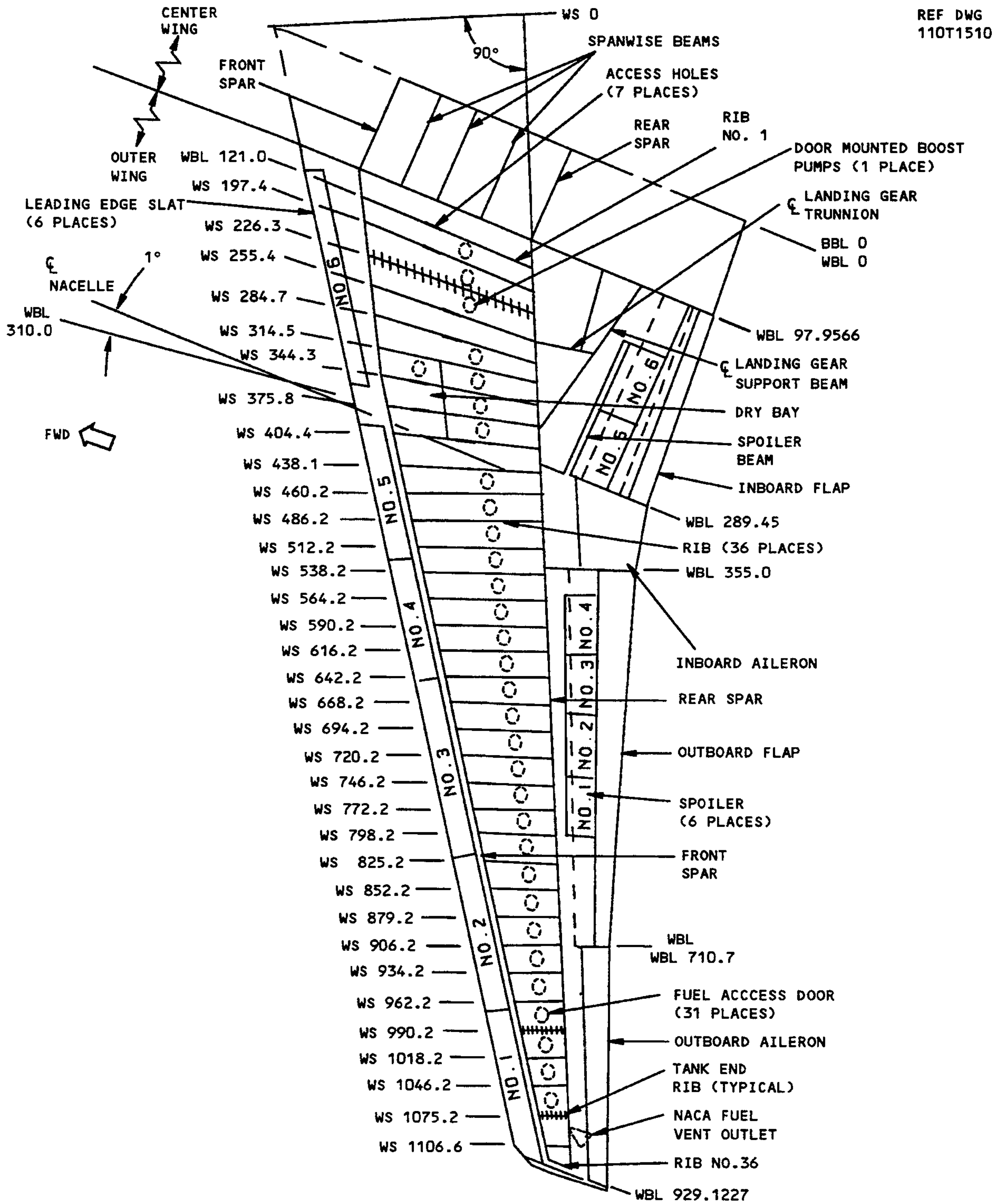
Nacelle and Strut Station Diagram
Figure 3



Horizontal Stabilizer Station Diagram
Figure 4



Vertical Stabilizer Station Diagram
Figure 5



Wing Station Diagram
Figure 6

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CHAPTER

23

COMMUNICATIONS

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AREA	PROBLEM	INDEX PREVENTION VOLUME 2	TERMINATING ACTION (IF ANY)
Airfone Antennas	Corrosion between antennas and fuselage skin	23-10-01	
VHF Antennas	Corrosion between antennas and fuselage skin	23-10-01	
Emergency Locator Antenna	Corrosion between antennas and fuselage skin	23-20-01	

Specific Corrosion Problems - Communications
Figure 1

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COMMUNICATIONS

1. General

A. Corrosion can occur between the exterior-mounted antennas and the fuselage skin.

2. Corrosion Prevention

A. Regularly remove the antennas and examine the mating surfaces for corrosion. On airplanes which have the Airfone (airborne public telephone) system, refer to 767 Maintenance Manual 23-80-00 for maintenance instructions.

B. Improved Corrosion Protection

(1) At line number 448, PRR B12253 changed the procedures that install the VHF and the Airfone antennas on the exterior of the airplane. BMS 10-79, Type III primer and BMS 3-27 corrosion preventive compound are applied to the skin under the antennas, and the fasteners are cadmium-plated stainless steel.

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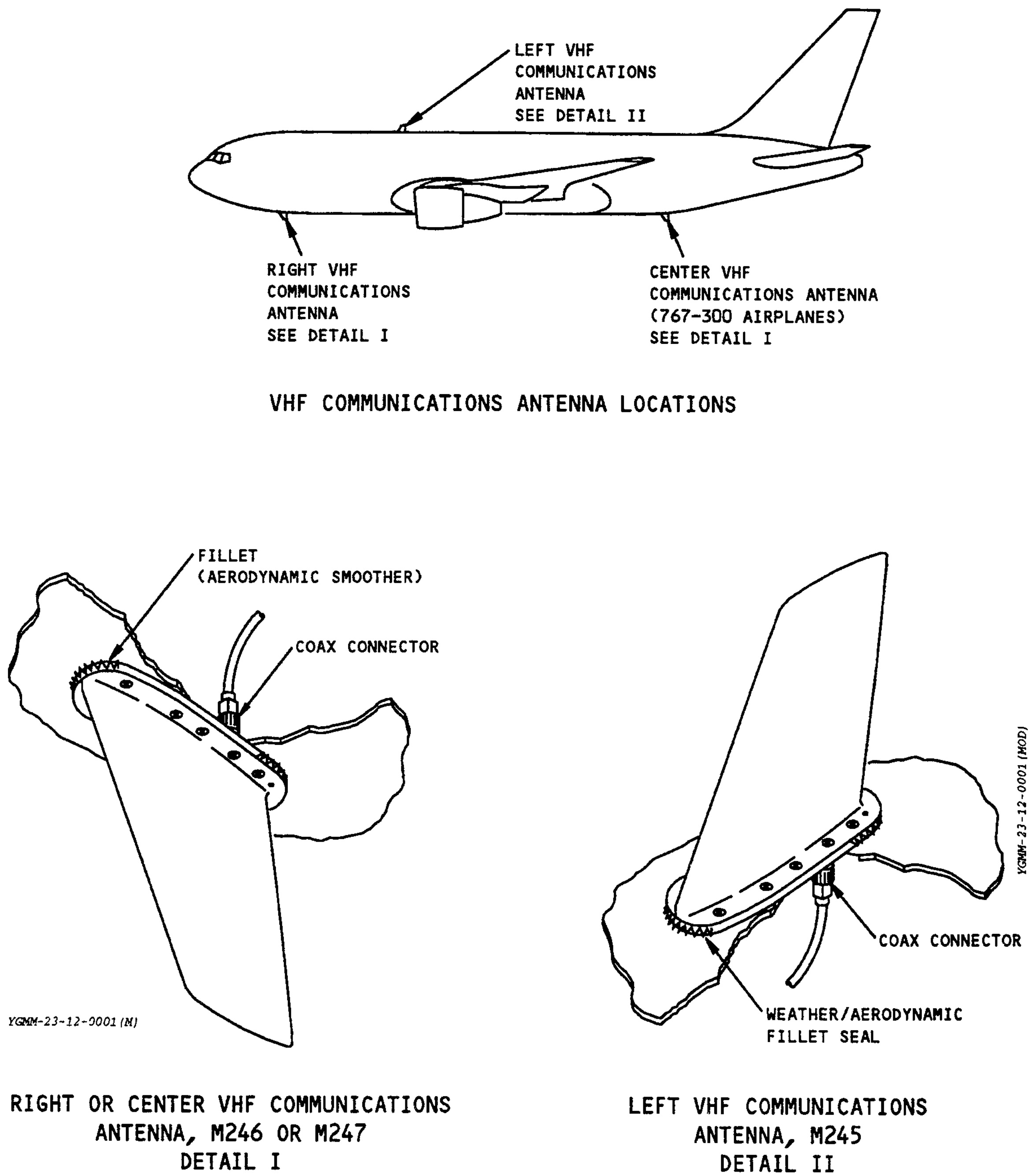

VHF Communications Antenna Installation
Figure 1

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COMMUNICATIONS

1. General

A. Corrosion can occur between the emergency location transmitter (ELT) antenna and the fuselage skin.

2. Corrosion Prevention

A. Regularly remove the ELT antenna and examine the mating surfaces for corrosion.

B. Improved Corrosion Protection

(1) At line number 448, PRR B12253 changed the procedures that install the ELT antenna on the exterior of the airplane. BMS 10-79, Type III primer and BMS 3-27 corrosion preventive compound are applied to the skin under the antenna, and the fasteners are cadmium-plated stainless steel.

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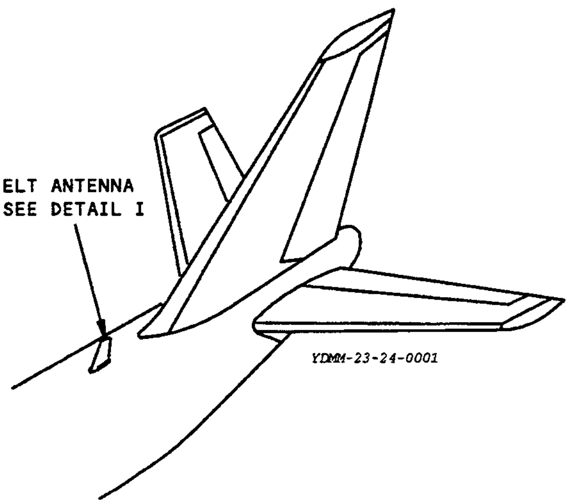

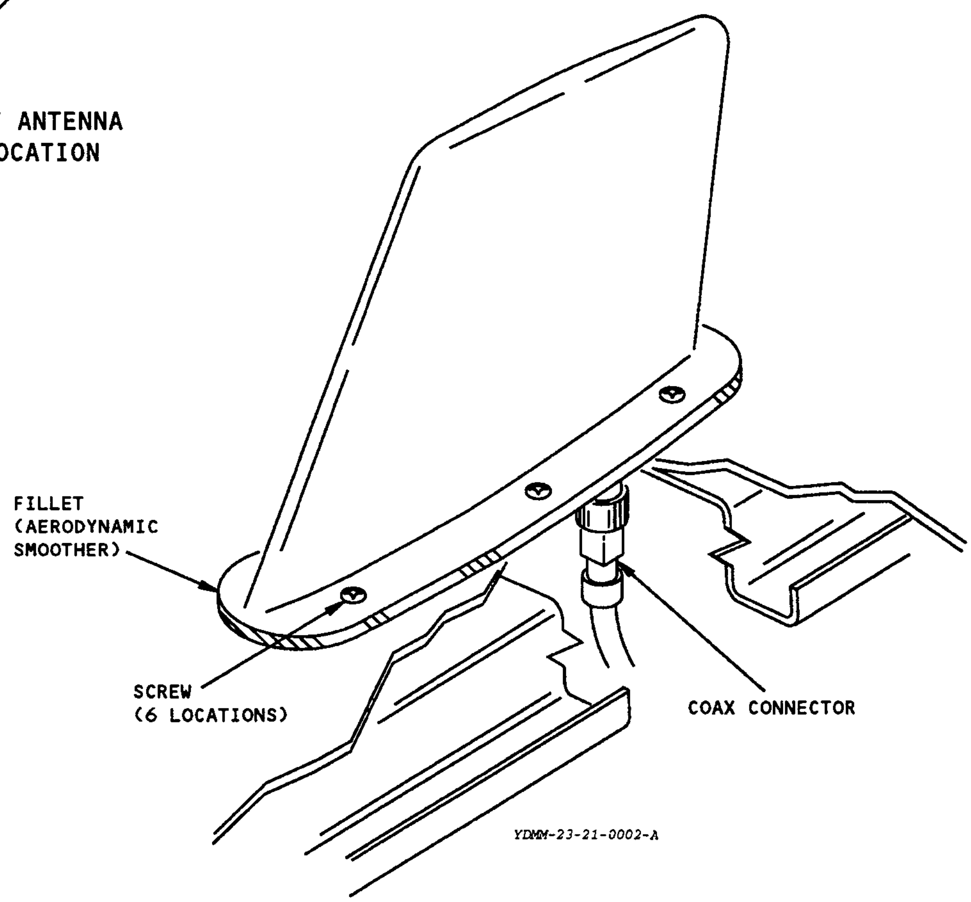

ELT Antenna Installation
Figure 1

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CHAPTER

25

EQUIPMENT AND FURNISHINGS

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AREA	PROBLEM	INDEX PREVENTION VOLUME 2	TERMINATING ACTION (IF ANY)
Lavatories	Corrosion of floors and aft walls of lavatory modules	25-40-01	
Cargo Compartments	Corrosion on ball transfer panels	25-50-01	
Emergency	Binding and corrosion of escape slide release mechanism	25-60-01	
	Corrosion on packboard bushings	25-60-01	
	Corrosion between packboard release rod and bearing	25-60-01	
	Corrosion of switch terminals in the off-wing escape system panel	25-60-01	
	Corrosion of pins between cams and bellcrank in the off-wing escape slide integrator	25-60-01	

SPECIFIC CORROSION PROBLEMS - EQUIPMENT/FURNISHINGS
Figure 1

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LAVATORIES

1. General

A. Corrosion can occur on the floors and the base of the aft walls of the lavatory modules.

2. Corrosion Prevention

A. Regularly examine the floors and the walls of the lavatory modules.

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1. General

A. Corrosion can occur on the ball transfer panels (ball mats) in the forward and aft cargo compartments.

2. Corrosion Prevention

A. Regularly examine the ball transfer panels for corrosion.

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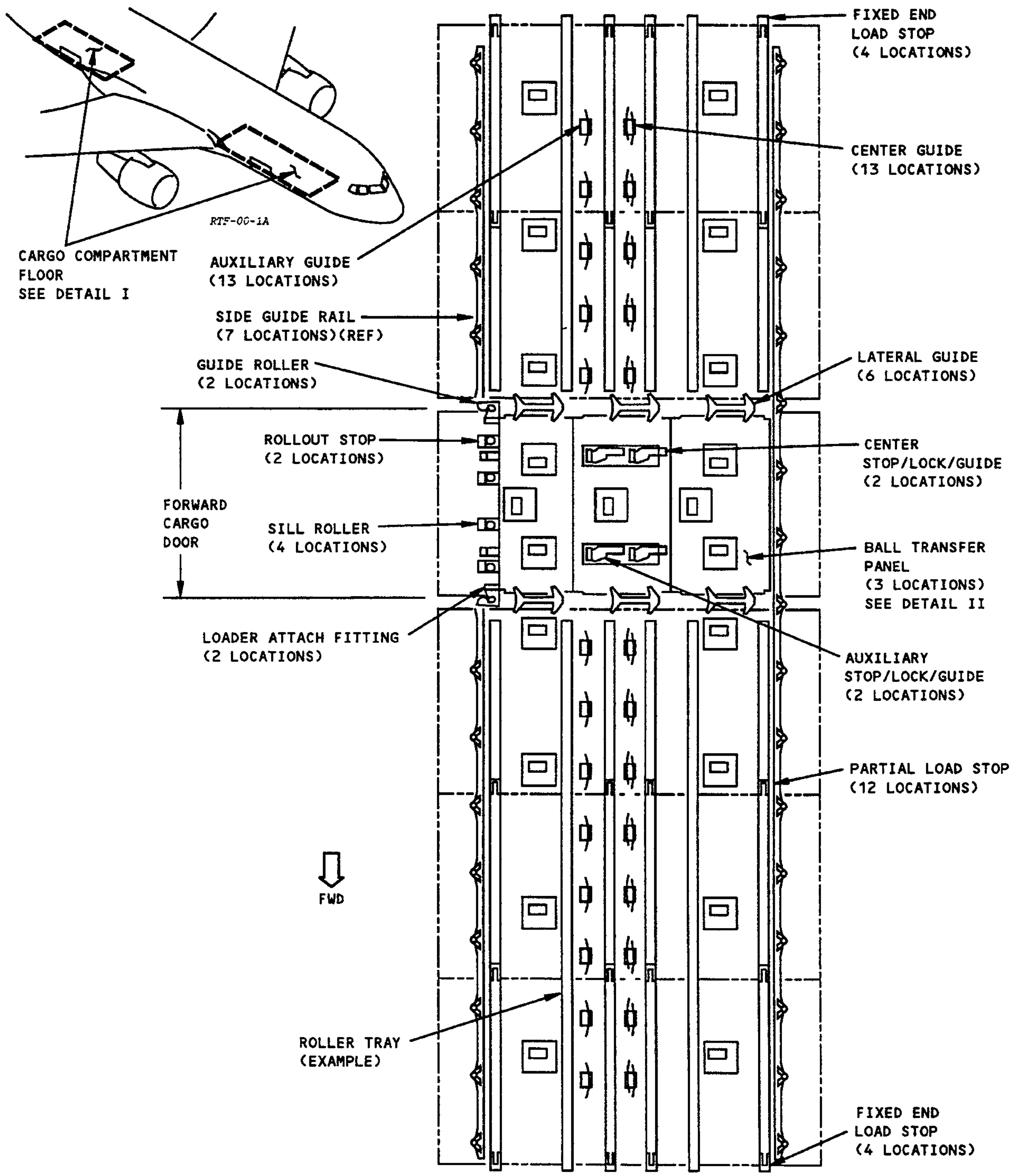
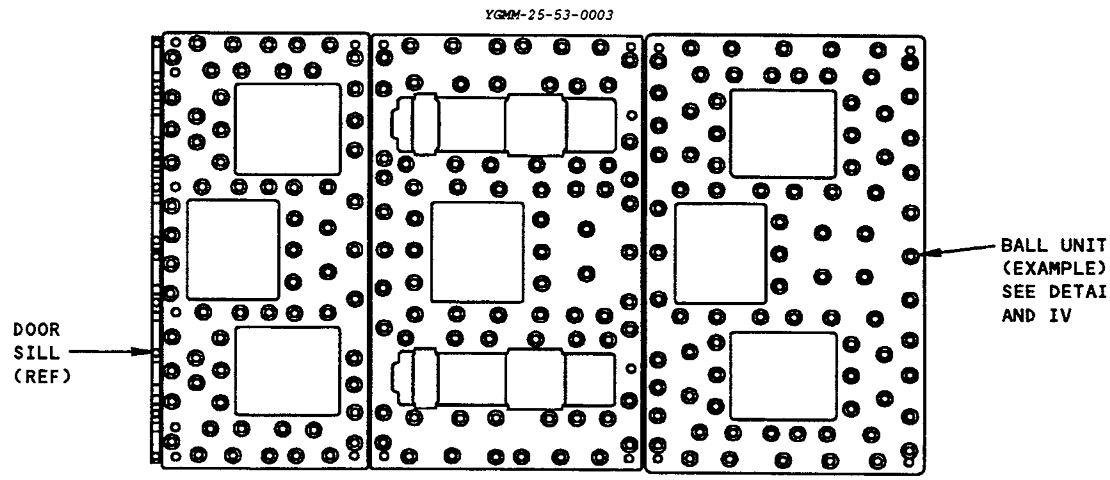
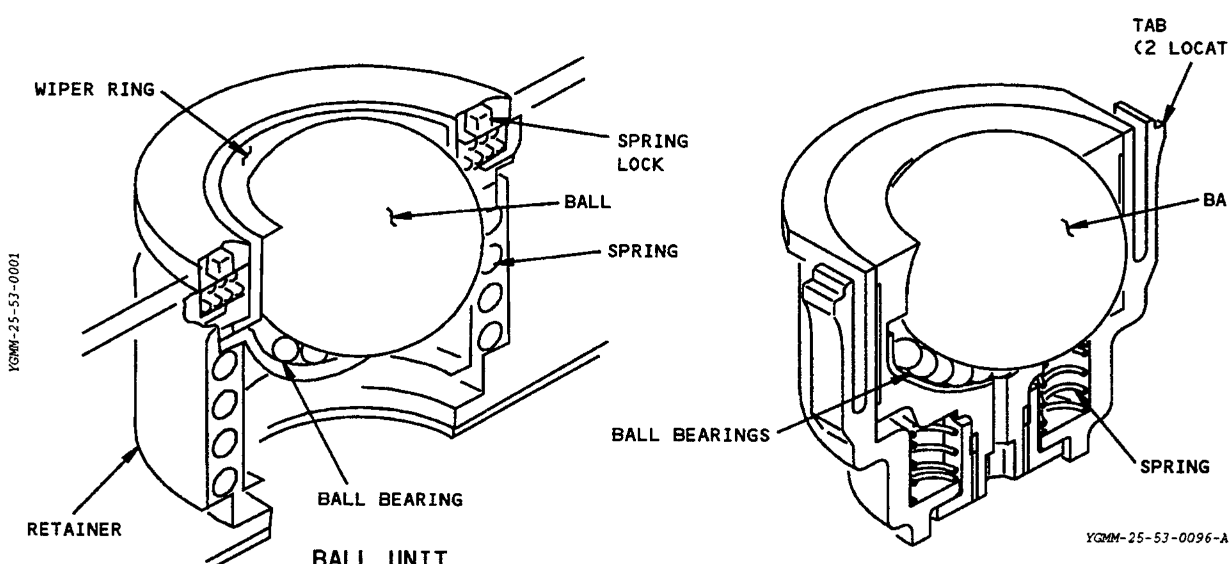


(EXAMPLE FORWARD CARGO COMPARTMENT SHOWN)
DETAIL I

Ball Transfer Panel
Figure 1 (Sheet 1)



BALL TRANSFER PANEL
DETAIL II



BALL UNIT
(EXAMPLE)
DETAIL III

BALL UNIT
(EXAMPLE)
DETAIL IV

Ball Transfer Panel
Figure 1 (Sheet 2)

EQUIPMENT/FURNISHINGS

1. General

   A. Emergency equipment includes items such as evacuation equipment, life rafts, emergency locator transmitters, but not fire extinguishers, oxygen equipment or masks.

   B. Escape Slides

      (1) Corrosion can cause much friction in the escape slide release mechanism. This condition may prevent the escape slide retaining shaft from rotating. Without rotation of the shaft, the slide cover will not deploy and the pressure vessel will not trigger (Ref 25-60-02, Fig. 1, Detail I).

      (2) Corrosion can occur on packboard bushings. Also, one packboard had very stiff quadrants and pawl assemblies on each side (Ref 25-60-02, Fig. 1, Detail III). Parts were loosened with the application of WD-40 and were subsequently sprayed with silicone.

      (3) Corrosion can occur between the packboard cover release rod and the bearing, which are made of different metals.

      (4) Corrosion can occur around the fittings because of water which can collect in the stowed escape slide. This water can also cause mold to start on the slide surfaces.

      (5) In the integrator at the latch opening actuator, stress corrosion can occur on the 400 CRES pins MS16562-236 that attach cams to the bellcrank (Ref 25-60-04, Fig. 1, Detail II).

   C. In the off-wing escape system switch panel, moisture accumulation can cause corrosion of switch terminals (Ref 25-60-03, Fig. 1).

2. Corrosion Prevention

   A. Following cleaning of suspected areas, a thorough inspection as described in Volume 1, 20-20-00 is effective to ensure that protective finishes provided during manufacture remain intact.

   B. For minor corrosion, to minimize the downtime of the airplane, the corrosion products should be cleaned off, followed by the application of a corrosion inhibiting compound into the affected area to retard the corrosion process (Ref Volume 1, 20-60-00). The finish system should be restored at the first opportunity consistent with the maintenance schedule.

   C. If you find corrosion on the 400 CRES pins MS16562-236 between the bellcrank and the cams in the latch opening integrator, replace the pins with 302 CRES pins MS51923-297. Refer to CMM 25-65-62 for details.

   D. Do not apply corrosion inhibiting compounds on grease joints or sealed bearings. These compounds dissolve grease and other lubricants. They are penetrating compounds and can get around the seals and into the bearings.

   E. Do not apply corrosion inhibiting compounds on interior materials such as insulation blankets. The compounds change the flammable quality of these materials.

F. Frequency of Application

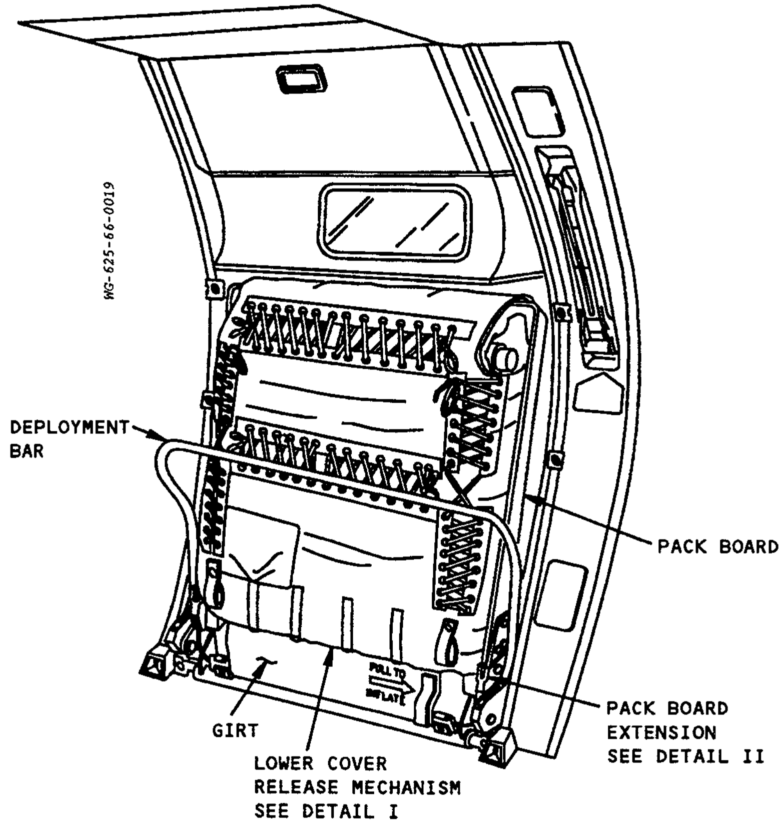
(1) Periodic inspection is required in areas identified as susceptible to corrosion and should be consistent to the schedules specified in the Maintenance Planning Document. Operators must be aware of reported problems and areas of occurrences.

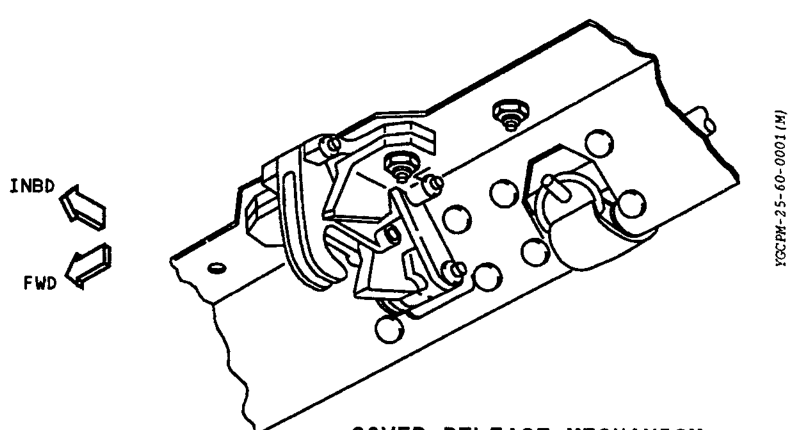
G. Improved Corrosion Protection

(1) On airplanes line number 138 and on, PRR B11511 changed and lubricated the cover latch mechanism to eliminate binding and possible corrosion. These changes can be incorporated on other airplanes per SB 25A0071.

(2) On airplanes line number 193 and on, per PRR B11716, the switch terminals of the off-wing escape switch panel are coated with a potting compound.

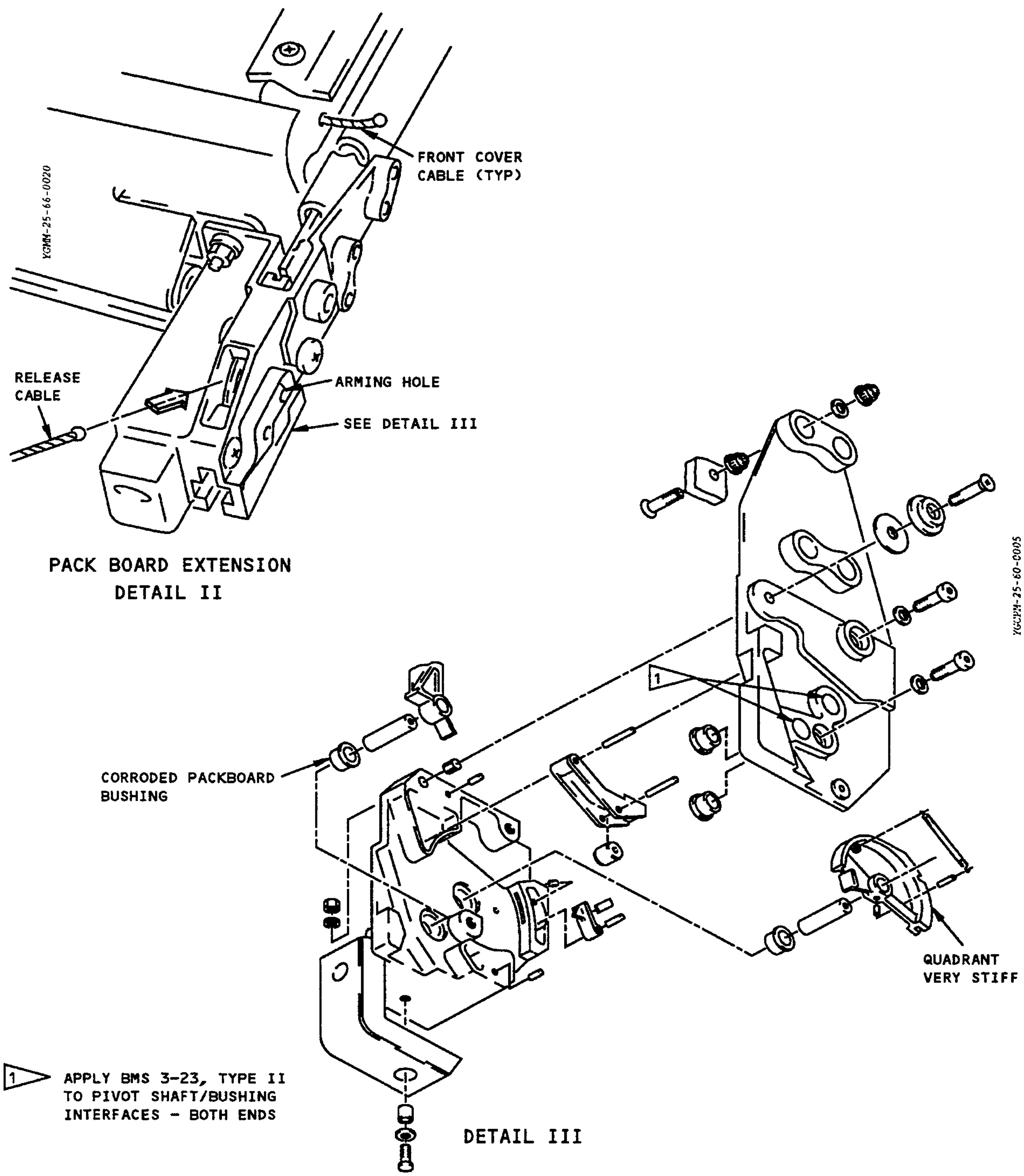
(3) On the off-wing escape slide integrators, a production change uses 302 CRES pins MS51923-297 between the cams and the bellcrank. Service Letter 767-25-070 gives more details.



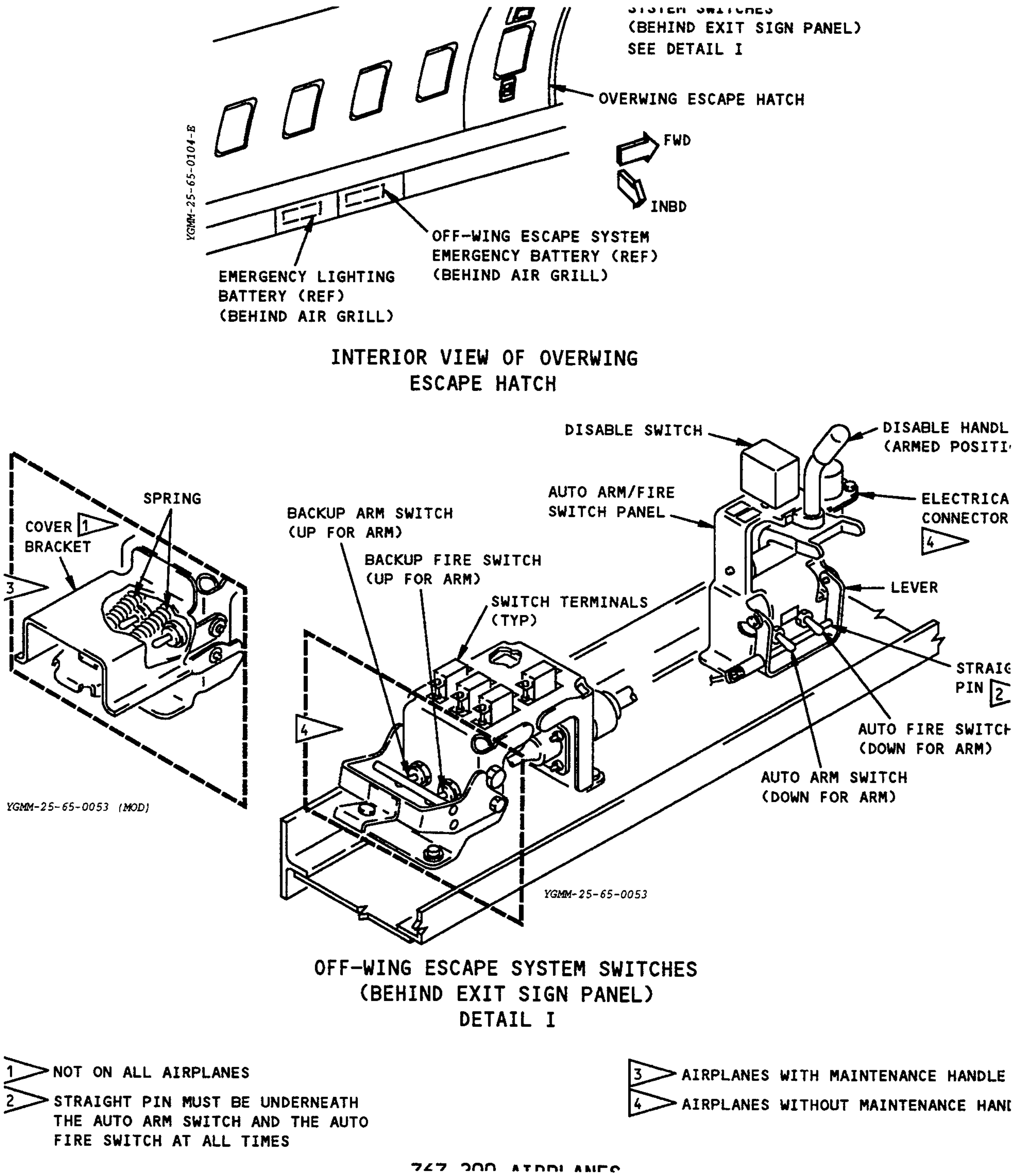


COVER RELEASE MECHANISM
DETAIL I

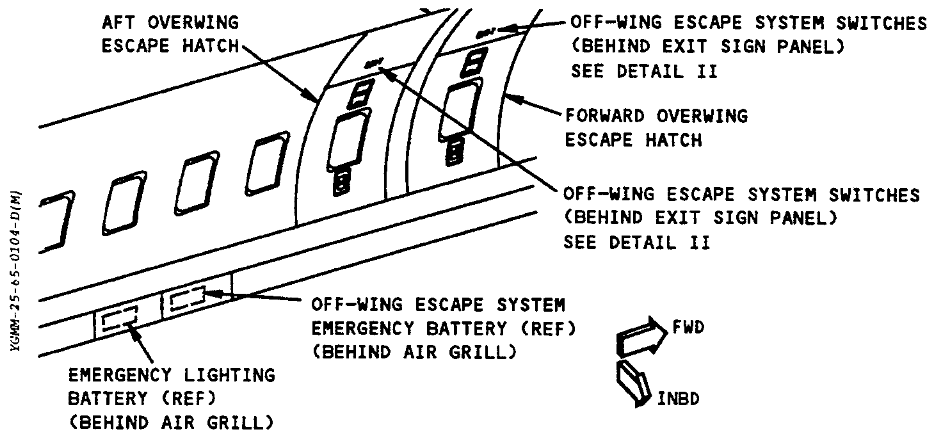
Escape Slides
Figure 1 (Sheet 1)



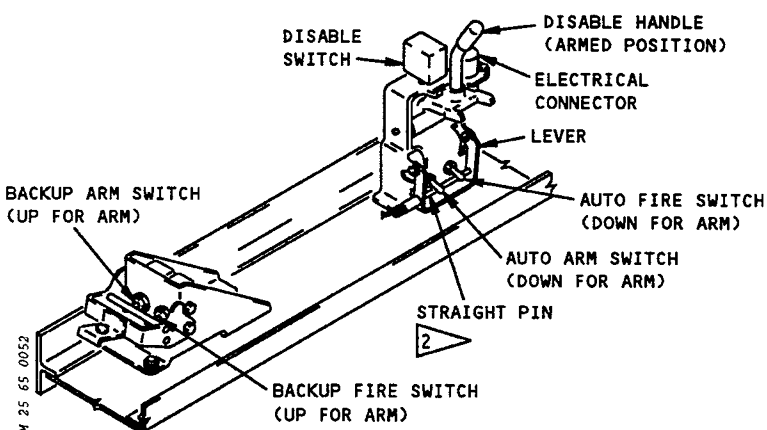
Escape Slides
Figure 1 (Sheet 2)



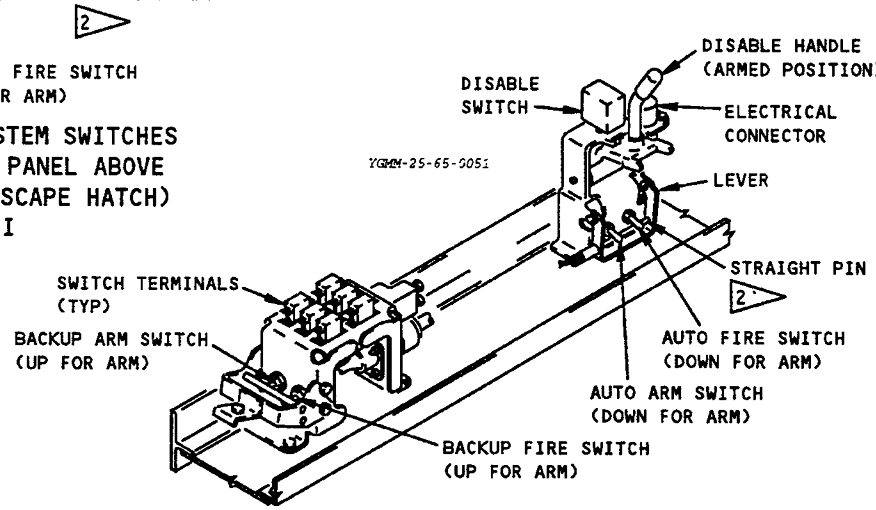
Off-Wing Escape System Switches
Figure 1 (Sheet 1)



INTERIOR VIEW OF OVERWING ESCAPE HATCHES



OFF-WING ESCAPE SYSTEM SWITCHES (BEHIND EXIT SIGN PANEL ABOVE FORWARD OVERWING ESCAPE HATCH)
DETAIL II

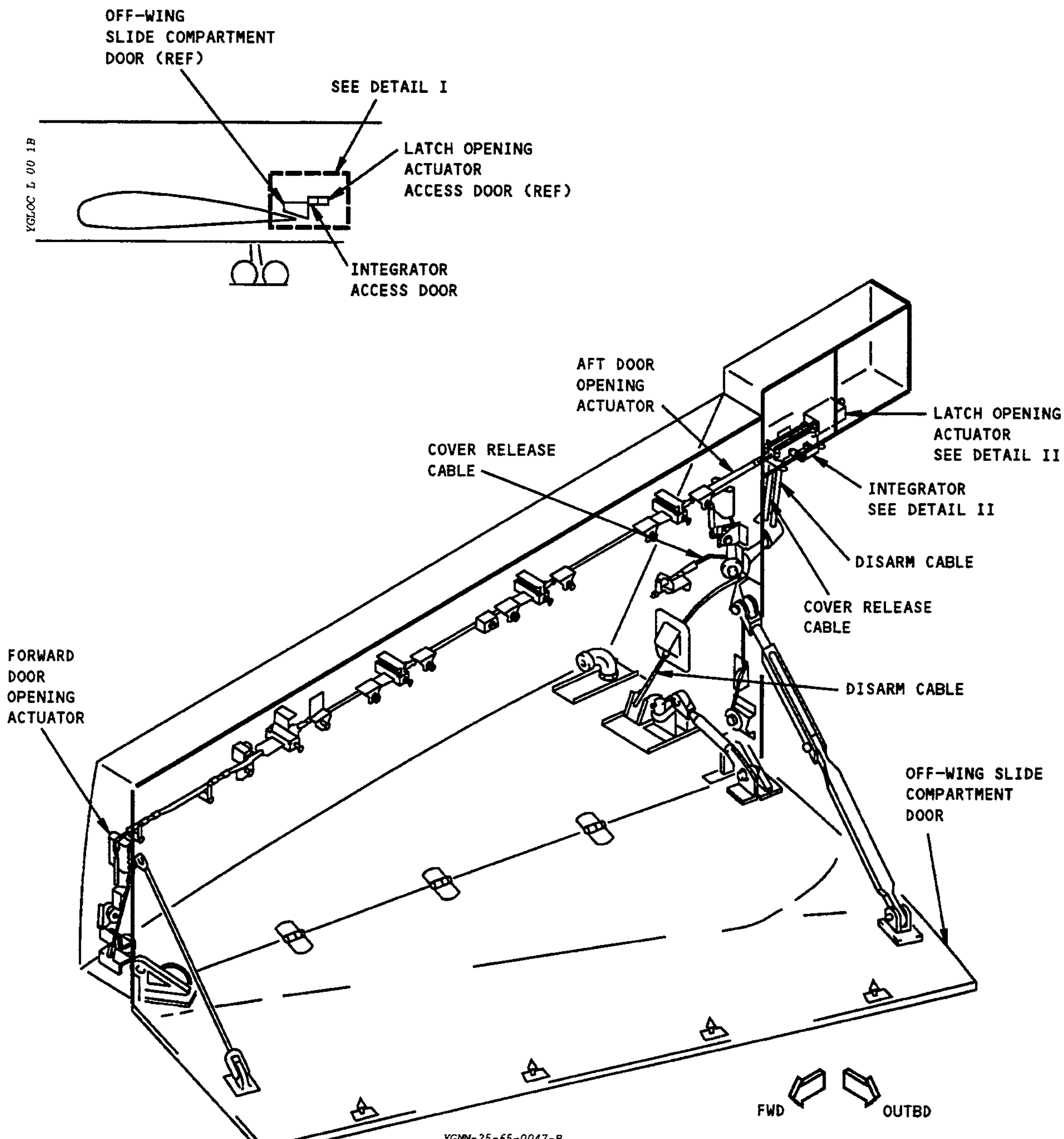


OFF-WING ESCAPE SYSTEM SWITCHES (BEHIND EXIT SIGN PANEL ABOVE AFT OVERWING ESCAPE HATCH)
DETAIL III

2 STRAIGHT PIN MUST BE UNDER THE AUTO ARM SWITCH AND THE AUTO FIRE SWITCH AT ALL TIMES

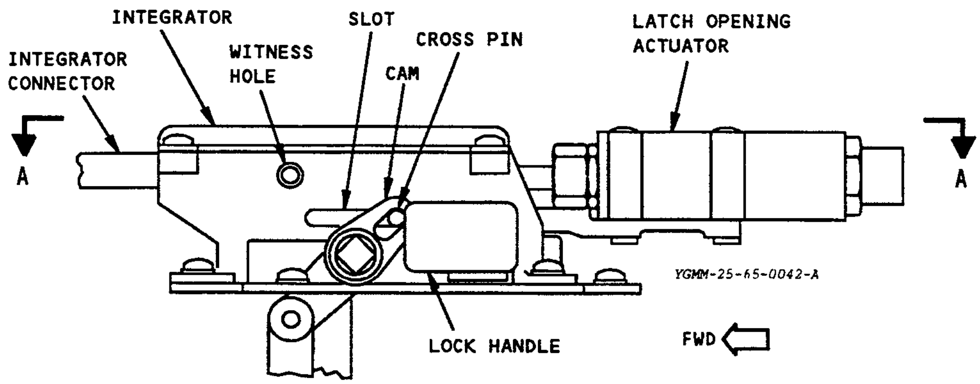
767-300 AIRPLANES

Off-Wing Escape System Switches
Figure 1 (Sheet 2)

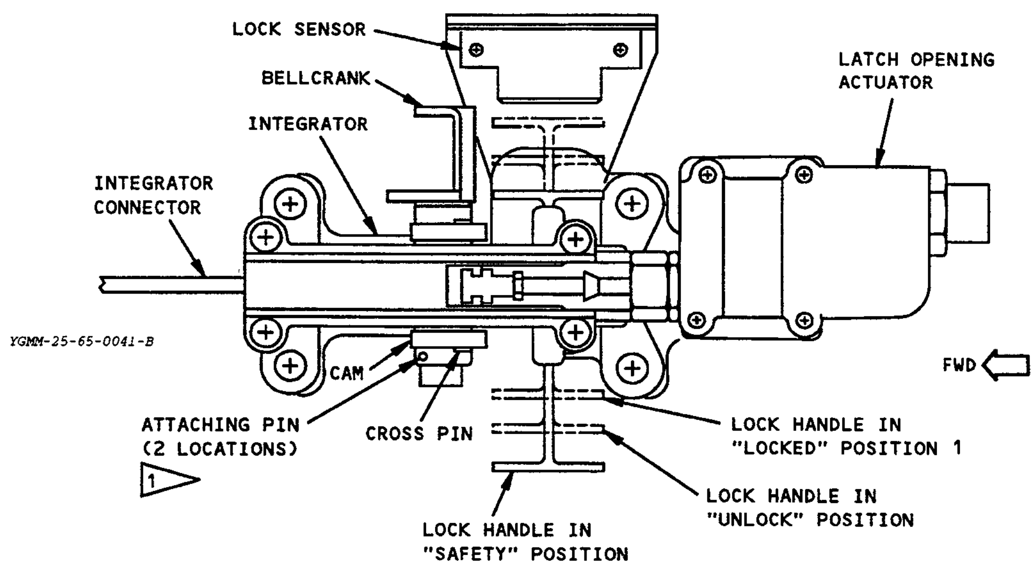


DETAIL I

Off-Wing Escape Slide Integrator
Figure 1 (Sheet 1)



INTEGRATOR IN UNLATCHED POSITION
(CAM IN AFT POSITION)
(LOCK HANDLE IN "SAFETY" POSITION)
DETAIL II



A-A

1 400 CRES PINS MS16562-236 CAN
GET STRESS CORROSION CRACKS

Off-Wing Escape Slide Integrator
Figure 1 (Sheet 2)

CHAPTER

27

FLIGHT CONTROLS

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AREA	PROBLEM	INDEX PREVENTION VOLUME 2	TERMINATING ACTION (IF ANY)
Control Cables	Corrosion on carbon steel cables	27-00-02	
Aileron and Tab	Binding and corrosion of control wheel and column assembly	27-10-01	
	Corrosion of bearings in aileron linkage	27-10-01	
	Corrosion of springs in inboard aileron droop mechanism	27-10-01	
	Corrosion of bearings in input control linkage of power control actuators	27-10-01	
	Corrosion of bearings in wheel well control rods	27-10-01	
	Corrosion of bearings Elevator and Tab in input control linkage of power control actuators	27-30-01	
	Corrosion in the Flaps deflection control tracks of trailing edge flaps	27-50-01	
	Corrosion in slat Lift Augmenting System tracks of LE slats	27-80-01	
	Corrosion of LE slat control rod door brackets	27-80-01	
	Corrosion of LE slat cores	27-80-01	

Specific Corrosion Problems - Flight Controls
Figure 1

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FLIGHT CONTROLS

1. General

   A. Control cables are made of thin strands of tinned carbon steel. Cables are protected by a thin film of grease. Corrosion can occur where the grease film is not there and the cables are open to moisture.

2. Corrosion Prevention

   A. At regular times, wipe off the grease with a dry, lint-free cloth and examine the cable for corrosion.

   B. Apply a thin film of grease over the length of the cable per 12-21-31 of the Maintenance Manual after you examine the cable.

   C. If you find corrosion, refer to Structural Repair Manual.

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1. General

A. The aileron and tab portion of the flight control system controls the movement of the ailerons/elevons and tabs. This includes the control wheels, cables, boosters, linkages, control surfaces, indicators, and actuators. The deployment of flight control surfaces exposes portions of the aileron control system to ground contaminants, thrust reverser soot, runway dirt and inclement weather, all of which contribute to corrosion.

B. Corrosion can occur on the bearings in the pilots' control wheel (Ref 27-10-02).

C. Corrosion can occur on bearings in linkage of the power control actuators (Ref 27-10-03,27-10-04), the outboard aileron lockout mechanism (Ref 27-10-05), and the aileron control feel mechanism (27-10-06).

D. Corrosion can occur on the bearings in the input linkage of the power control actuators (Ref 27-10-03, 27-10-04).

E. Corrosion can occur on the springs of the inboard aileron droop mechanism (Ref 27-10-03, Fig. 2).

F. Corrosion can occur on the wheel well control rod bearings (Ref 27-10-07, Fig. 1).

2. Corrosion Prevention

A. Following cleaning of suspected areas, a thorough inspection as described in Volume 1, 20-20-00 is effective to ensure that the protective finishes provided during manufacture remain intact.

B. Where corrosion exists (noticeable bulges of the skin or white deposits of corrosion products at fastener heads or joint edges), refer to the index column in 27-00-01 for reference rework chapter.

C. For minor corrosion, to minimize the downtime of the airplane, the corrosion products should be cleaned off, followed by the application of a corrosion inhibiting compound into the affected area to retard the corrosion process (Ref Volume 1, 20-60-00). The finish system should be restored at the first opportunity consistent with the maintenance schedule.

D. Do not apply corrosion inhibiting compounds on grease joints or sealed bearings. These compounds dissolve grease and other lubricants. They are penetrating compounds and can get around the seals and into the bearings.

E. Frequency of Application

(1) Periodic inspection is required in areas identified as susceptible to corrosion and should be consistent to the schedules specified in the Maintenance Planning Document. Operators must be aware of reported problems and areas of occurrences.

(2) Periodic application of BMS 3-23 compound is necessary to areas identified and should be consistent to the schedule specified in the Maintenance Planning Document.

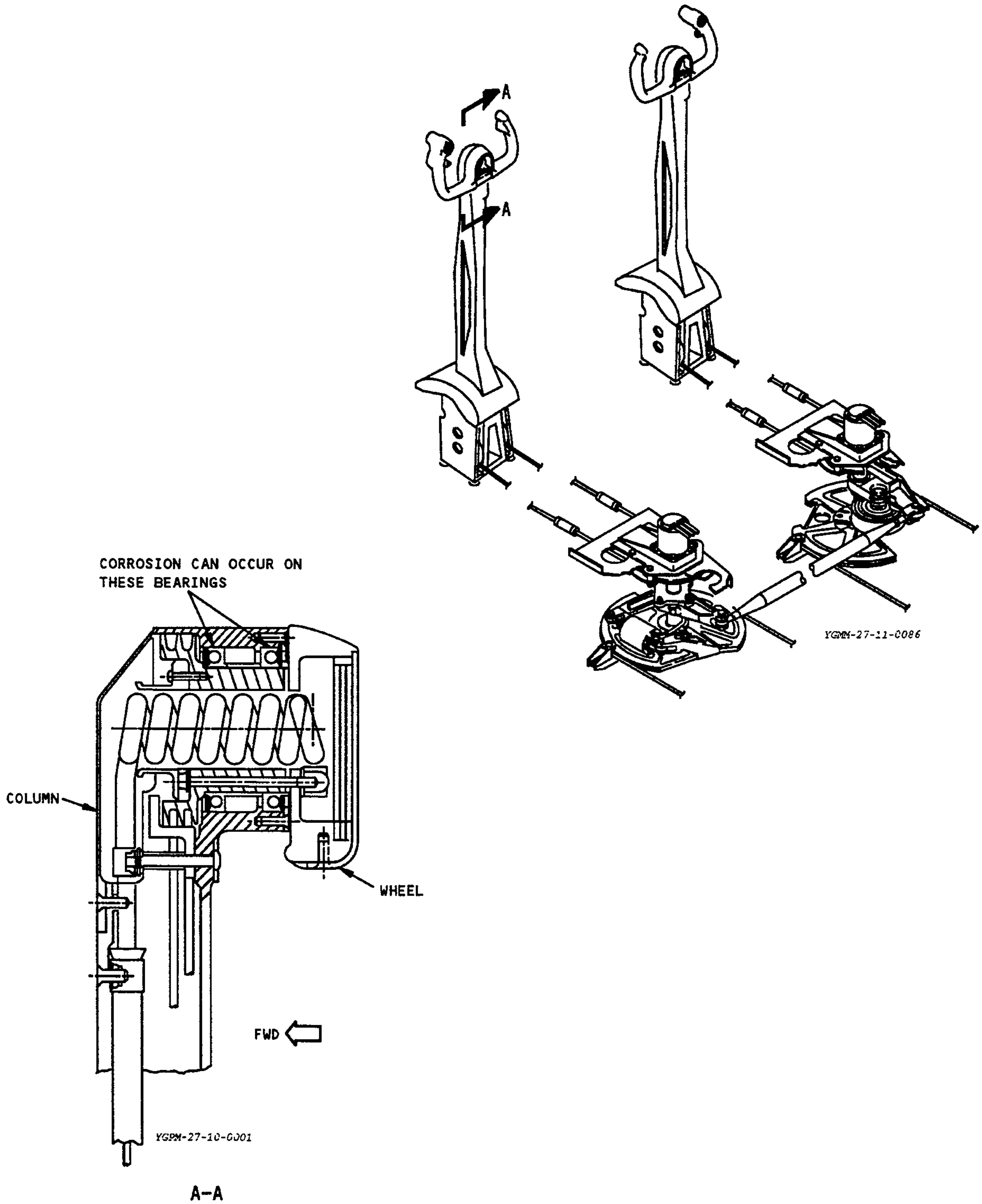
(3) Improved Corrosion Protection

(4) At line number 218, PRR B11715 installed bearings in the pilots' control wheel that have low starting torque.

(5) At line number 334, PRR B11857 installed corrosion-resistant bearings in linkage of the power control actuators, the outboard aileron Lockout mechanism, and the aileron control feel mechanism.

(6) At line number 529, PRR B12522 installed corrosion-resistant-steel bearings in the input linkage of the power control actuators.

(7) At line number 563, PRR B12597 installed corrosion-resistant-steel bearings in all lateral flight controls.



Control Wheel and Column Assembly
Figure 1

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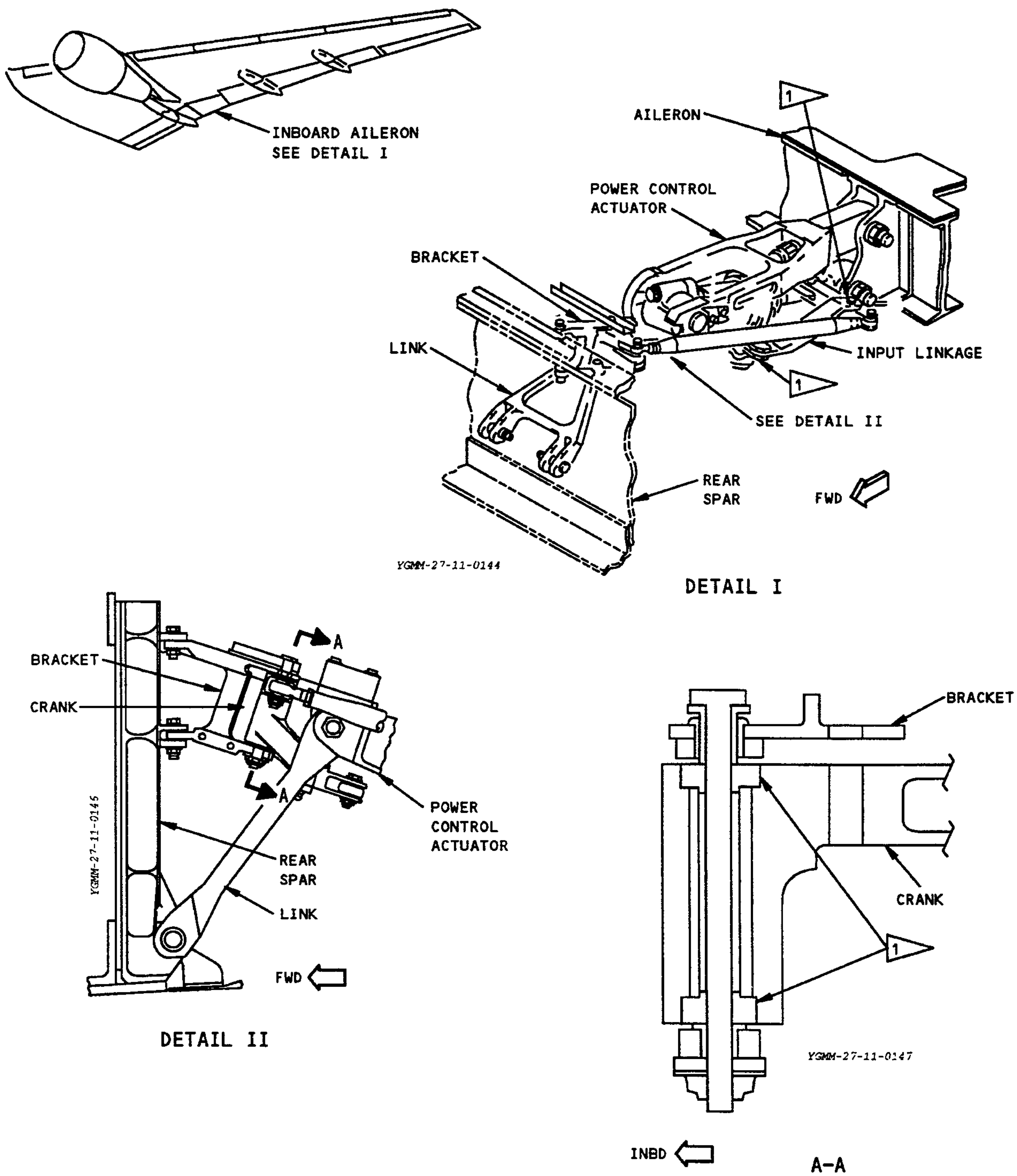
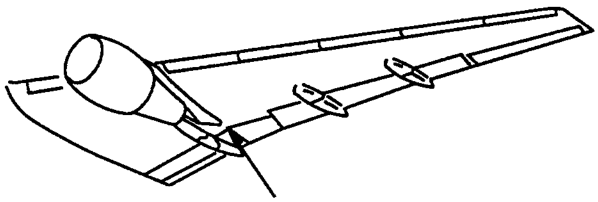
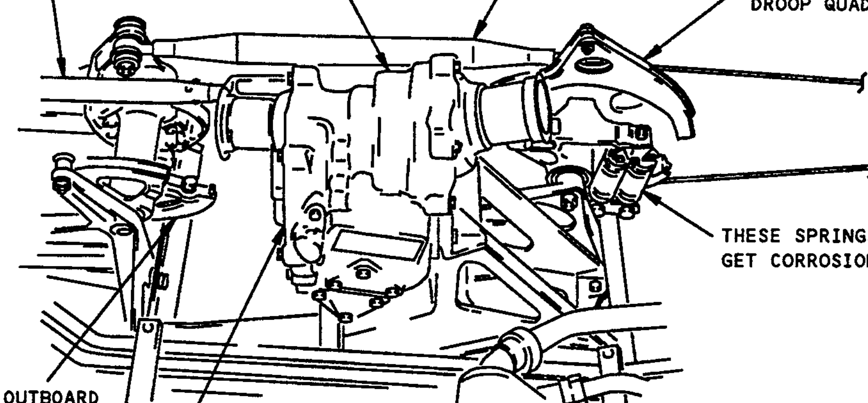


1 CORROSION CAN OCCUR ON THESE BEARINGS

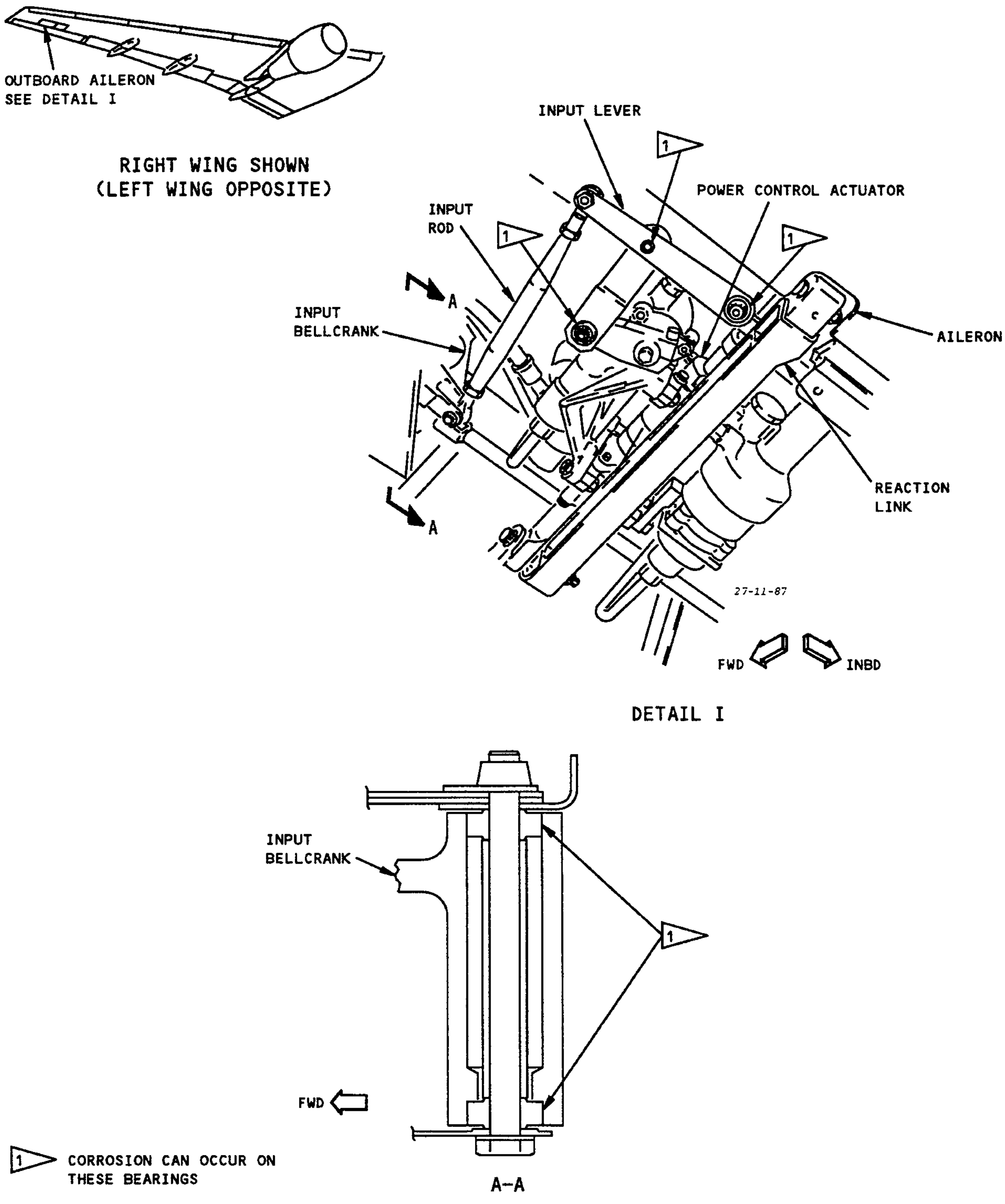
Inboard Aileron Power Control Actuator
Figure 1





INBOARD AILERON DROOP MECHANISM
DETAIL I

Inboard Aileron Power Control Actuator
Figure 2



Outboard Aileron Power Control Actuator
Figure 1

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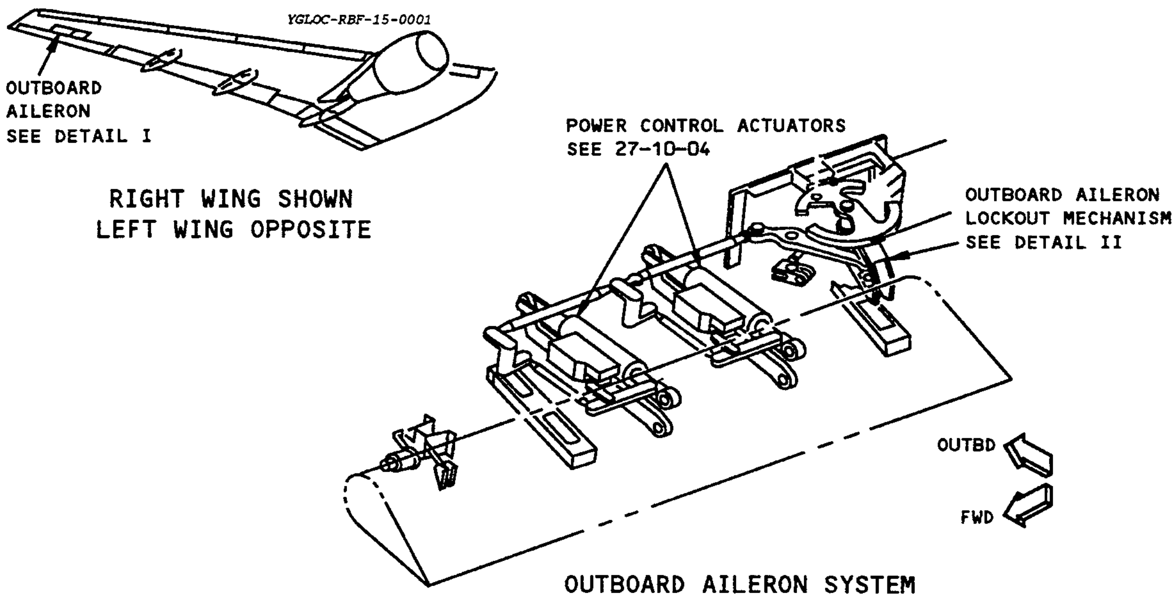
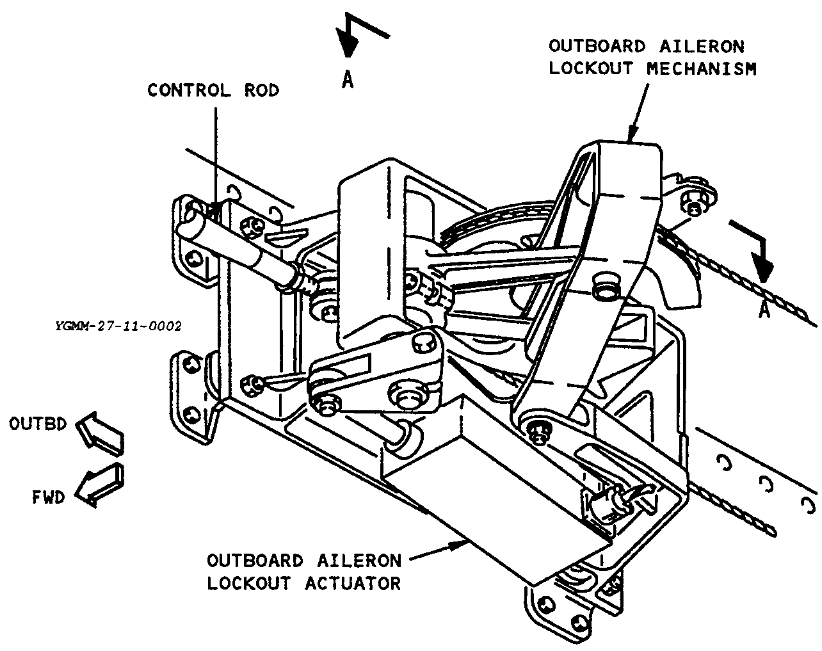
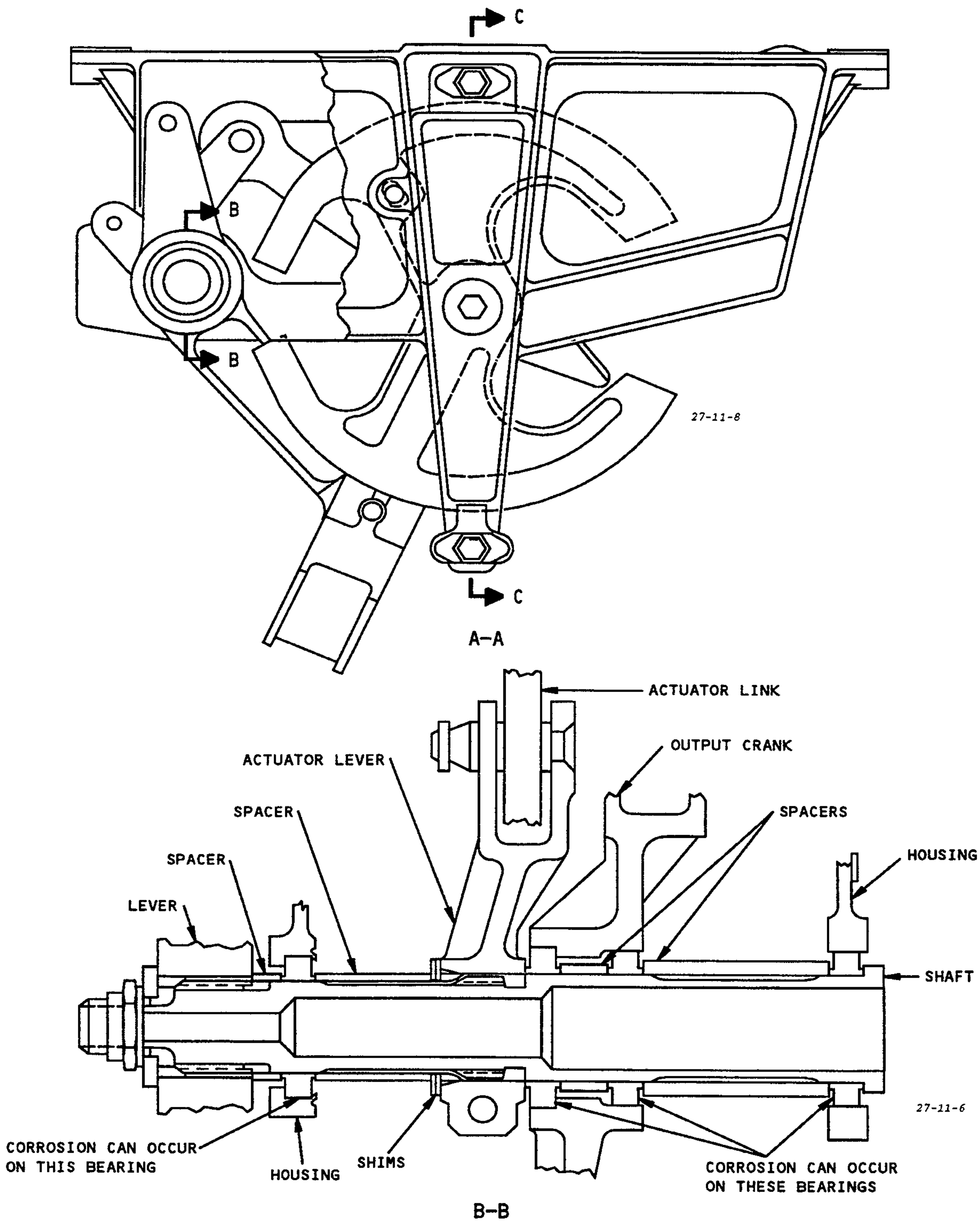


OUTBOARD AILERON SYSTEM
DETAIL I

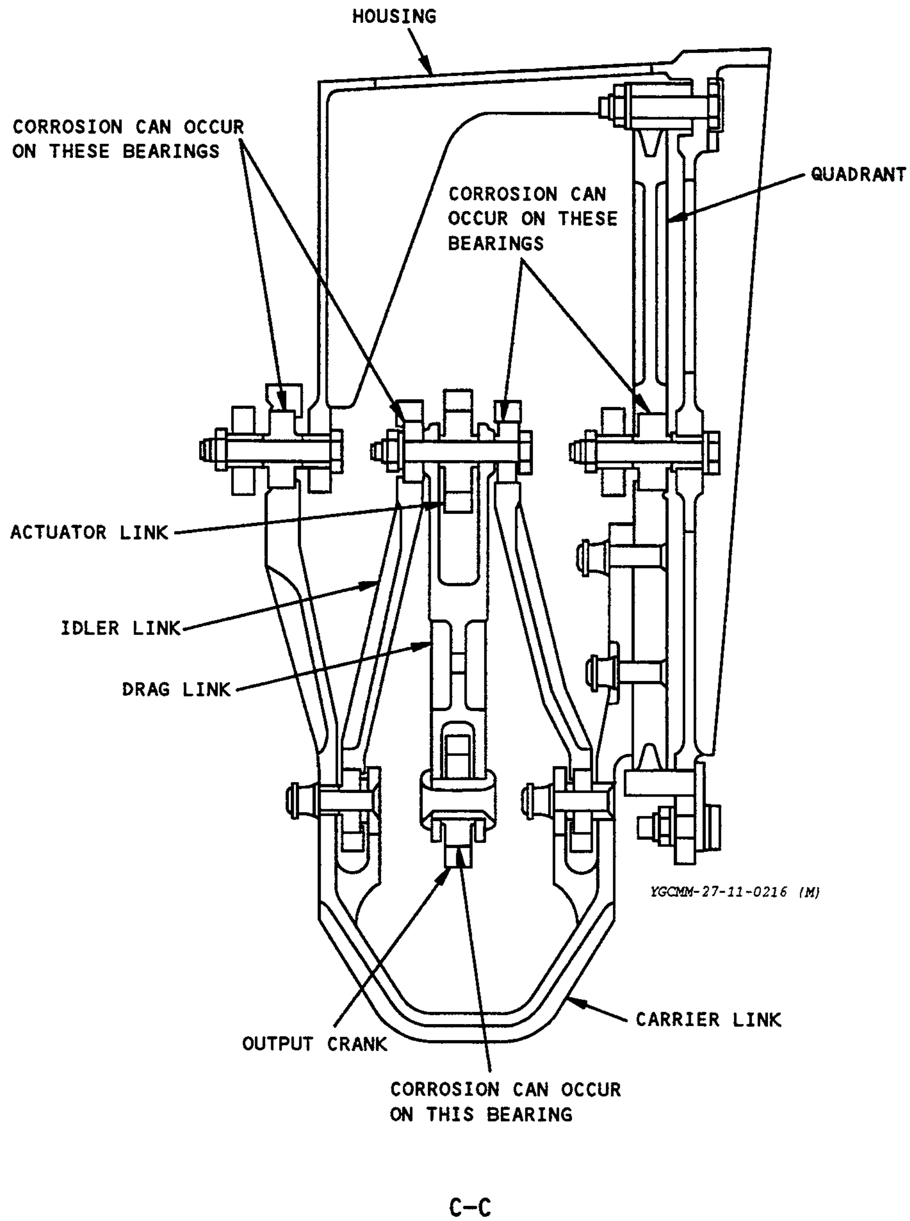


OUTBOARD AILERON LOCKOUT MECHANISM
DETAIL II

Outboard Aileron Lockout Mechanism
Figure 1 Sheet 1



Outboard Aileron Lockout Mechanism
Figure 1 (Sheet 2)



Outboard Aileron Lockout Mechanism
Figure 1 (Sheet 3)

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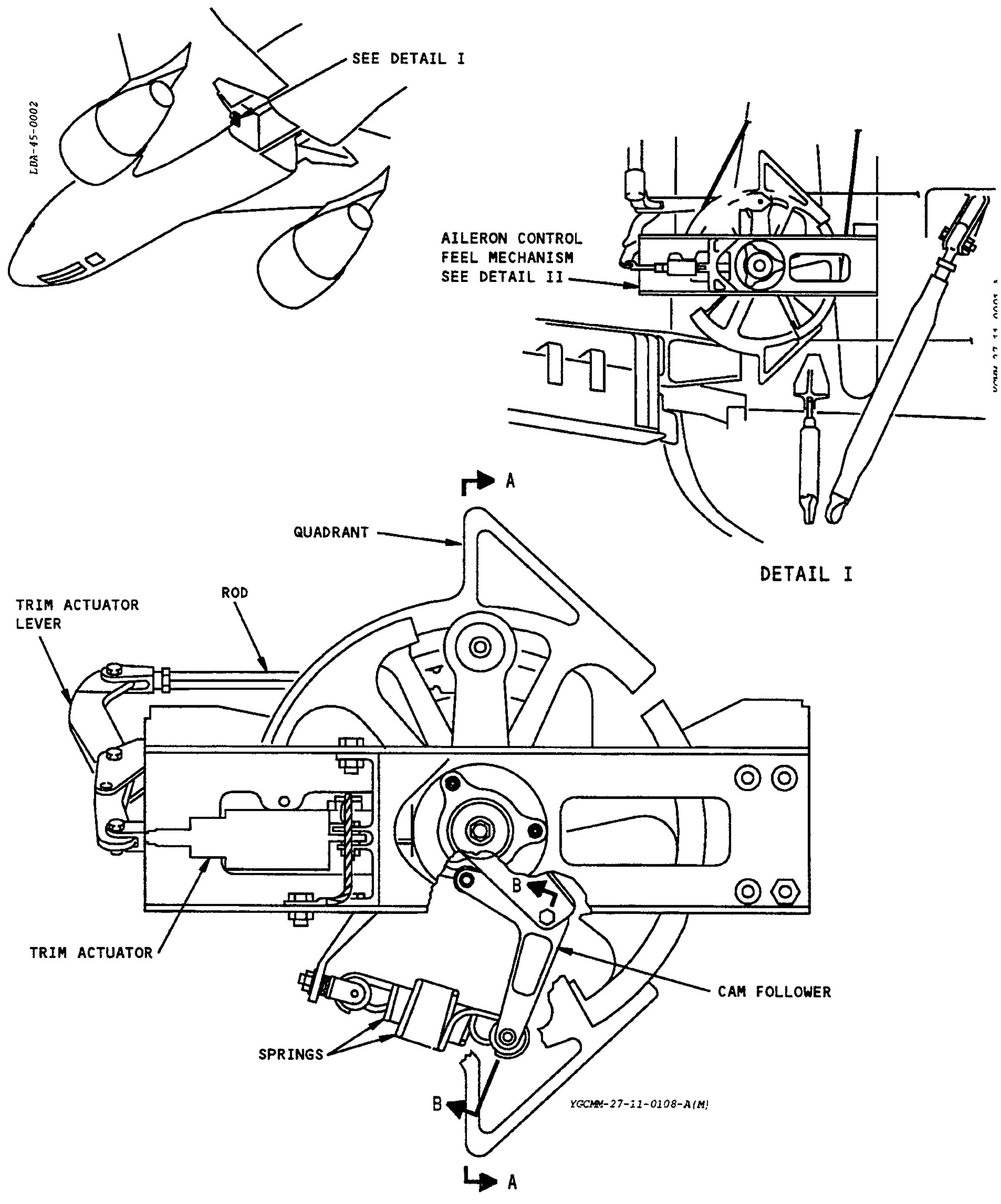
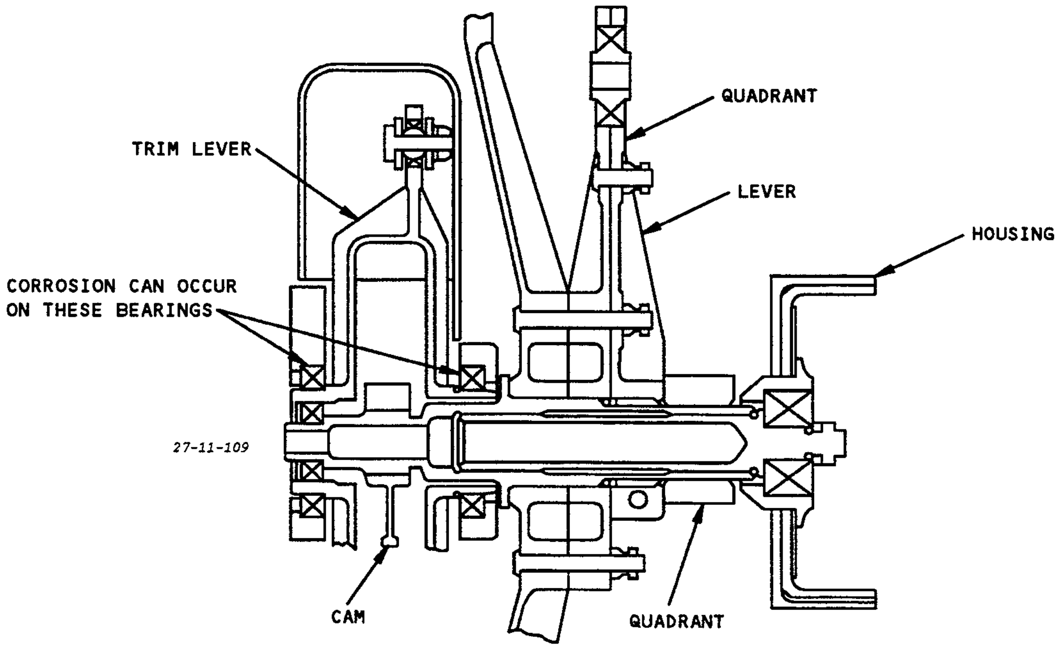
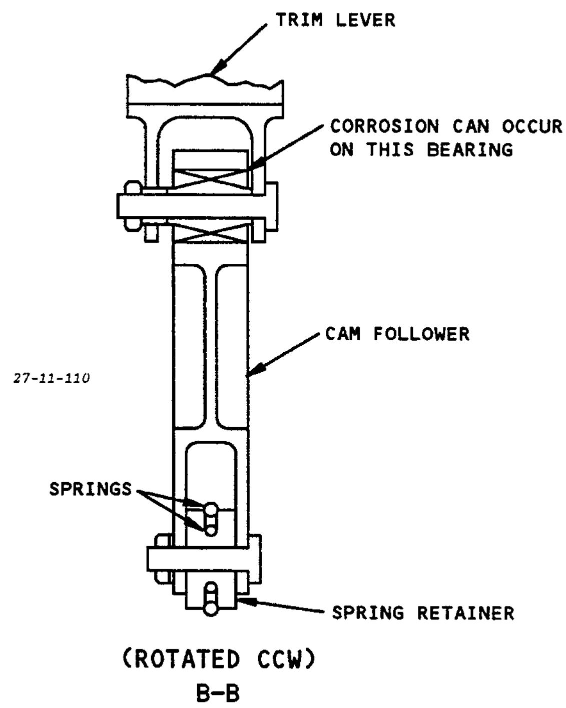


NOTE: DEBRIS GUARD REMOVED FOR CLARITY

Aileron Control Feel Mechanism
Figure 1 Sheet 1

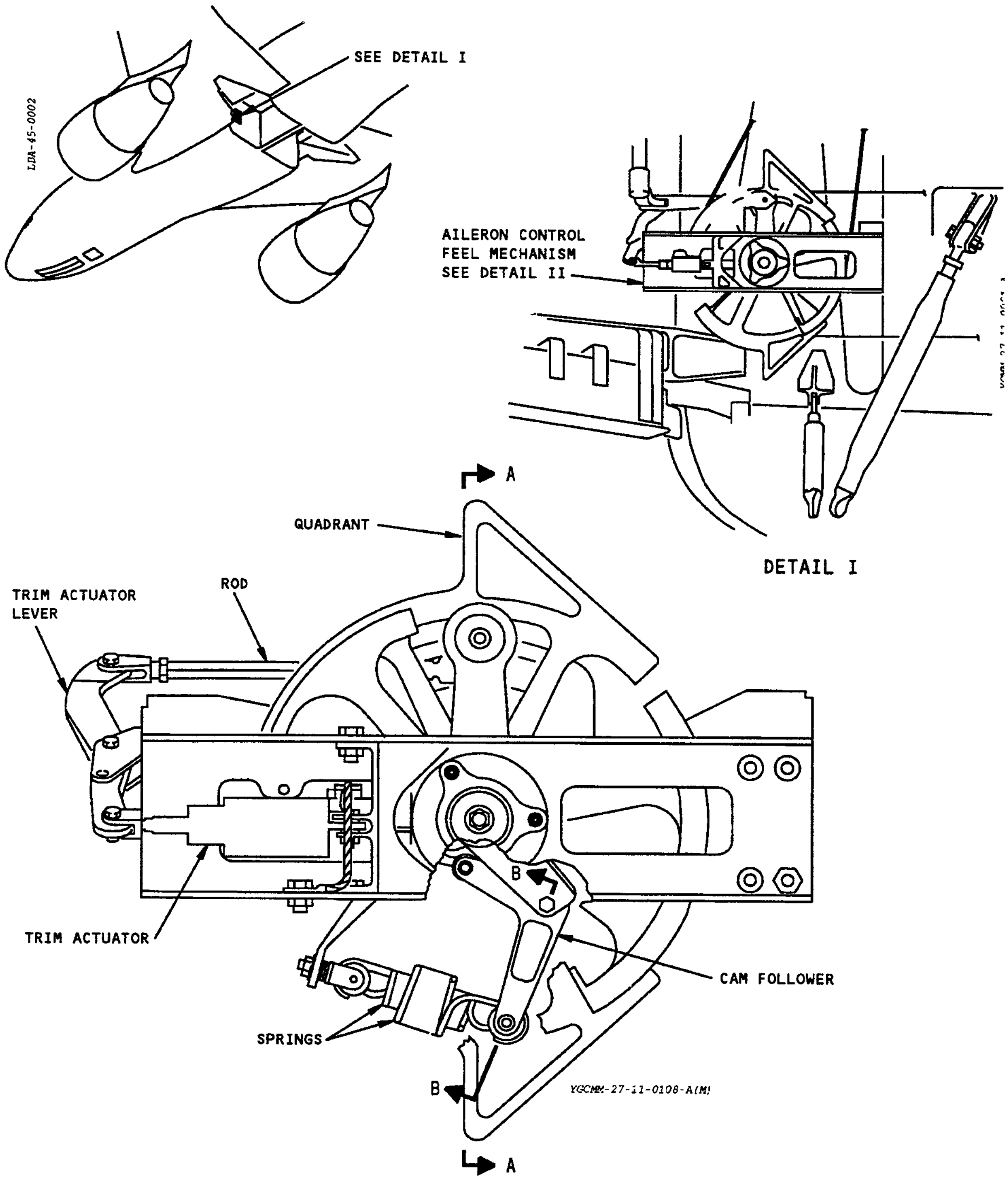


A-A



(ROTATED CCW)
B-B

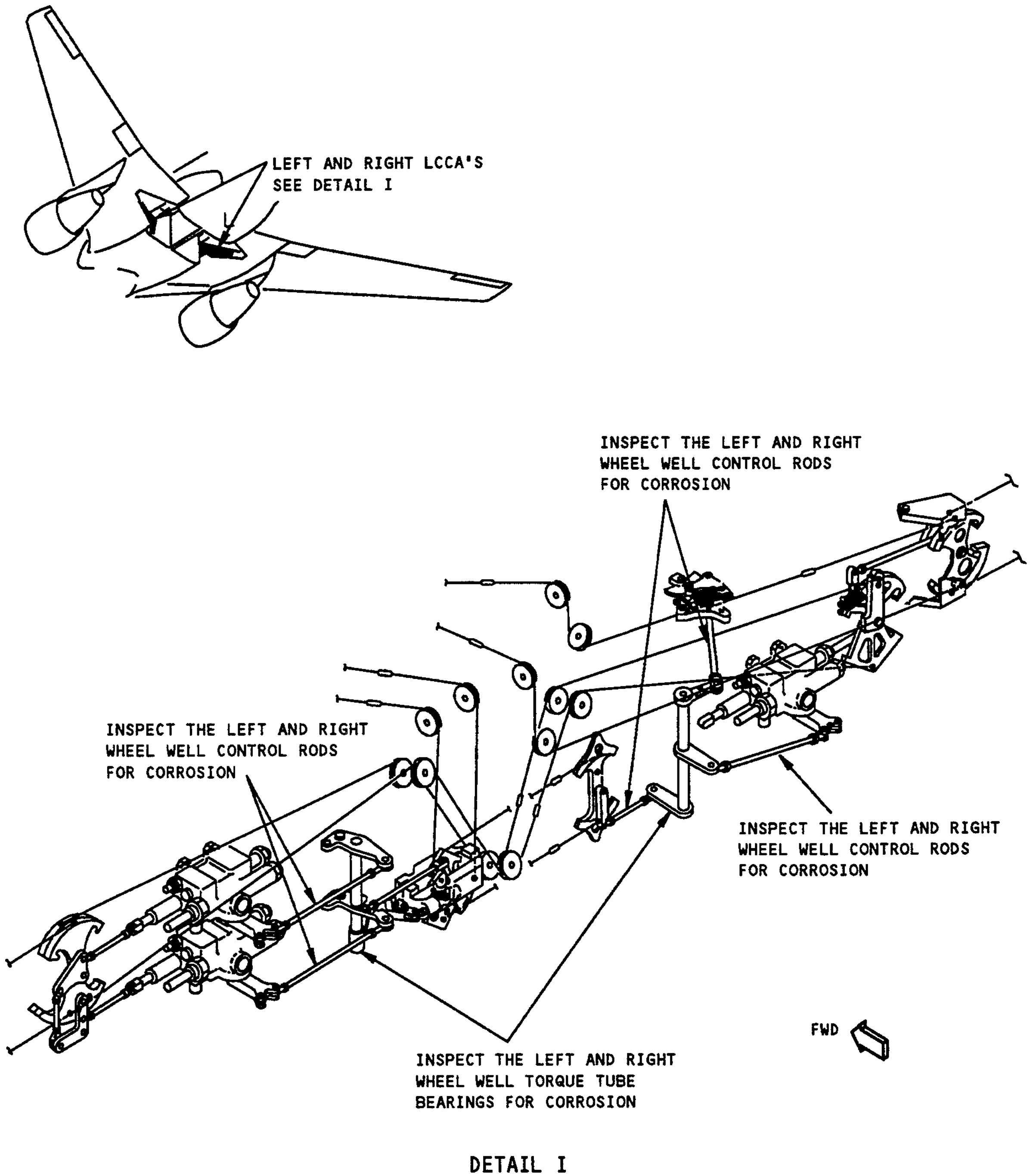
Aileron Control Feel Mechanism
Figure 1 (Sheet 2)



DETAIL II

NOTE: DEBRIS GUARD REMOVED FOR CLARITY

Aileron Control Feel Mechanism
Figure 1 Sheet 1



Wheel Well Control Rod bearing Inspection
Figure 1

FLIGHT CONTROLS

1. General

A. The elevator and tab portion of the flight control system controls the movement of the elevators and tabs. This includes the control wheels, cables, boosters, linkages, control surfaces, indicators, and actuators. When the flight control surfaces move, the elevator control system is open to dirt from the thrust reverser, runway and the weather, all of which can cause corrosion.

B. Corrosion can occur on the bearings in the input linkage of the power control actuators (Ref 27-30-02).

2. Corrosion Prevention

A. After you clean the area, examine the area per Volume 1, 20-20-00 to make sure that the protective finishes stay serviceable.

B. For small amounts of corrosion, to decrease the downtime of the airplane, clean off the corrosion products then apply corrosion inhibiting compound into the area to stop the corrosion process (Ref Volume 1, 20-60-00). Repair the finish when the maintenance schedule permits.

C. Do not apply corrosion inhibiting compounds on grease joints or sealed bearings. These compounds dissolve grease and other lubricants. They are penetrating compounds and can get around the seals and into the bearings.

D. Improved Corrosion Protection

(1) At line number 529, PRR B12522 installed corrosion-resistant-steel bearings in the input linkage of the power control actuators.

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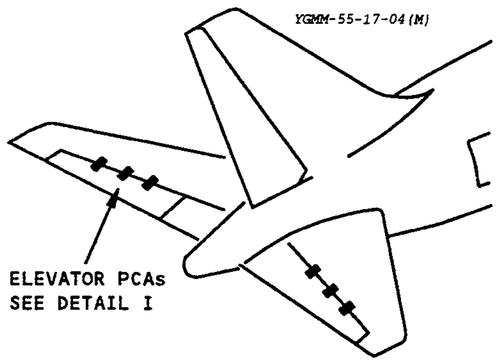

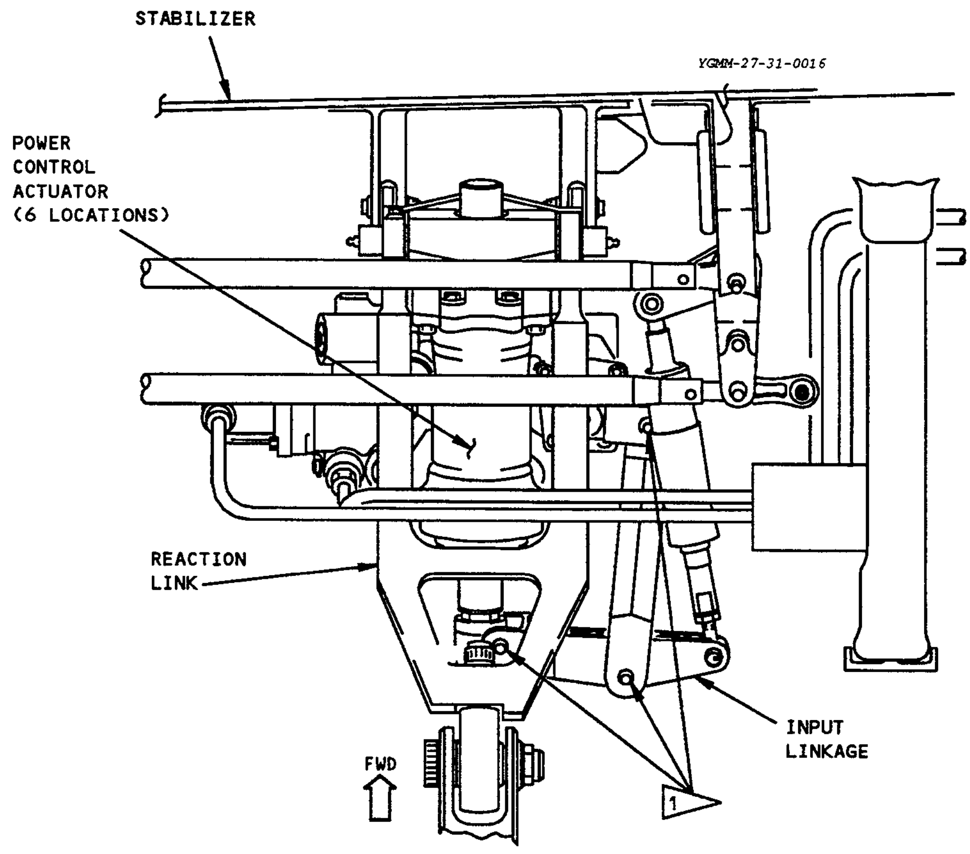

ELEVATOR PCA (EXAMPLE)
DETAIL I

Elevator Power Control Actuator Installation
Figure 1

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1. General

A. Flaps is the portion of the flight control system that controls the position and movement of the trailing edge flaps. Includes such items as control handles, cables, actuators, warning systems, linkages, control surfaces, position indicators, etc. Flap deployment exposes portions of the flap control system to ground contaminants, thrust reverser soot, runway dirt and inclement weather, all of which contribute to corrosion.

B. Corrosion has been reported over the entire surface of the left outboard deflection control flap track (Ref 27-50-02, Fig. 1).

2. Corrosion Prevention

A. Following cleaning of suspected areas, a thorough inspection as described in Volume 1, 20-20-00 is effective to ensure that the protective finishes provided during manufacture remain intact. Refer to Volume 1, 20-60-00 for details on the application of corrosion inhibiting compound.

B. Where corrosion exists (noticeable bulges of the skin or white deposits of corrosion products at fastener heads or joint edges), refer to the index column in 27-00-01 for reference rework chapter.

C. For minor corrosion, to minimize the downtime of the airplane, the corrosion products should be cleaned off, followed by the application of a corrosion inhibiting compound into the affected area to retard the corrosion process (Ref Volume 1, 20-60-00). The finish system should be restored at the first opportunity consistent with the maintenance schedule.

D. Do not apply corrosion inhibiting compounds on grease joints or sealed bearings. These compounds dissolve grease and other lubricants. They are penetrating compounds and can get around the seals and into the bearings.

E. Frequency of Application

(1) Periodic inspection is required to areas identified as susceptible to corrosion and should be consistent to the schedules specified in the Maintenance Planning Document. Operators must be aware of reported problems and areas of occurrences.

(2) Periodic application of BMS 3-23 compounds in necessary to areas identified and should be consistent to the schedule specified in the Maintenance Manual.

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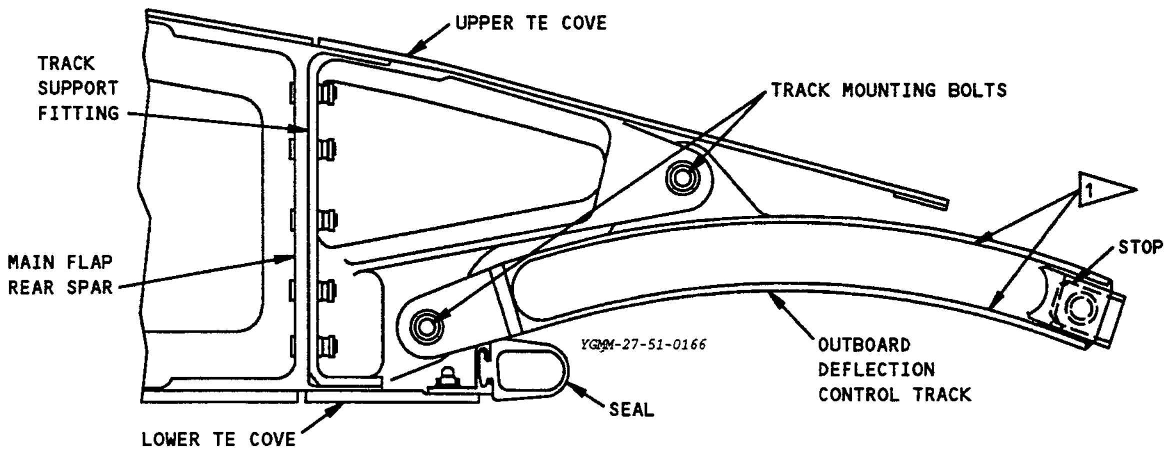

DEFLECTION CONTROL TRACK
(OUTBD SHOWN, INBD SIMILAR)

1 TRACK SURFACE SUSCEPTIBLE TO CHROMIUM DEPLETION AND SUBSEQUENT CORROSION

TE Flap Deflection Control Track
Figure 1

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1. General

A. Lift augmenting is that portion of the system which controls the position and movement of variable opening wing slats, leading edge wing flaps, and other similar auxiliary devices used for increasing aerodynamic lift. Includes items such as control handles, cables, actuators, linkages, warning systems, control surfaces, position indicators, etc. The deployment of lift augmenting devices exposes portions of the lift augmentation system to ground contaminants, thrust reverser soot, runway dirt and inclement weather, all of which contribute to corrosion.

B. Corrosion can occur on LE slat tracks (Ref 27-80-02, Fig. 1).

C. Corrosion can occur on outboard leading edge slat control rods at the bracket and clamp assembly used for holding control rod doors in place.

D. Corrosion can occur on the offset gearbox no-brake spring washer of the outboard LE slat and on internal gear assemblies of leading edge slat rotary actuators.

E. Corrosion in the core of the leading edge slats because of moisture can cause damage to the trailing edge wedges.

2. Corrosion Prevention

A. Following cleaning of suspected areas, a thorough inspection as described in Volume 1, 20-20-00 is effective to ensure that the protective finishes provided during manufacture remain intact.

B. Where corrosion exists (noticeable bulges of the skin or white deposits of corrosion products at fastener heads or joint edges), refer to the index column in 27-00-01 for reference rework chapter. For the trailing edge wedges of the leading edge slats, refer to SB 57A0039.

C. For minor corrosion, to minimize the downtime of the airplane, the corrosion products should be cleaned off, followed by the application of a corrosion inhibiting compound into the affected area to retard the corrosion process (Ref Volume 1, 20-60-00). The finish system should be restored at the first opportunity consistent with the maintenance schedule.

D. Do not apply corrosion inhibiting compounds on grease joints or sealed bearings. These compounds dissolve grease and other lubricants. They are penetrating compounds and can get around the seals and into the bearings.

E. Frequency of Application

(1) Periodic inspection is required in areas identified as susceptible to corrosion and should be consistent to the schedules specified in the Maintenance Planning Document. Operators must be aware of reported problems and areas of occurrences.

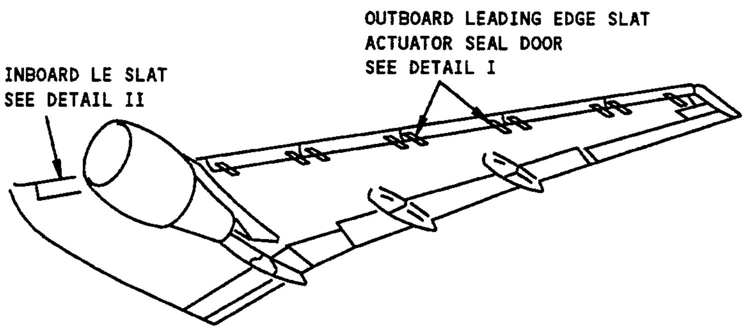
(2) Periodic application of BMS 3-23 compound is necessary to areas identified and should be consistent to the schedule specified in the Maintenance Planning Document.

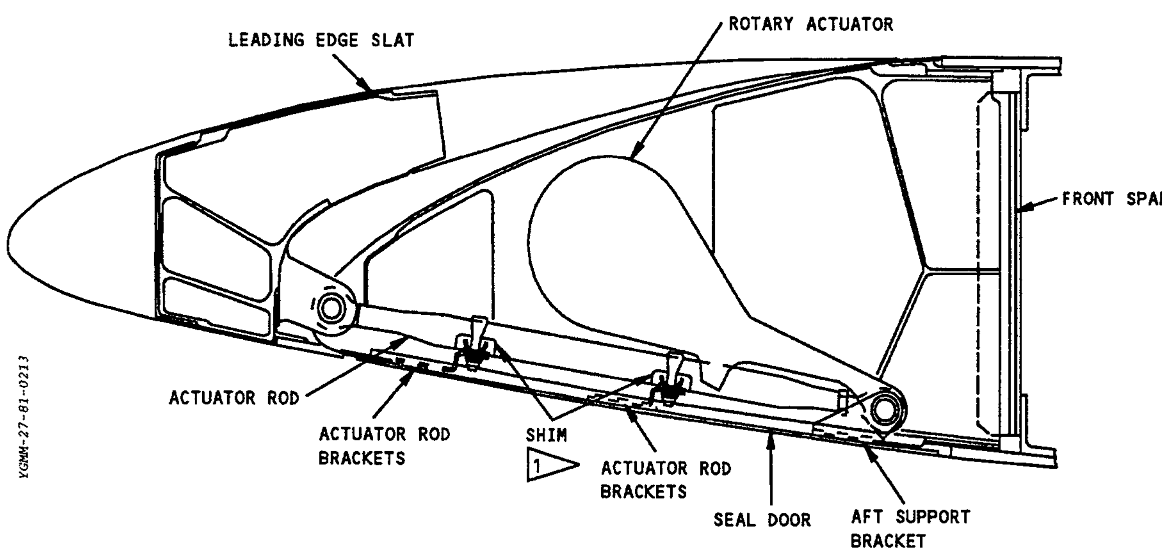
F. Improved Corrosion Protection

(1) At line number 112, a production change applied BMS 5-95 sealant to the outer surface of the shim between leading edge slat actuator rods and actuator rod door brackets (Ref 27-80-02, Fig. 1).

(2) At line number 98, a production change installed CRES spring washers on both inboard and outboard leading edge slat offset gearboxes.

(3) At line number 480, PRR B12388-1 applied BMS 3-23 compound to all interior metallic structure of all leading edge slats.

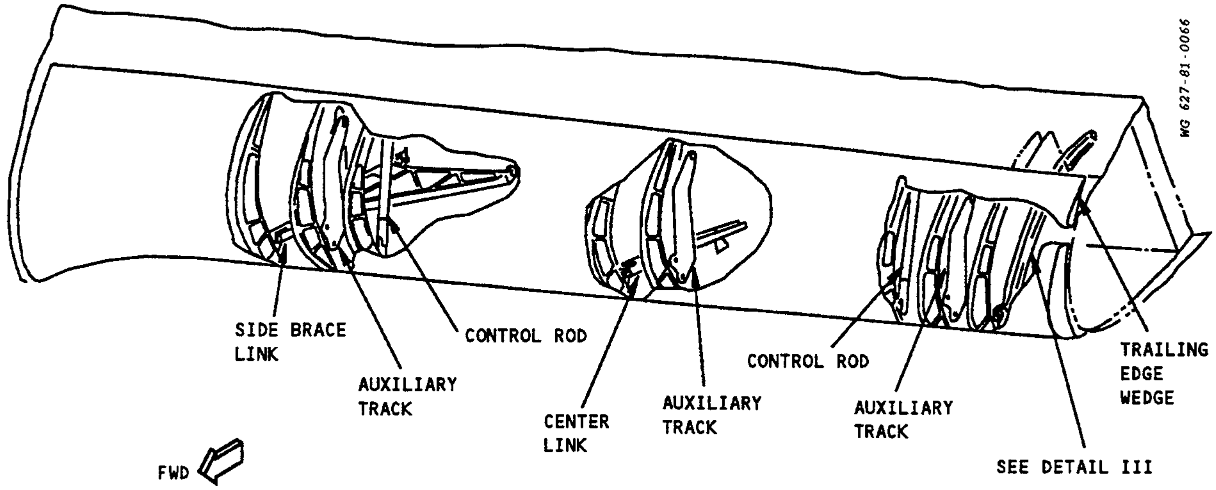




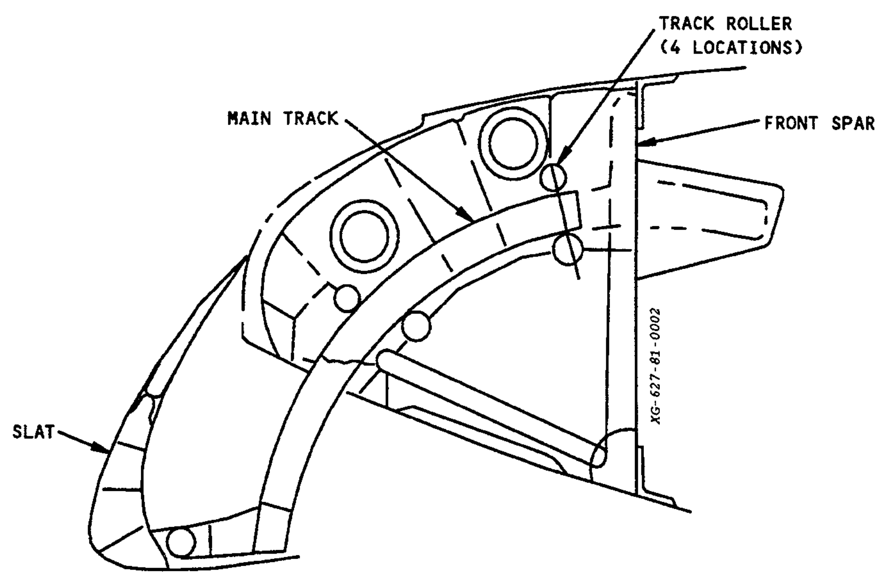
OUTBOARD LEADING EDGE SLAT ACTUATOR SEAL DOOR
DETAIL I

1 APPLY BMS 5-95 SEALANT TO OUTER SURFACE AS NECESSARY

Leading Edge and Leading Edge Devices
Figure 1 (Sheet 1)



LEFT INBOARD SLAT NO. 6
(RIGHT INBOARD SLAT NO. 7 OPPOSITE)
DETAIL II



MAIN TRACK
DETAIL III

Leading Edge and Leading Edge Devices
Figure 1 (Sheet 2)

CHAPTER

28

FUEL

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FUEL

AREA	PROBLEM	INDEX PREVENTION VOLUME 2	TERMINATING ACTION (IF ANY)
Fuel Shutoff Valve Actua-tors	Corrosion at body joints and water entry into actuators	28-20-01	SB 28A0020
Densitometer Electronics Unit	Corrosion of the connector	28-40-01	

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FUEL

1. General

A. This system includes tanks, valves, actuators, pumps and fuel lines. This system is used to distribute fuel among various tanks of the airplane, and to remove fuel from the airplane.

B. Corrosion can occur on the exterior of the fuel shutoff valve actuators, at body joints and fastener heads. If this corrosion gets in past the O-rings, contamination and water can cause malfunctions of the actuators.

2. Corrosion Prevention

A. Make regular checks of the actuators for corrosion at body joints and fastener heads. If you find corrosion, replace the defective actuators per SB 28A0020.

B. Corrosion inhibiting compounds can be used on fuel vapor barriers.

C. Improved Corrosion Protection

(1) Fuel Shutoff Valve Actuators -- Airplanes line number 245 and on use actuators per PRR B11898, with cadmium-plated external screws and washers, and with sealant on the body joints and fastener heads. These improvements can be incorporated on other airplanes by actuator replacement per SB 28A0020.

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FUEL

1. General

A. This system includes equipment that measures fuel quantity, temperature, and pressure.

B. Corrosion can occur on the electrical connector of the densitometer electronics unit (DEU).

2. Corrosion Prevention

A. Make regular checks of the electrical connectors. If you find corrosion, replace the defective parts.

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CHAPTER

29

HYDRAULIC POWER

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HYDRAULIC POWER

AREA	PROBLEM	INDEX		TERMINATING ACTION (IF ANY)
		PREVENTION VOLUME 2	REWORK VOLUME 3	
Main	Corrosion of hydraulic lines, valves and fittings	29-10-01	29-10-01	
Auxiliary	Corrosion of hydraulic line to pump on ram air turbine	29-20-01	---	SB 29A0065

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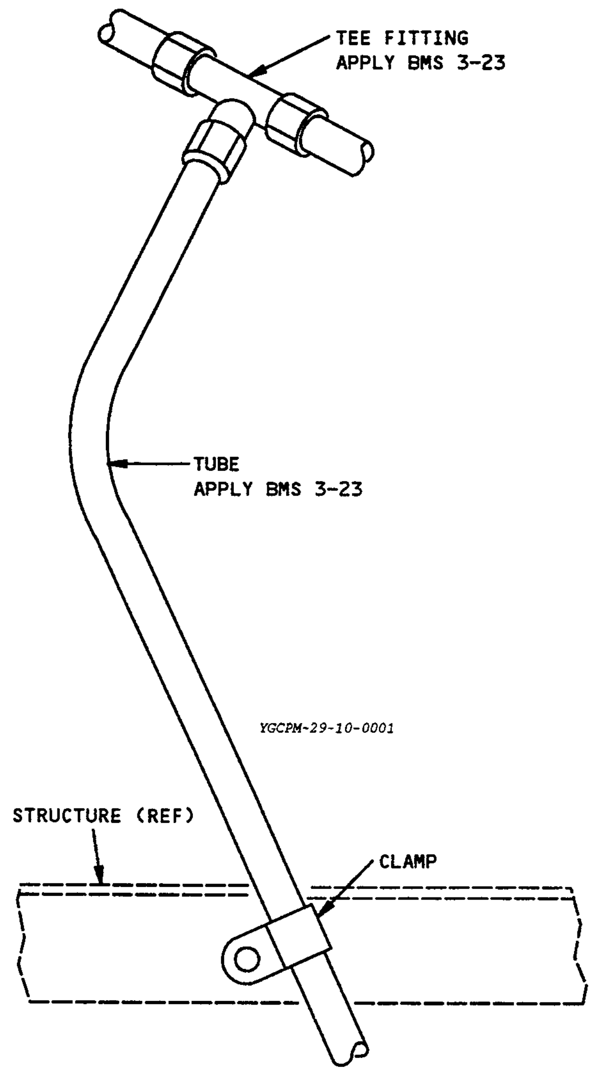

Hydraulic Plumbing
Figure 1

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FUEL

1. General

A. Corrosion can occur on the pressure tube on the ram air turbine. Sometimes the tube can break because of corrosion and preload stresses.

2. Corrosion Prevention

A. Regularly examine the ram air turbine for corrosion. Refer to SB 29A0065 for details.

B. Improved Corrosion Protection

(1) At line number 405, PRR B12434 changed the material of the pressure tube from 304 CRES to 321 CRES, which has better resistance to corrosion. This change can be incorporated on earlier airplanes with SB 29A0065.

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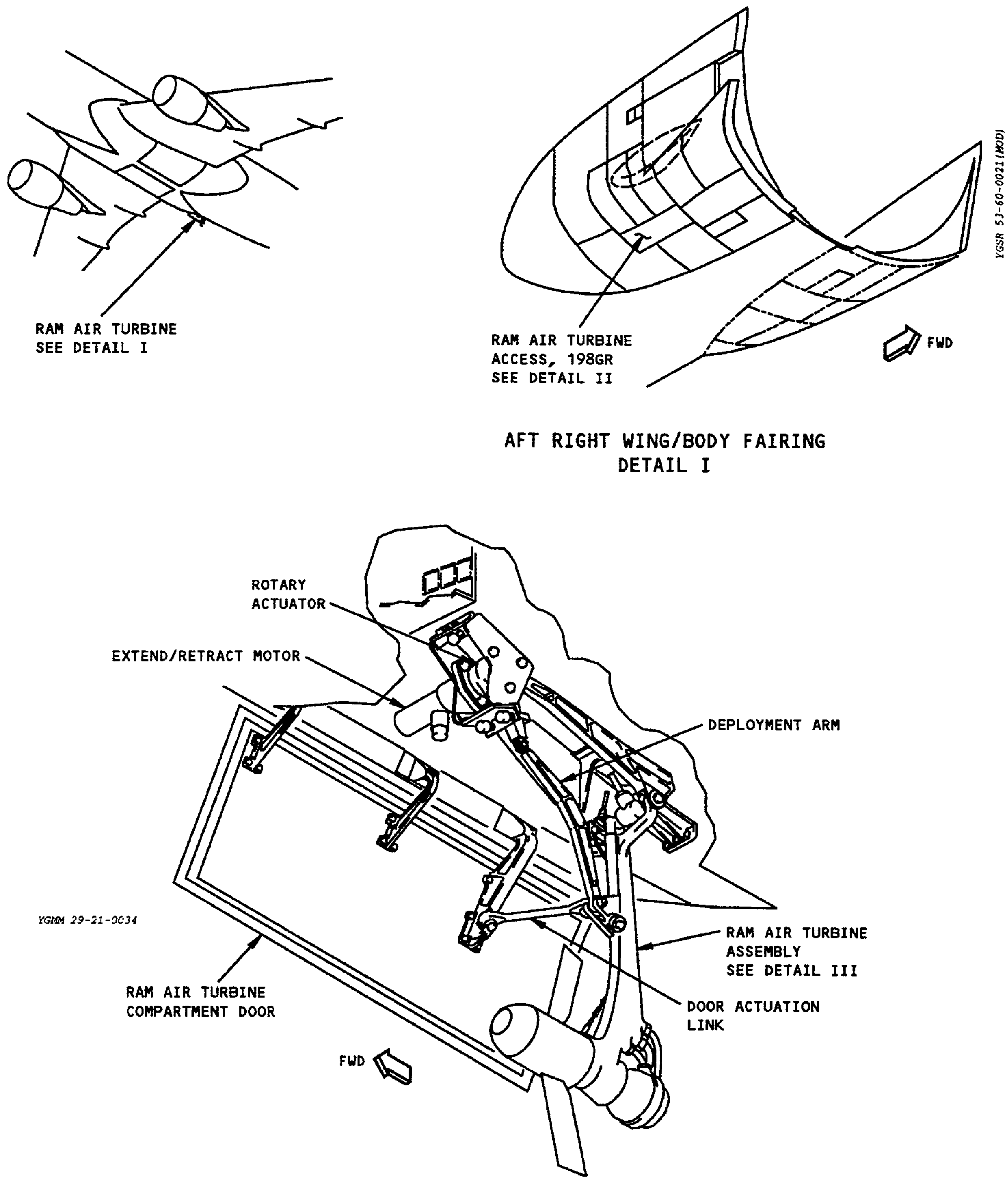
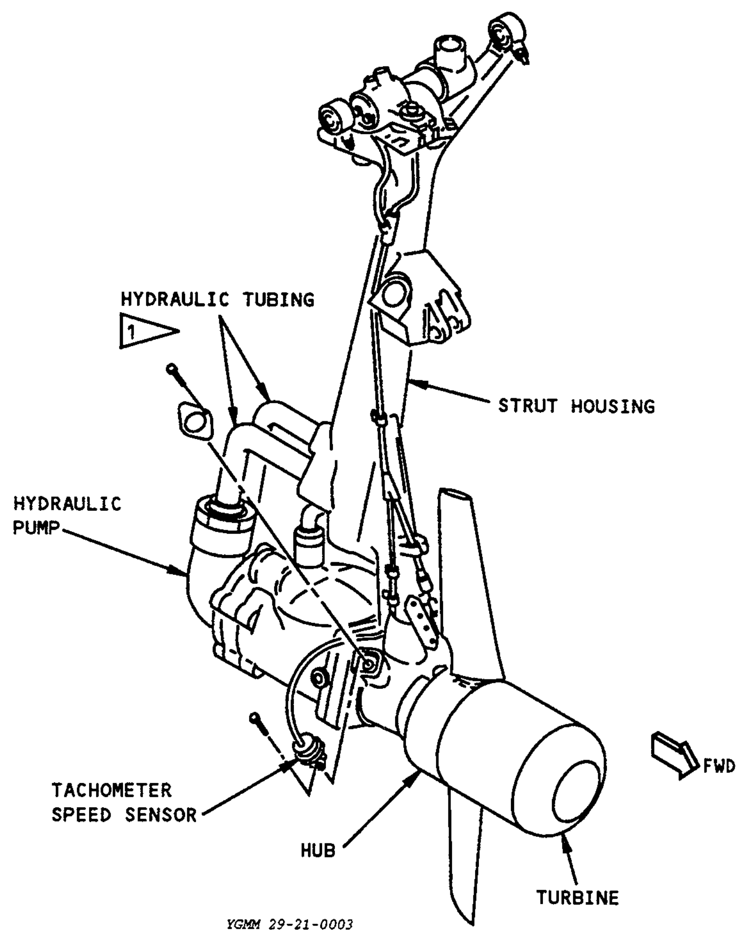


DETAIL II

Ram Air Turbine
Figure 1 (Sheet 1)



RAM AIR TURBINE ASSEMBLY
DETAIL III

1 AREA OF POSSIBLE CORROSION

Ram Air Turbine
Figure 1 (Sheet 2)

CHAPTER

30

ICE AND RAIN PROTECTION

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AREA	PROBLEM	INDEX PREVENTION VOLUME 2	INDEX REWORK VOLUME 3	TERMINATING ACTION (IF ANY)
Windshield Wiper Arms	Corrosion of pivot bolt	30-40-01		Replacement with modified part

Specific Corrosion Problems - Ice And Rain Protection
Figure 1

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1. General

A. The ice protection systems prevent icing on critical areas on the airplane and helps maintain aerodynamic efficiency by protecting wing leading edge slats, engine nose cowls, engine probes (Pt2/Tt2), pitot static probes, angle of attach probe (AOA), total air temperature probes, flight compartment windows, and water waste.

B. The rain protection system increase forward visibility through use of windshield wipers, and rain repellent.

C. Corrosion has been reported found on the fractured surfaces of the windshield wiper pivot bolt. Replacement of two-piece hub wiper arms has been initiated.

2. Corrosion Prevention

A. Following cleaning of suspected areas, a thorough inspection as described in Volume 1, 20-20-00 is effective to ensure that the protective finishes provided during manufacture remain intact. Refer to Volume 1, 20-60-00 for details on the application of corrosion inhibiting compound.

B. Do not apply corrosion inhibiting compounds on grease joints or sealed bearings. These compounds dissolve grease and other lubricants. They are penetrating compounds and can get around the seals and into the bearings.

C. For minor corrosion, to minimize the downtime of the airplane, the corrosion products should be cleaned off, followed by the application of a corrosion inhibiting compound into the affected area to retard the corrosion process (Ref Volume 1, 20-60-00). The finish system should be restored at the first opportunity consistent with the maintenance schedule.

(1) Periodically inspect windshield wiper components consistent with scheduled maintenance activity.

(2) Ensure that adjustment screws are tight and secure, allowing no relative motion between the hub halves that may possibly contribute to pivot bolt fracture.

D. Frequency of Application

(1) Periodic inspection is required to areas identified as susceptible to corrosion and should be consistent to the schedules specified in the Maintenance Planning Document. Operators must be aware of reported problems and areas of occurrences.

(2) Periodic application of BMS 3-23 compounds is necessary to areas identified and should be consistent to the schedule specified in the Maintenance Planning Document.

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CHAPTER

32

LANDING GEAR

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AREA	PROBLEM	INDEX PREVENTION VOLUME 2	TERMINATING ACTION (IF ANY)
Main Landing Gear	Corrosion of MLG components	32-10-01	
	Stress corrosion cracks on H-11 bolts	32-10-01	SL 51-8
Nose Landing Gear	Corrosion of NLG components	32-20-01	SB 32-0022
	Corrosion of the bearings in the housing of the nose wheel steering drum and lockout assembly	32-20-01	SB 32-0067
	Corrosion of bearings in nose wheel steering system	32-20-01	
Hydraulic Brake	Corrosion of bearings in brake metering valve module linkage	32-40-01	

Specific Corrosion Problems - Navigation
Figure 1

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MAIN GEAR AND DOORS

1. General

A. The main gear provides the major support for the aircraft while on the ground. This includes shock struts, bogie axles, drag struts, doors, linkages, attach bolts, etc. The main landing gear is exposed to air contaminants and runway splash which can cause corrosion.

B. H-11 bolts can get stress-corrosion cracks. When you remove H-11 bolts, replace them with Inconel 718 bolts, which do not get stress-corrosion cracks. Refer to SL 51-8 for further information.

C. Corrosion can occur on the end faces of the forward trunnion.

D. Corrosion can occur in the stainless steel reinforcement braid of hydraulic hoses, possibly because of chlorine and sulfur in the environment.

2. Corrosion Prevention

A. Make periodic inspections as described in Volume 1, 20-20-00 to ensure that the protective finishes provided during manufacture remain intact. The preferred treatment for broken finishes is to replace the finish with the same protective system as used originally. Since in some cases it is impractical or impossible to use this approach between overhaul cycles, the treatment described in the following paragraphs is recommended.

B. Where corrosion has already started, refer to Structural Repair Manual for details of corrosion removal.

C. Apply BMS 3-23 water displacing corrosion inhibiting compound to damaged finish on exposed surfaces. Refer to Volume 1, 20-60-00 for details of application of BMS 3-23.

D. After application of BMS 3-23, all grease fittings in the treated areas must be regreased.

E. Precautions for Use of Corrosion Inhibiting Compound.

CAUTION: DO NOT APPLY BMS 3-23 TO AREAS WHICH WILL BE SUBSEQUENTLY PAINTED OR SEALED.

OBSERVE PRECAUTIONS OF VOLUME 1, 20-60-00 ABOUT SPRAYING CONTROL CABLES WITH BMS 3-23.

(1) Apply BMS 3-23 to unpainted hydraulic tubing in the area.

(2) Shield or protect pulleys, wire bundles, etc., in some manner to prevent direct application of BMS 3-23.

(3) Mask off electrical connectors to avoid application to any electrical contacts.

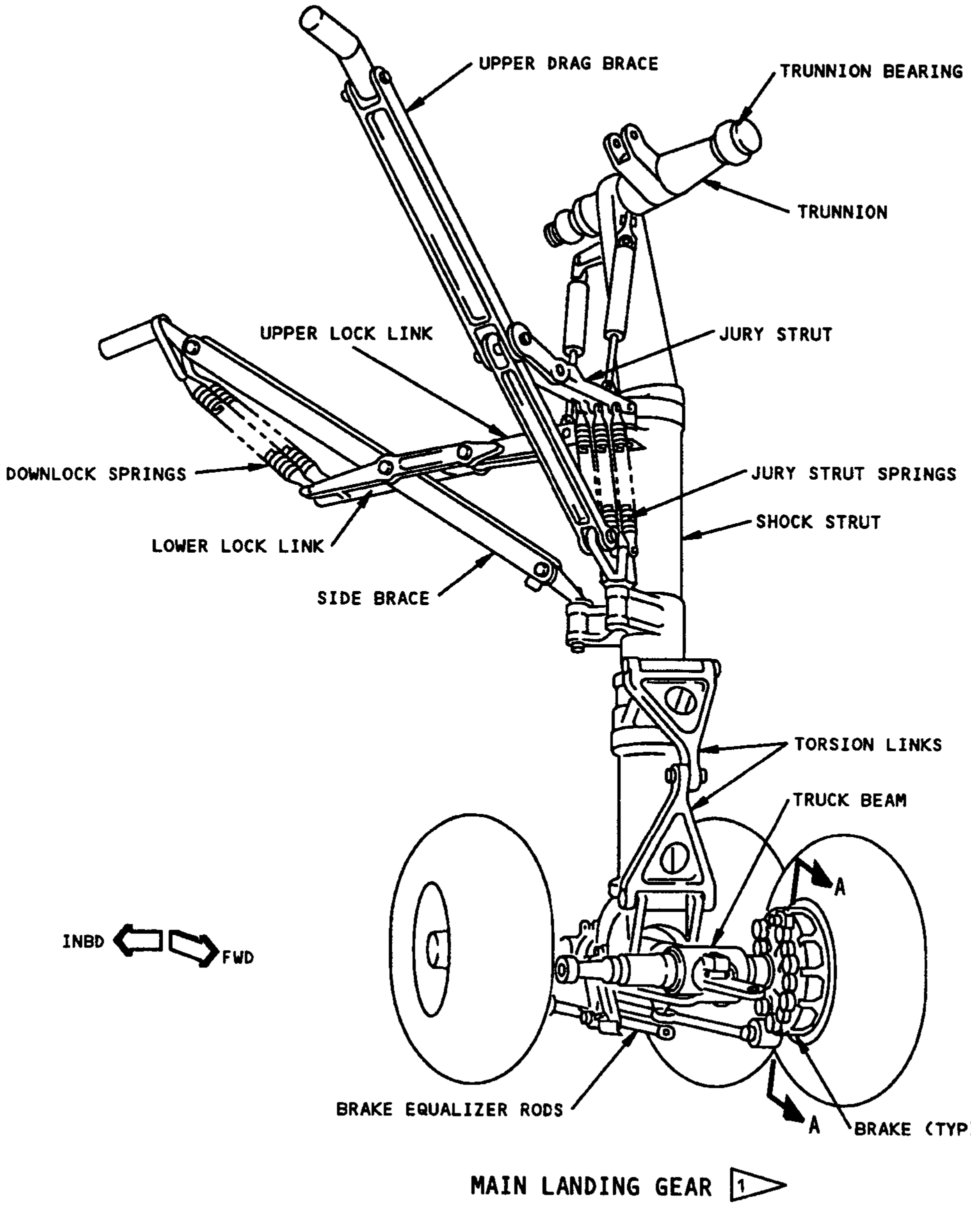
(4) Protect oxygen systems, including fittings, from contamination in accordance with Chapter 35 of the Maintenance Manual.

(5) Do not apply corrosion inhibiting compounds on grease joints or sealed bearings. These compounds dissolve grease and other Lubricants. They are penetrating compounds and can get around the seals and into the bearings.

F. Improved Corrosion Protection

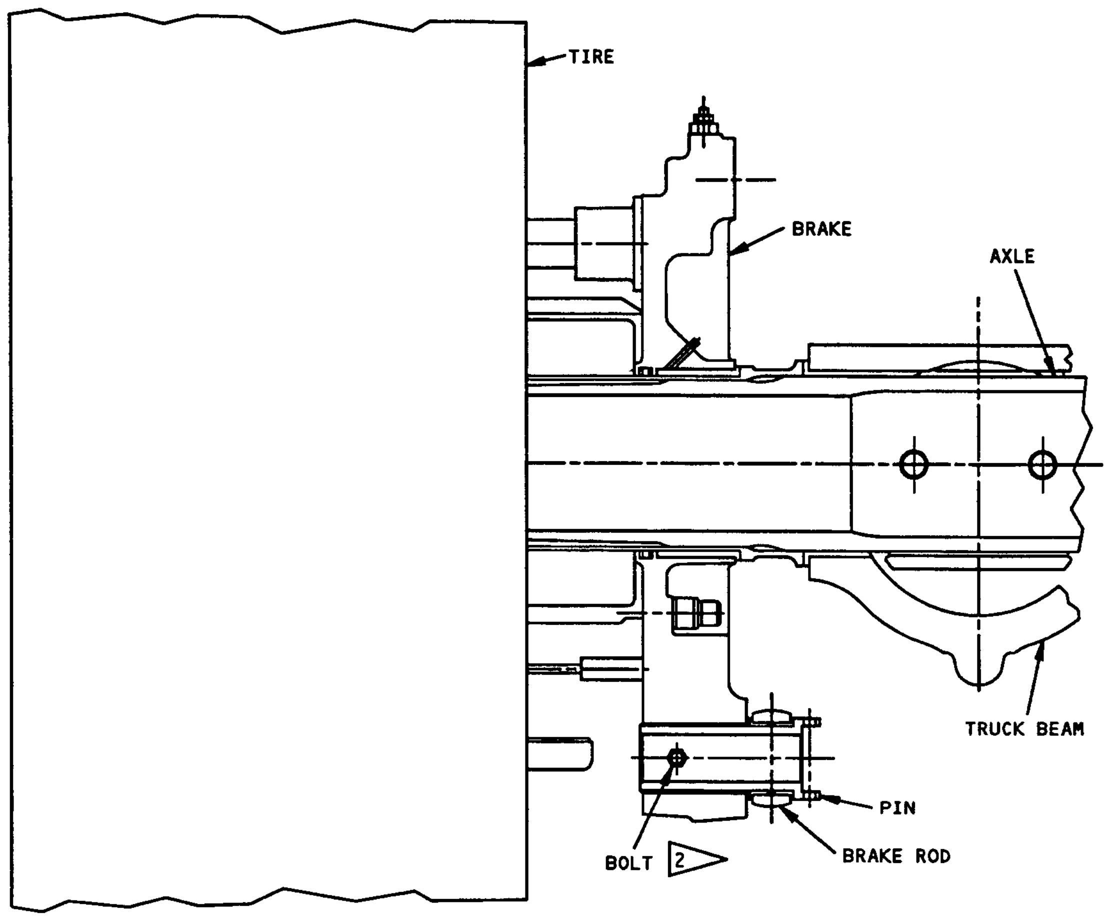
(1) On airplanes line number 220 and on, bolts of corrosion-resistant steel replace the steel bolts between the brakes and the brake rods.

(2) On airplanes line number 334 and on, more chrome plating is added to the forward trunnion.



1 APPLY BMS 3-23 TO UNPAINTED HYDRAULIC TUBING AND DAMAGED FINISH. REAPPLY AFTER CLEANING WITH STEAM OR HIGH PRESSURE WATER AND DETERGENT. DO NOT APPLY BMS 3-23 TO GREASE FITTINGS, LUBRICATED SURFACES OR JOINTS, ELECTRICAL CONNECTIONS AND CONTACS OR TEFLON BEARINGS.

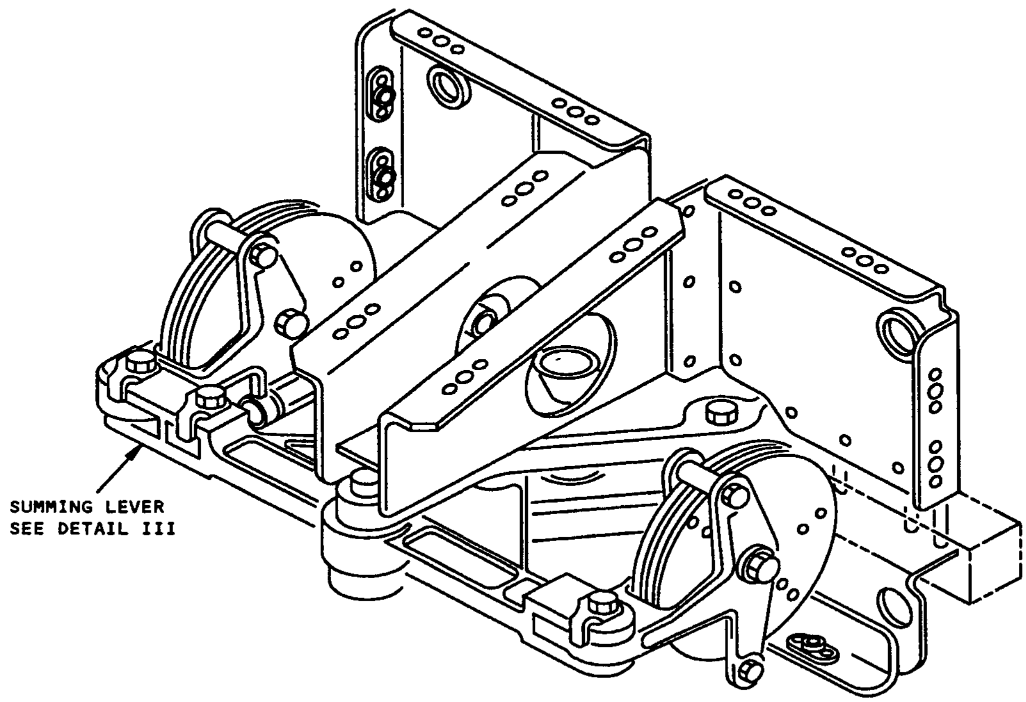
Main Gear
Figure 1 Sheet 1



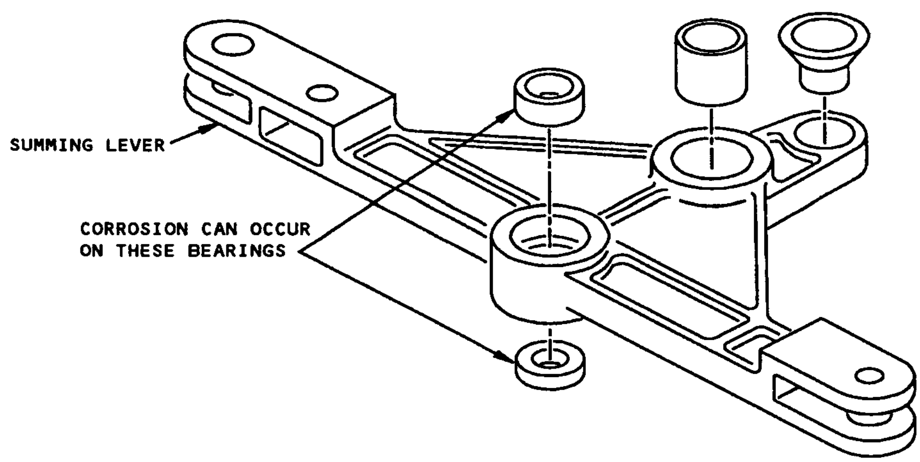
A-A

1 CRES BOLT PREFERED SPARE TO STEEL BOLT ON AIRPLANES PRIOR TO LINE 220

Main Gear
Figure 1 (Sheet 2)



STEERING SUMMING MECHANISM
(COVER REMOVED)
DETAIL II



DETAIL III

Nose Gear
Figure 1 (Sheet 3)

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LANDING GEAR

1. General

A. The nose gear supports the nose of the aircraft while the aircraft is on the ground. This includes the shock strut, drag strut, doors, linkages, and attach bolts. The nose landing gear and its components are exposed to air contaminants and runway splash which can cause corrosion.

B. Water intrusion and subsequent corrosion has been reported in the trunnion drum bearing.

C. Corrosion can occur in the steering shutoff valve of the steering metering valve module.

D. Corrosion can occur in the park brake indicator light assembly.

E. Corrosion can occur on bearings in the nose wheel steering system. These are in the drum and lockout assembly, its housing, and in the summing lever. Water can get into these bearings if the bearings do not contain sufficient grease.

F. Corrosion can occur in the extendable door operating strut. The corrosion occurs on the inner tube and on the end fitting. This strut is volume of the nose gear forward door mechanism installation.

2. Corrosion Prevention

A. Make periodic inspections as described in Volume 1, 20-00-00, to ensure that the protective finishes provided during manufacture remain intact. The preferred treatment for broken finishes is to replace the finish with the same protective system as used originally. Since in some cases it is impractical or impossible to use this approach between overhaul cycles, the treatment described in the following paragraphs is recommended.

B. Where corrosion has already started, refer to Structural Repair Manual for details of corrosion removal.

C. Apply BMS 3-23 water displacing corrosion inhibiting compound to damaged finish on exposed surfaces. Refer to Volume 1, 20-60-00 for details of application of BMS 3-23.

D. After application of BMS 3-23, all grease fittings in the treated area must be regreased.

E. In the nose wheel steering drum and lockout assembly, be sure to regularly lubricate the bearings in the housing. These bearings have tube fittings, but the access is not easy.

F. Precautions for use of Corrosion Inhibiting Compound.

CAUTION: DO NOT APPLY BMS 3-23 TO AREAS WHICH WILL BE SUBSEQUENTLY PAINTED OR SEALED. OBSERVE PRECAUTIONS OF VOLUME 1, 20-60-00 FOR SPRAYING CONTROL CABLES WITH BMS 3-23.

(1) Apply BMS 3-23 to unpainted hydraulic tubing in the area.

(2) Shield or protect pulleys, wire bundles, etc., in some manner to prevent direct application of BMS 3-23.

(3) Mask off electrical connectors to avoid application to any electrical contacts.

(4) Protect oxygen systems, including fittings, from contamination in accordance with chapter 35 of the Maintenance Manual.

(5) Do not apply corrosion inhibiting compounds on grease joints or sealed bearings. These compounds dissolve grease and other lubricants. They are penetrating compounds and can get around the seals and into the bearings.

G. Improved Corrosion Protection

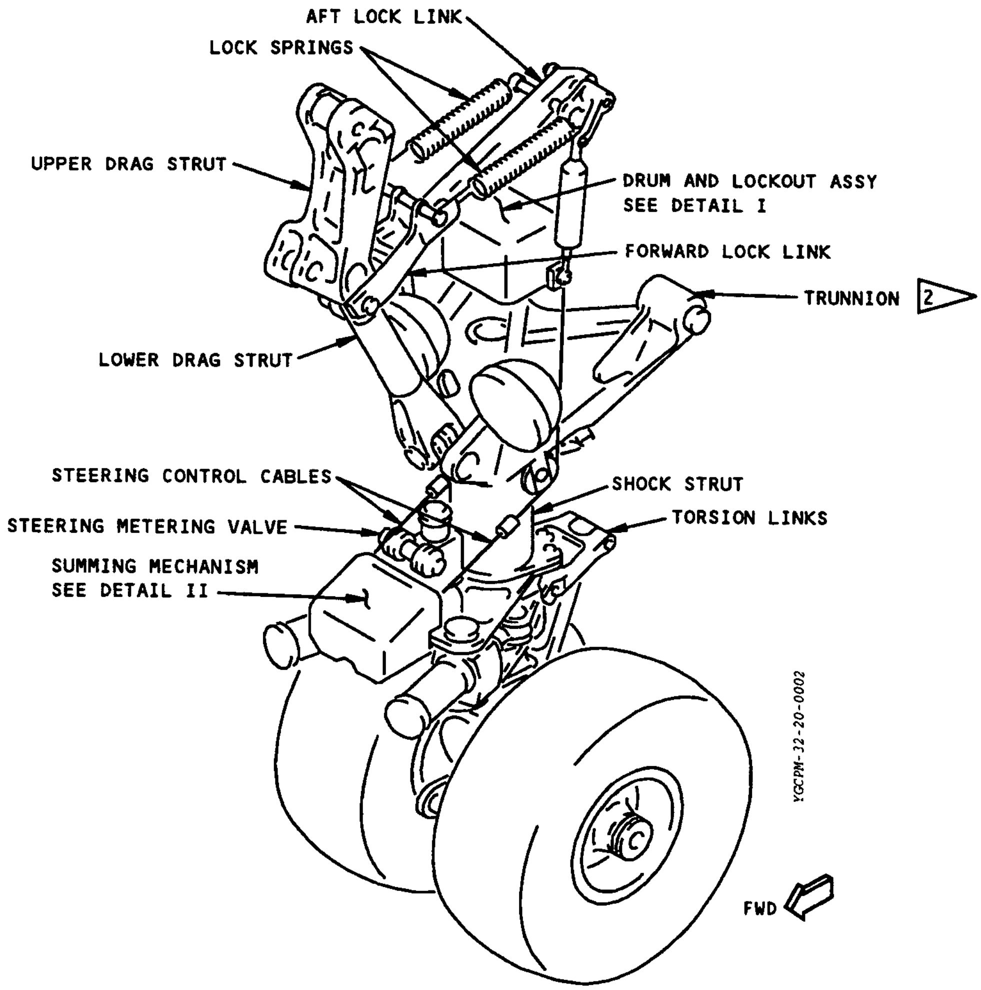
(1) Steering metering valve module: Airplanes line number 248,249,254, and on have a new module per PRR B11765, with changes in the shutoff valve. The valve has a chrome plated plunger and a CRES retainer. The cavity behind the retainer has a vent hole. The slide and sleeve are 440C CRES. These changes can be incorporated on other airplanes per SB 32-0067.

(2) Park brake light indicator light and shield: Some airplanes line number 314 and on have new waterproof light assemblies per PRR B11992, with soldered terminals, instead of screw terminals.

(3) Nose wheel steering system:

(a) At line number 86, PRR B11106 added tube fittings and changed bearings in the housing of the nose wheel steering drum and lockout assembly. This change can be added to earlier airplanes with SB 32-0022, but you must regularly lubricate the bearings or the corrosion could come back.

(b) At line number 334, PRR B11857 changed to 440C CRES the material of the bearings in the drum and lockout assembly, its housing, and in the summing lever.

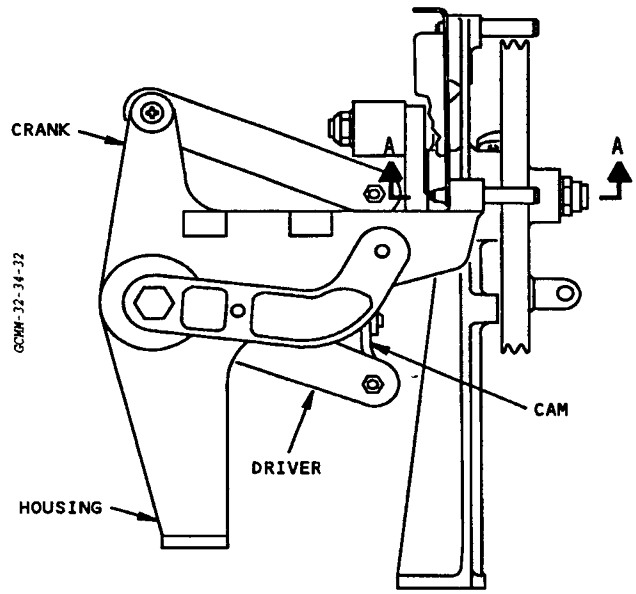


NOSE LANDING GEAR 1

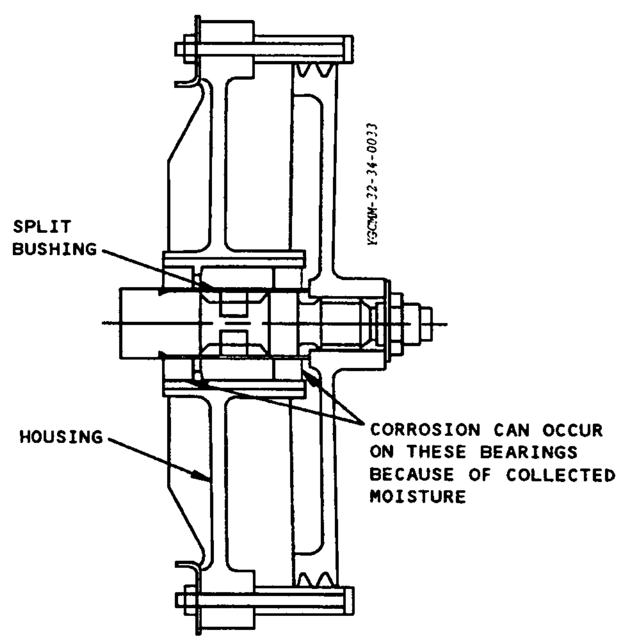
1 APPLY BMS 3-23 TO DAMAGED FINISH ON EXPOSED AREAS. REAPPLY AFTER CLEANING WITH STEAM OR HIGH PRESSURE WATER AND DETERGENT. DO NOT APPLY BMS 3-23 TO GREASE FITTINGS, LUBRICATED SURFACES OR JOINTS, ELECTRICAL CONNECTIONS AND CONTACTS, TEFLON BEARINGS OR PULLEYS AND CONTROL CABLES.

2 LUBRICATE REGULARLY TO PREVENT WATER INTRUSION

Nose Gear
Figure 1 Sheet 1

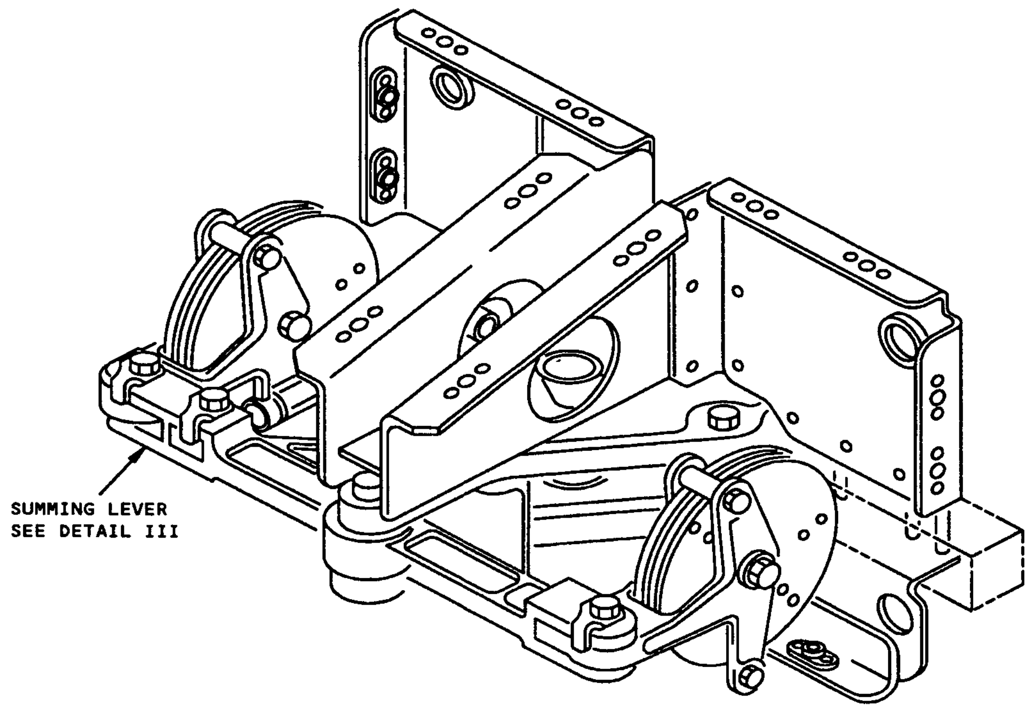


(COVER, SHAFT, AND DRUM ASSEMBLIES REMOVED)
DRUM AND LOCKOUT ASSY
DETAIL I

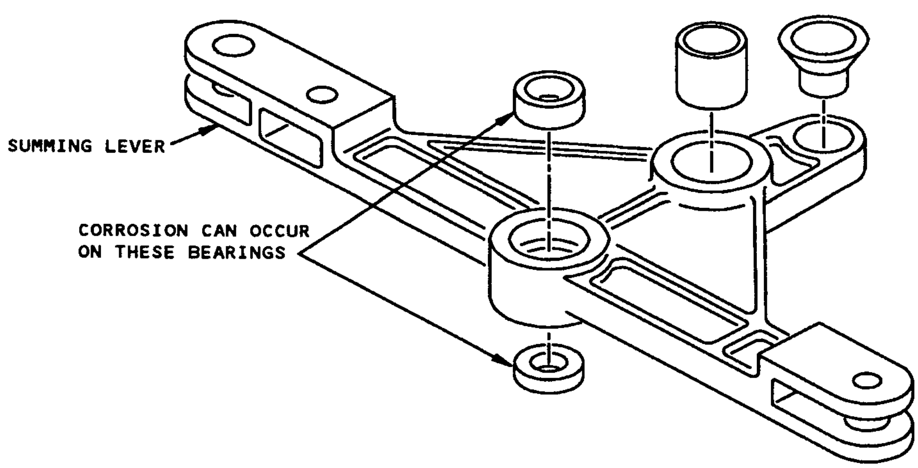


A-A

Nose Gear
Figure 1 (Sheet 2)



STEERING SUMMING MECHANISM
(COVER REMOVED)
DETAIL II



DETAIL III

Nose Gear
Figure 1 (Sheet 3)

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1. General

   A. The hydraulic brake system includes main landing gear brake assemblies, mechanical control linkage from the pilot's foot pedals to the brake metering valve modules, hydraulic valves, actuators and accumulators.

   B. Corrosion can occur on bearings in the linkage of the brake metering valve module.

2. Corrosion Prevention

   A. Make regular checks of the brake metering valve module for corrosion of bearings in the linkage. If you find corrosion, replace the defective bearings with equivalent corrosion resistant bearings.

   B. Do not apply corrosion inhibiting compounds on grease joints or sealed bearings. These compounds dissolve grease and other lubricants. They are penetrating compounds and can get around the seals and into the bearings.

   C. For minor corrosion, to minimize the downtime of the airplane, the corrosion products should be cleaned off, followed by the application of a corrosion inhibiting compound into the affected area to retard the corrosion process (Ref Volume 1, 20-60-00). The finish system should be restored at the first opportunity consistent with the maintenance schedule.

   D. Frequency of Application

      (1) Periodically inspect windshield wiper components consistent with scheduled maintenance activity.

      (2) Ensure that adjustment screws are tight and secure, allowing no relative motion between the hub halves that may possibly contribute to pivot bolt fracture.

   E. Improved Corrosion Protection

      (1) Airplanes line number 334 and on have corrosion resistant bearings in the module linkage per PRR B11857. This change can be incorporated on other airplanes by service letter scheduled for release approximately August 1990.

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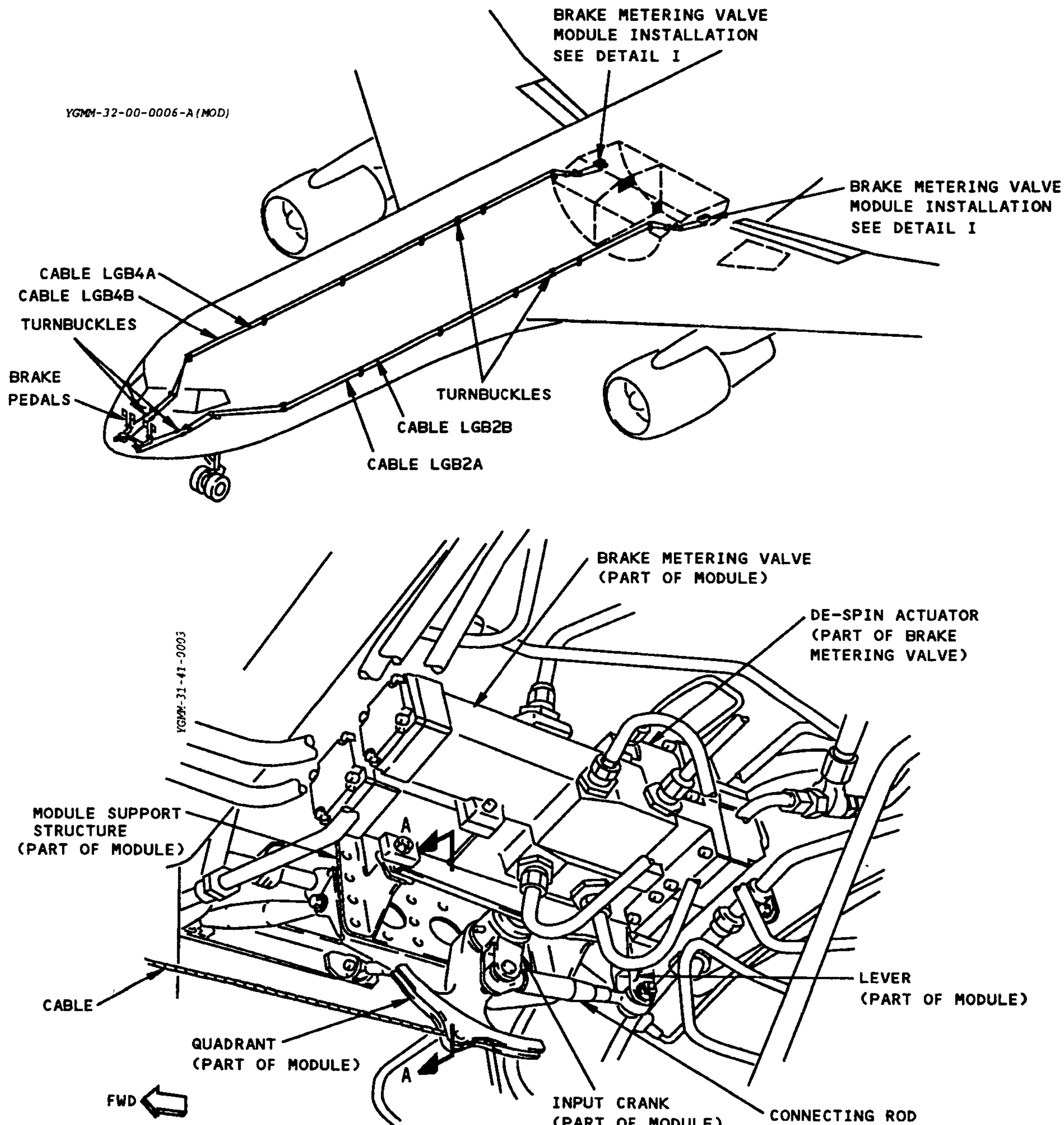
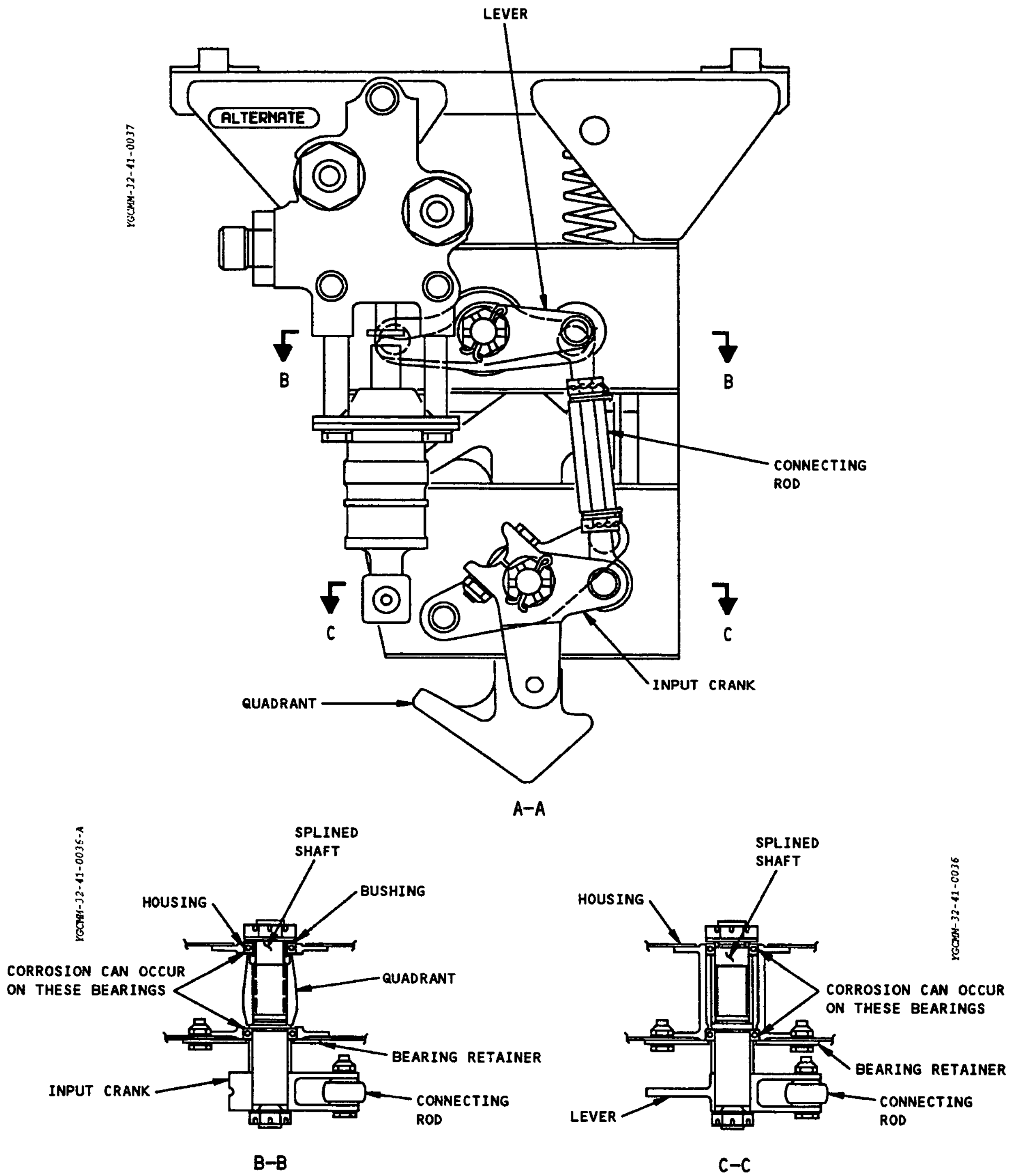


BRAKE METERING VALVE MODULE
(RIGHT SIDE INSTALLATION SHOWN)
DETAIL I

Brake Metering Valve Module
Figure 1 (Sheet 1)



Brake Metering Valve Module
Figure 1 (Sheet 2)

CHAPTER

34

NAVIGATION

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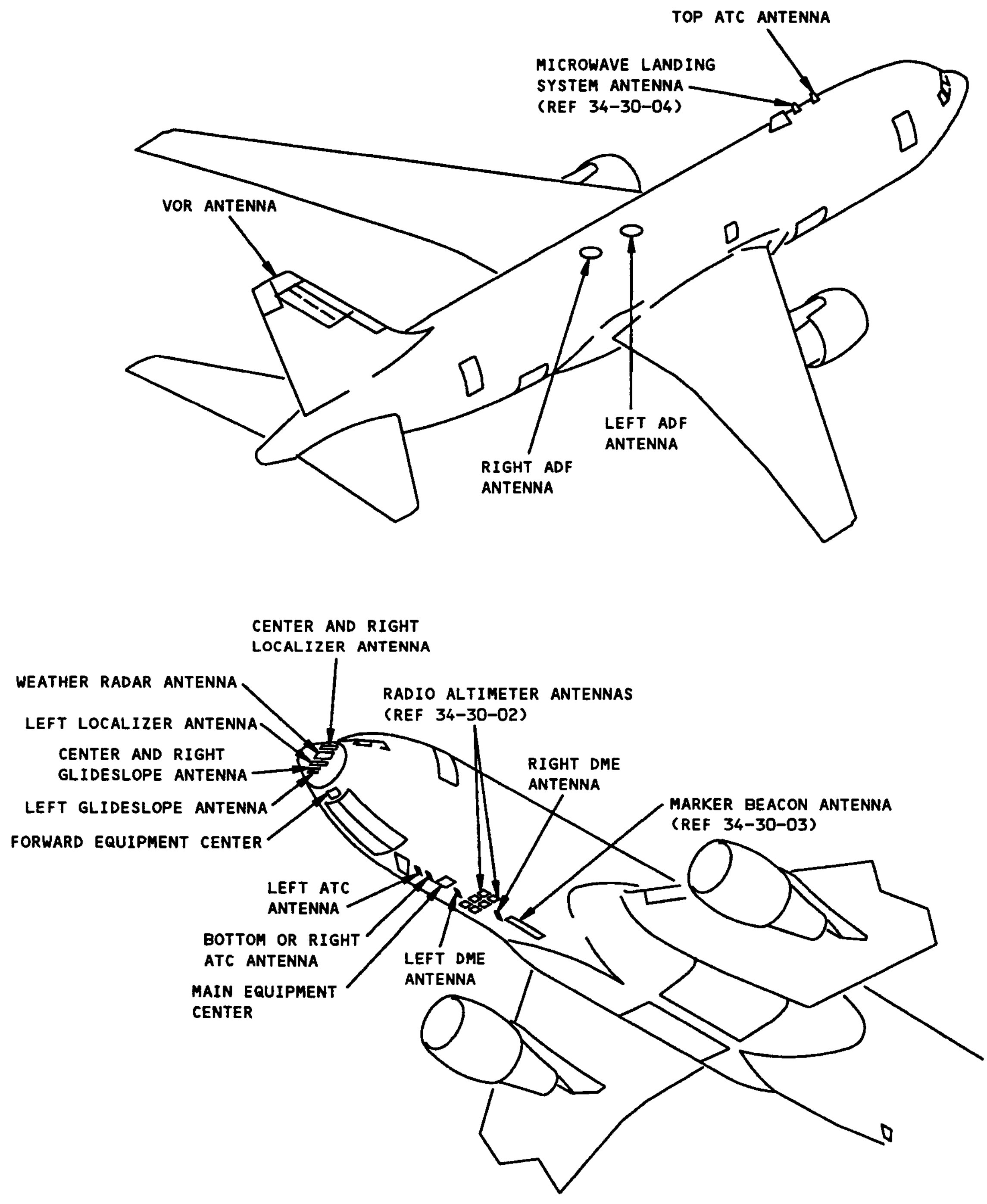
NAVIGATION

AREA	PROBLEM	INDEX PREVENTION VOLUME 2	TERMINATING ACTION (IF ANY)
Landing and Taxiing Aids	Corrosion of fasteners and moisture in the antennas for the radio altimeter	34-30-01	SB 34-0043
	Corrosion between the antennas and fuselage skin	34-30-01	
Dependent Position Determining	Corrosion between the antennas and fuselage skin	34-50-01	
	Moisture inside the antenna for the automatic direction finder		

SPECIFIC CORROSION PROBLEMS - NAVIGATION
Figure 1



Navigational Systems Antenna Location
Figure 1

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ANTENNAS - LANDING AND TAXIING AIDS

1. General

A. Corrosion can occur between the exterior-mounted antennas and the fuselage skin.

B. Moisture came into the antennas for the radio altimeter. This caused corrosion and subsequent antenna failures.

2. Corrosion Prevention

A. Regularly remove the antennas and examine the mating surfaces for signs of corrosion. For the radio altimeter antennas, refer to SB 34-0043.

B. Improved Corrosion Protection

(1) At line number 131, a production change applied BMS 3-23 corrosion inhibiting compound to the connector base of the radio altimeter antennas, and filled the base with BMS 3-24 grease. This change can be incorporated on earlier airplanes with SB 34-0043.

(2) At line number 448, PRR B12253 changed the procedures that install the antennas for the marker beacon, the microwave landing system, and the radio altimeter. BMS 10-79, Type III primer and BMS 3-27 corrosion preventive compound are applied to the skin under the antennas, and the fasteners are cadmium-plated stainless steel.

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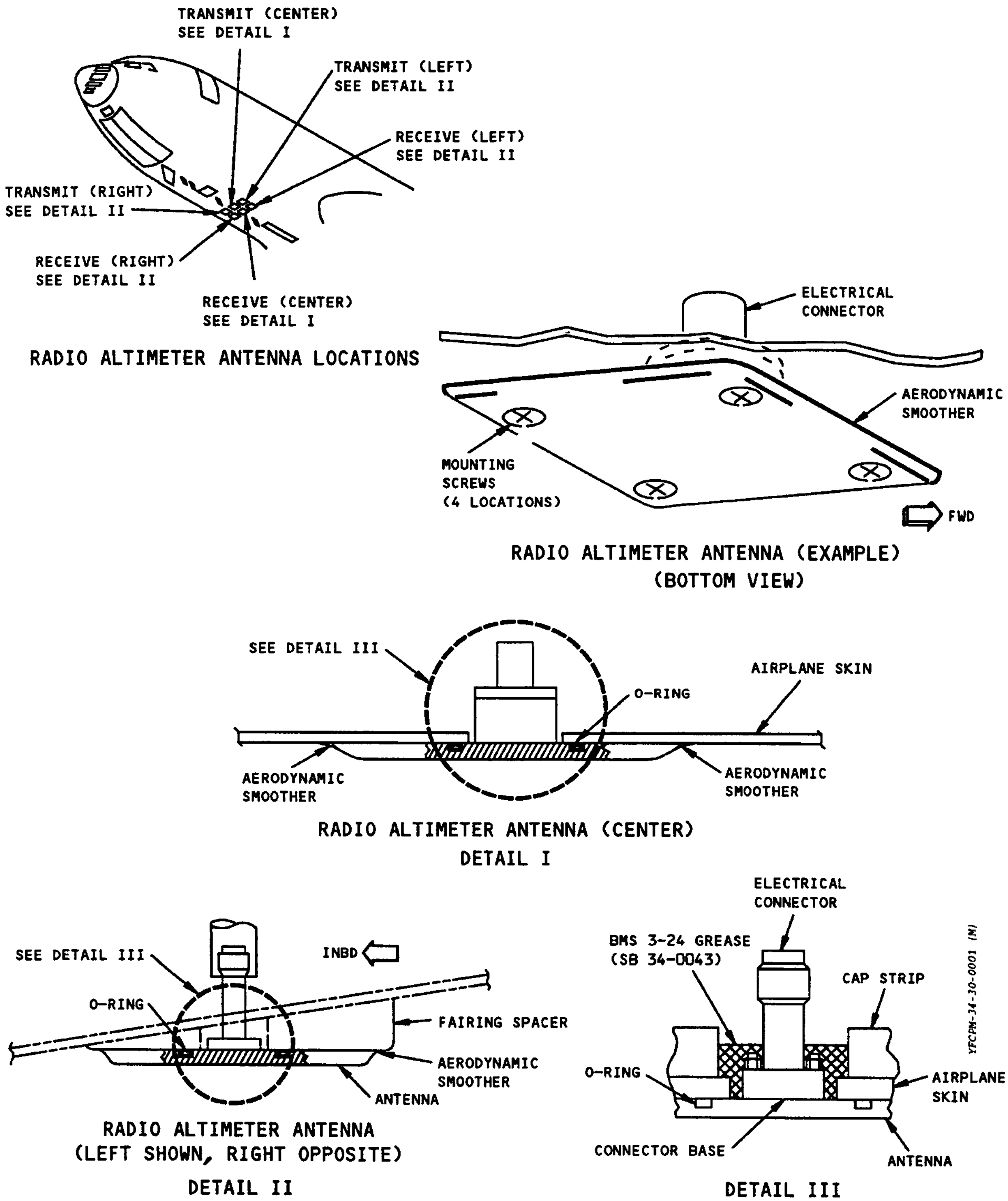

Radio Altimeter Antenna
Figure 1

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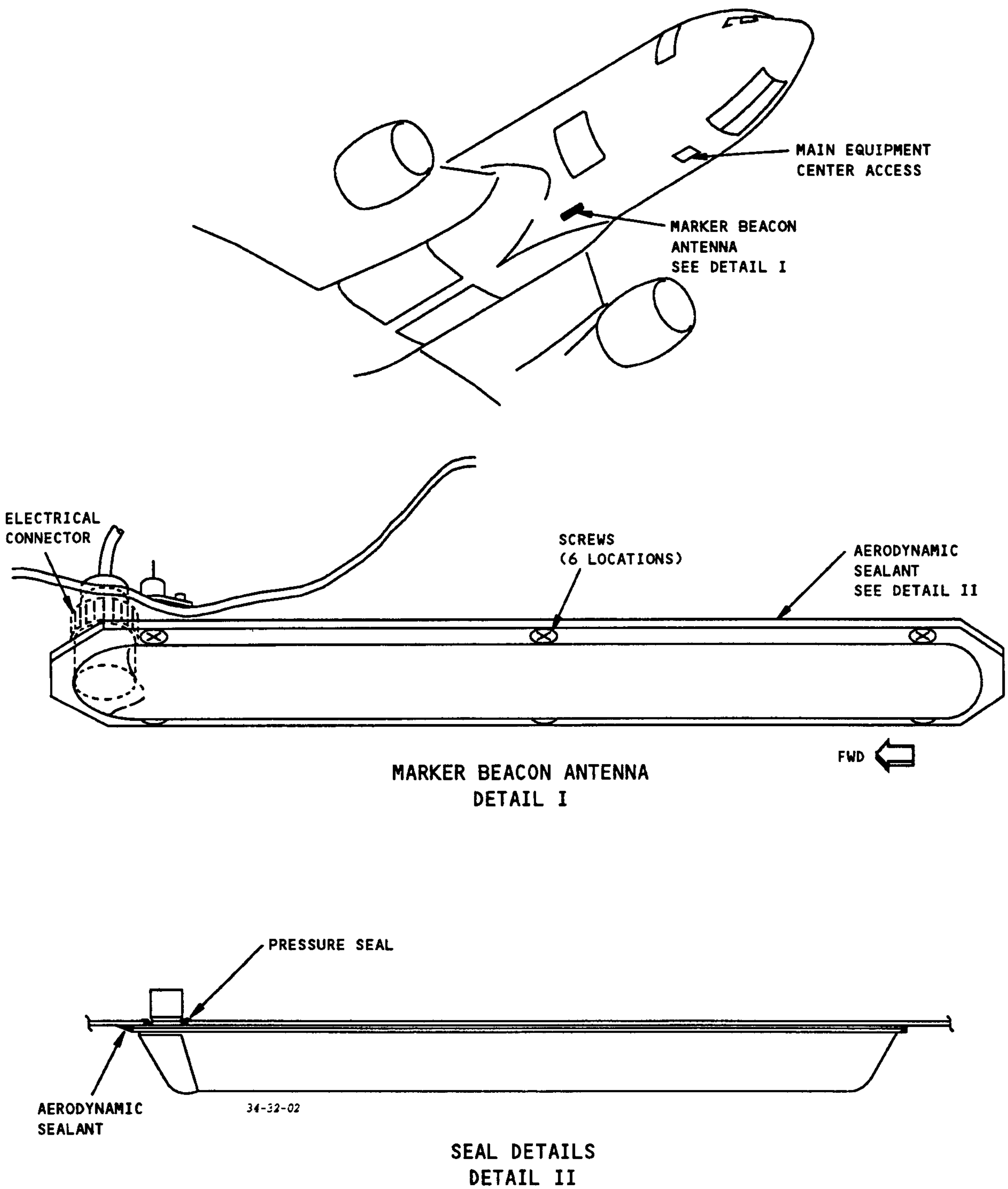

Marker Beacon Antenna Installation
Figure 1

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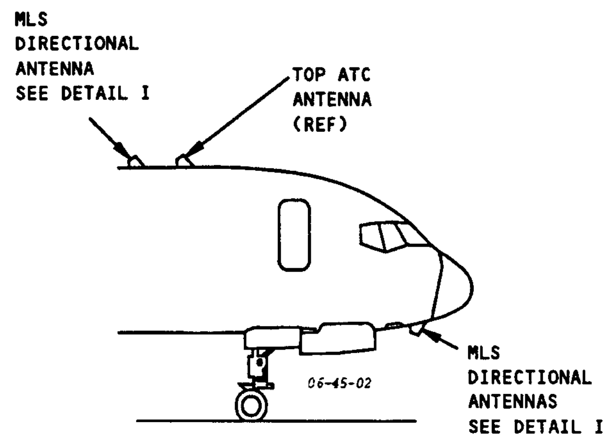

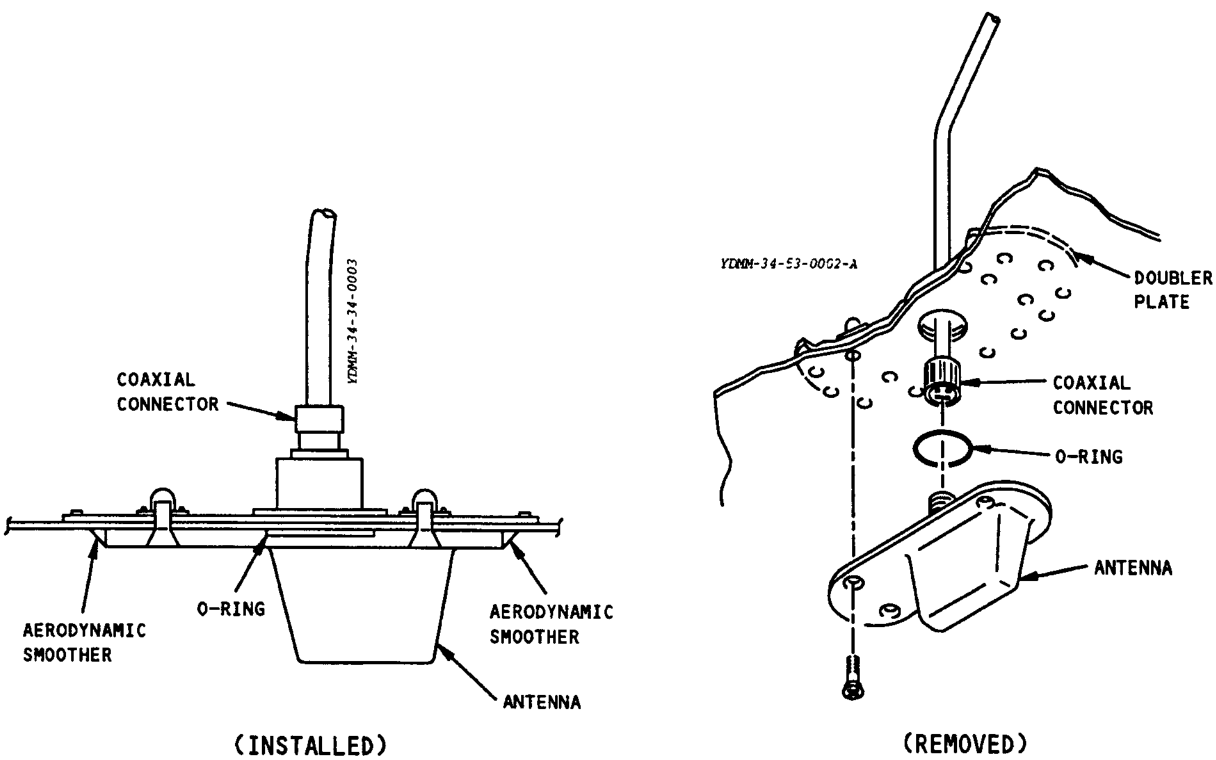

MLS DIRECTIONAL ANTENNA (EXAMPLE)
DETAIL I

Microwave Landing System (MLS) Directional Antenna Installation
Figure 1

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1. General

A. Corrosion can occur between the exterior-mounted antennas and the fuselage.

B. Moisture came into the antenna for the automatic direction finder. This caused corrosion at the electrical connectors, which caused problems with reception and equipment performance.

2. Corrosion Prevention

A. Regularly remove the antennas and examine the mating surfaces for corrosion.

B. Improved Corrosion Protection

(1) At line number 448, PRR B12253 changed the procedures that install the antennas for the automatic direction finder, the air traffic control system, and the distance measuring equipment. BMS 10-79, Type III primer and BMS 3-27 corrosion preventive compound are applied to the skin under the antennas, and the fasteners are cadmium-plated stainless steel.

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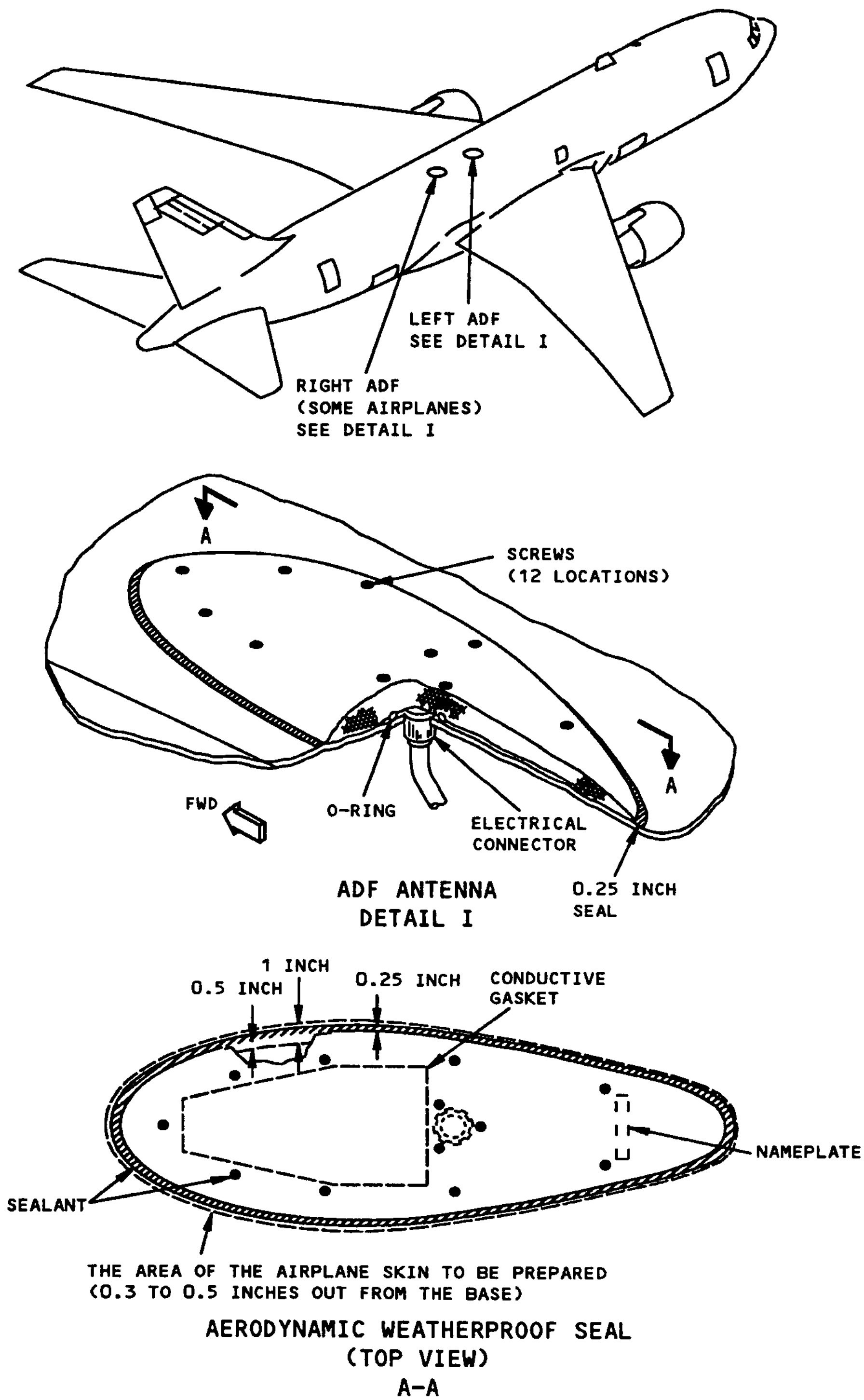

Automatic Direction Finder (ADF) Antenna Installation
Figure 1

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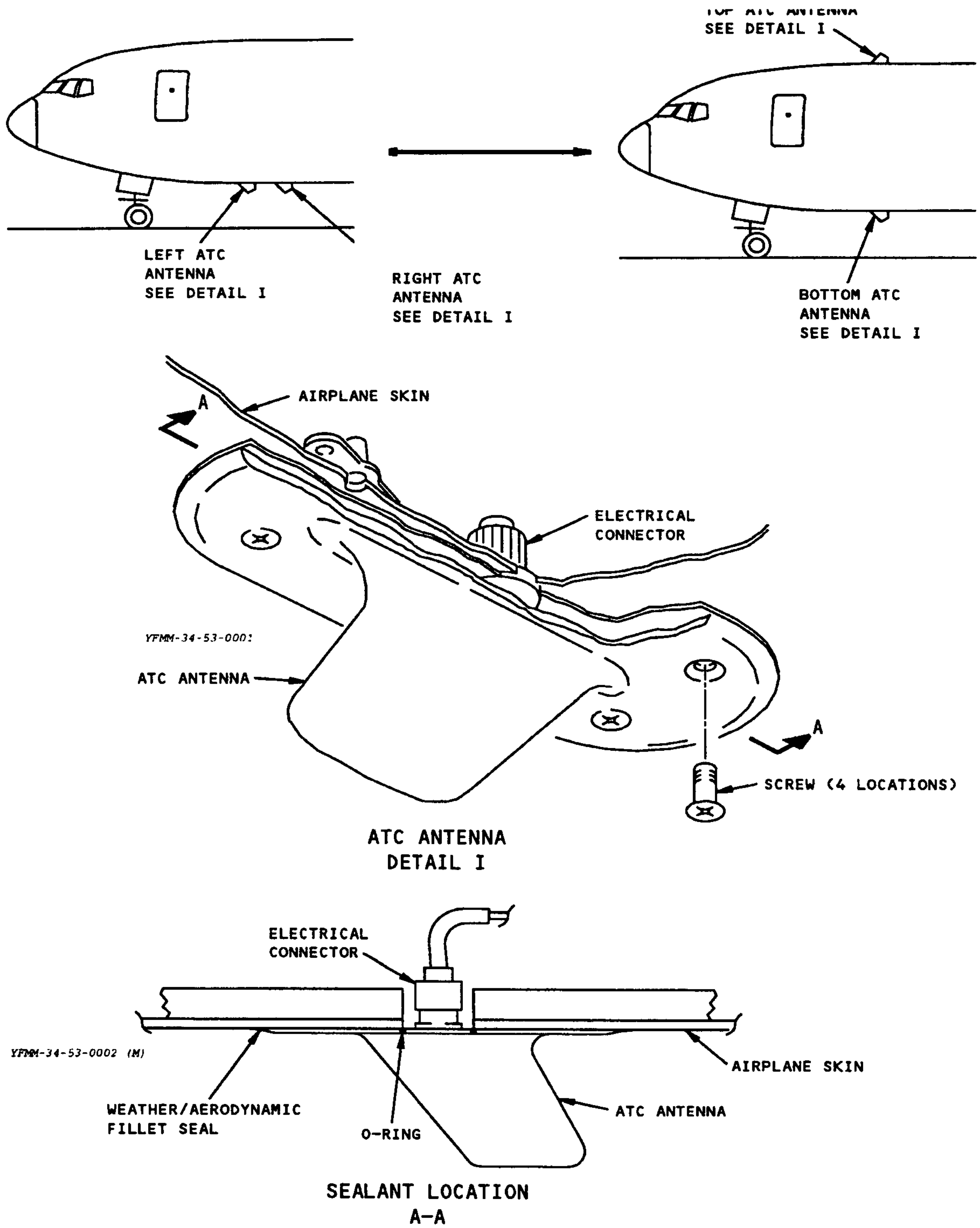

Air Traffic Control (ATC) Antenna Installation
Figure 1

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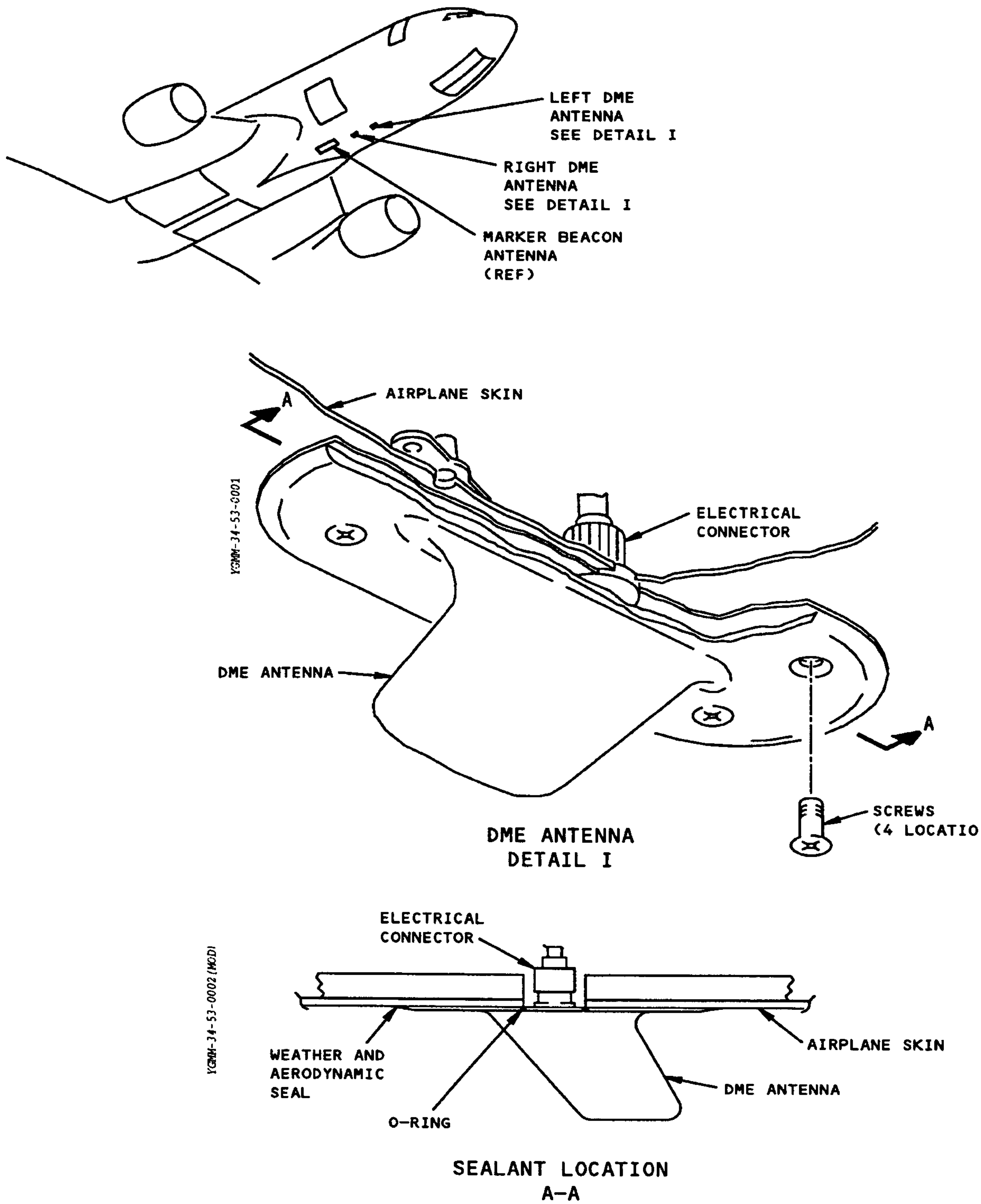

Distance Measuring Equipment (DME) Antenna Installation
Figure 1

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CHAPTER

36

PNEUMATIC

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AREA	PROBLEM	INDEX PREVENTION VOLUME 2	TERMINATING ACTION (IF ANY)
Distribution	High pressure and firewall shutoff valves	36-10-01	

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PNEUMATIC

1. General

A. On Rolls-Royce engines, corrosion can occur in the bearings that support the butterfly plates in the high pressure and firewall shutoff valves.

2. Corrosion Prevention

A. Regularly examine the bearings of the butterfly plates in these shutoff valves for corrosion.

B. Improved Corrosion Protection -- At line number 530, PRR B12541 changed the bearings of the butterfly plates. The new bearings have thin dense chrome plating on the race, and ceramic ball bearings with graphite lubrication.

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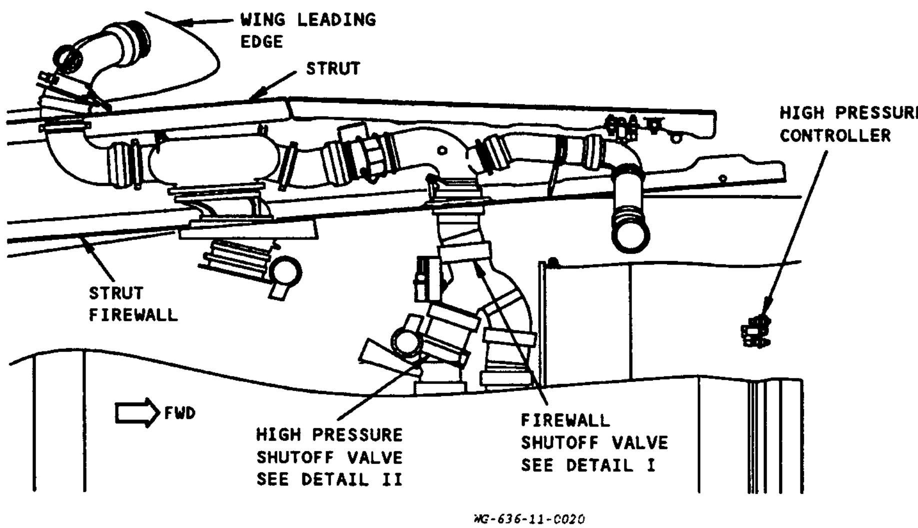
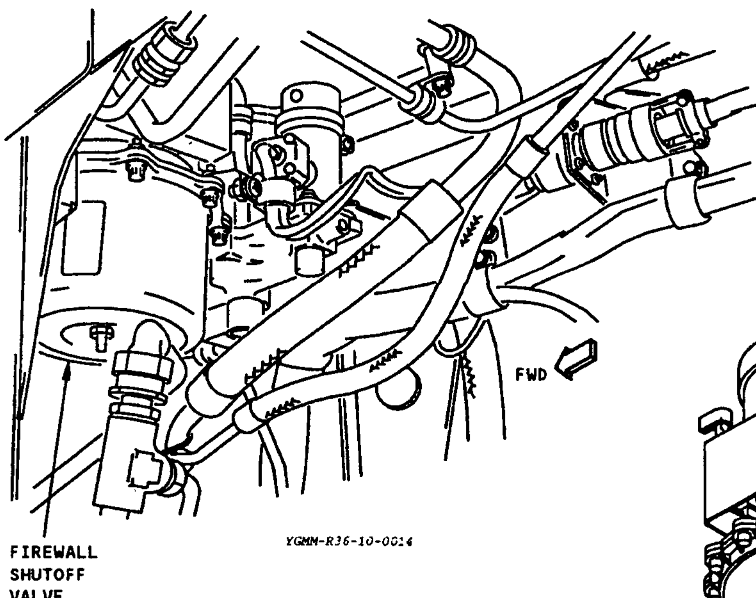
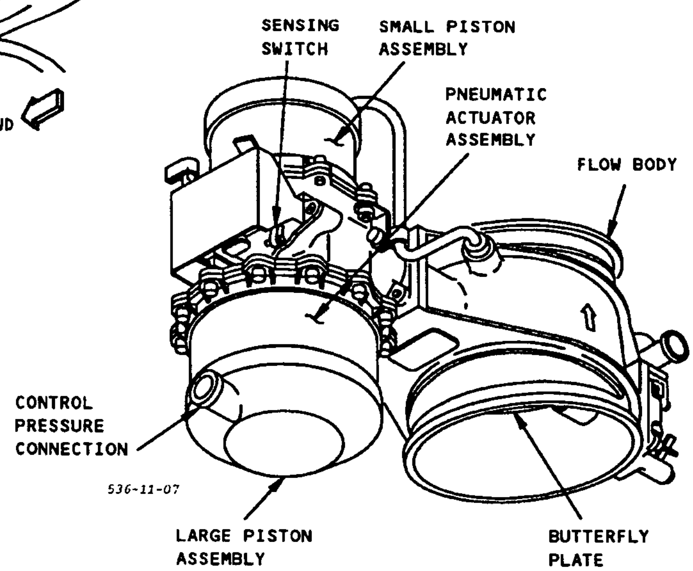




FIREWALL SHUTOFF VALVE
DETAIL I



HIGH PRESSURE SHUTOFF VALVE
DETAIL II

Rolls Royce Engines - High Pressure and Firewall Shutoff Valves
Figure 1

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CHAPTER

38

WATER/WASTE

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AREA	PROBLEM	INDEX PREVENTION VOLUME 2	TERMINATING ACTION
Waste Disposal	Precharge control valve actuators	38-30-01	

SPECIFIC CORROSION PROBLEMS - WATER/WASTE
Figure 1

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WATER/WASTE

1. General

   A. Corrosion can occur in the electrical actuators for the precharge control valves on the waste tanks.

   B. Corrosion can occur on the valve shafts, which can cause leaks.

2. Corrosion Prevention

   A. Regularly examine the waste tank precharge control valve actuators and the valves for corrosion.

   B. The valve vendor changed the material of the valve shafts, and plans to issue a service bulletin for the older valves.

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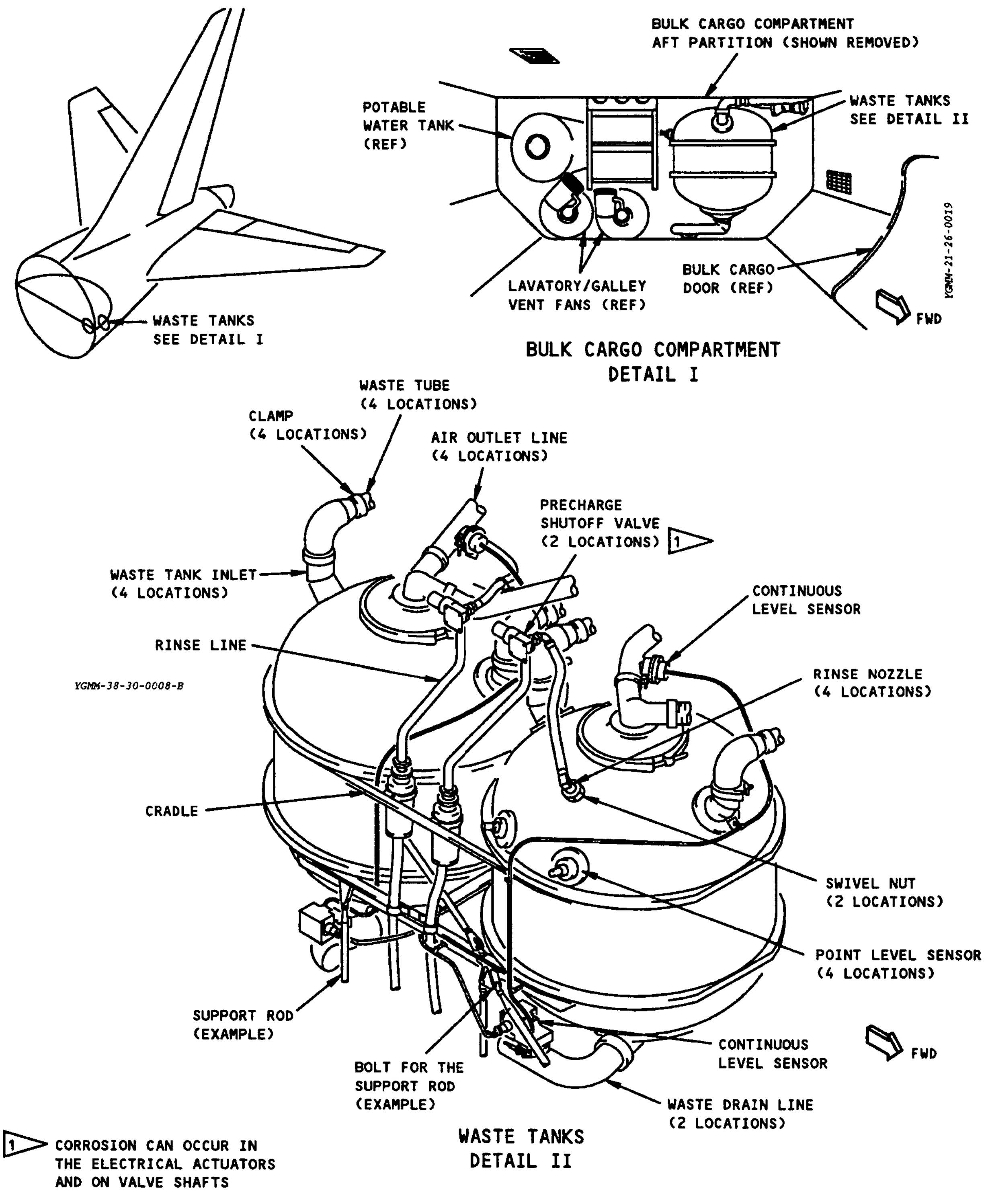

Waste Tank Installation
Figure 1

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CHAPTER

52

DOORS

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DOORS

AREA	PROBLEM	INDEX PREVENTION	TERMINATING ACTION (IF ANY)
Passenger/ Crew	Corrosion in main entry doors	52-10-01	
	Corrosion in bearings of door latching and arming systems	52-10-01	SB 52-0056
Emergency Exit	Corrosion on overwing escape hatches	52-20-01	
Cargo	Corrosion of large cargo door latch mechanism	52-30-01	
Service	Corrosion of panel and adjacent skin of lavatory service panel	52-40-01	
	Corrosion at forward access door		
	Corrosion at electrical access door		

Specific Corrosion Problems - Doors
Figure 1

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DOORS

1. General

A. Passenger/crew doors are used by personnel for routine entrance and exit. This includes structure, latching mechanisms, handles, insulation, lining, controls, integral steps, ramps, handrails and fittings. Areas of possible corrosion are the internal and external structure of the doors, connection points and mechanisms.

B. Corrosion can occur in the bearings of the door latching and arming systems if the bearings are not lubricated.

2. Corrosion Prevention

A. Following cleaning of suspected areas, a thorough inspection as described in Volume 1, 20-20-00 is effective to ensure that protective finishes provided during manufacture remain intact. Refer to Volume 1, 20-60-00 for details on the application of corrosion inhibiting compound.

B. Where corrosion exists (noticeable bulges of the skin or white deposits of corrosion products at fastener heads or joint edges), refer to the index column in 52-00-01 for reference rework chapter.

C. For minor corrosion, to minimize the downtime of the airplane, the corrosion products should be cleaned off, followed by the application of a corrosion inhibiting compound into the affected area to retard the corrosion process (Ref Volume 1, 20-60-00). The finish system should be restored at the first opportunity consistent with the maintenance schedule.

D. Prevention Treatment

(1) At first opportunity consistent with scheduled maintenance activity, corrosion prevention treatment should be accomplished on the internal and external structure of the doors, connection points and mechanisms. Door openings should be treated at the same time as doors.

(2) Remove liner and gain access to interior structure of door.

(3) Clean out drains and drain paths.

(4) Apply corrosion inhibiting compound to the interior door structure, giving special attention to the lower corners (Ref 52-10-02, Fig. 1, Section A-A).

(5) Do not apply corrosion inhibiting compounds on grease joints or sealed bearings. These compounds dissolve grease and other Lubricants. They are penetrating compounds and can get around the seals and into the bearings.

(6) Do not apply corrosion inhibiting compounds on interior materials such as liners. The compounds change the flammable quality of these materials.

(7) Keep interior door fittings properly lubricated.

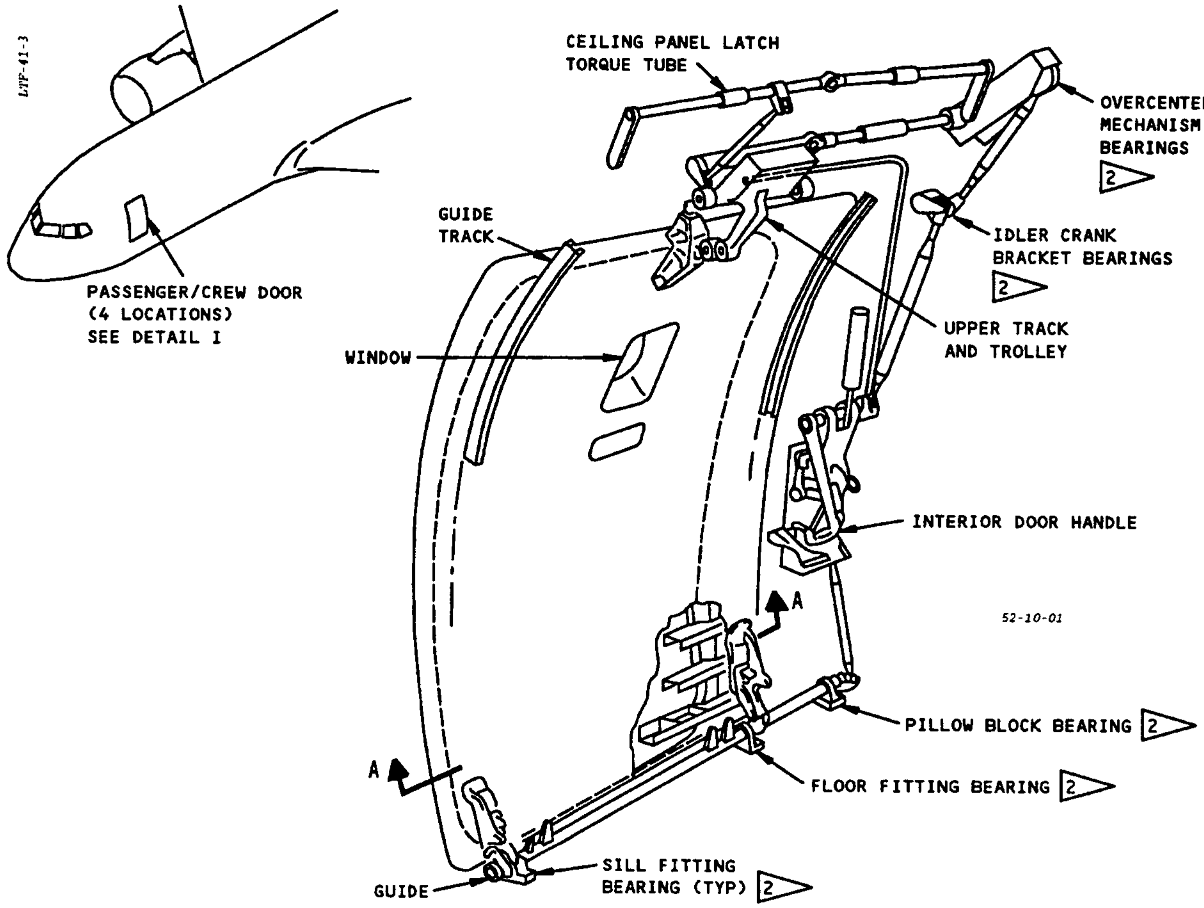
E. Frequency of Application

(1) Periodic inspection is required in areas that can get corrosion and should be consistent to the schedules specified in the Maintenance Planning Document. Operators must be aware of reported problems and areas of occurrences.

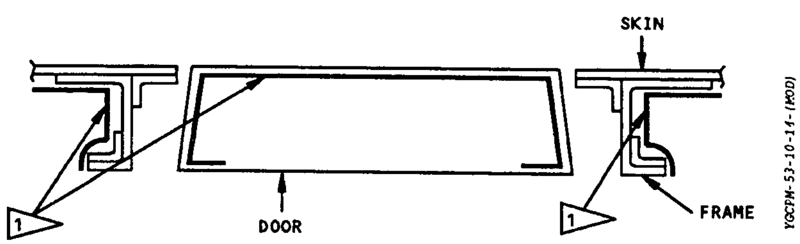
(2) Periodic application of BMS 3-23 compounds is necessary on areas identified and should be consistent to the schedule specified in the Maintenance Planning Document.

F. Improved Corrosion Protection

(1) At line number 374, PRR B12043 changed the bearings in the door latching and arming systems. These changes can be incorporated on other airplanes with SB 52-0056.



PASSENGER/CREW DOOR (TYP)
DETAIL I



SECTION A-A

1 APPLY BMS 3-23, TYPE II CORROSION INHIBITING COMPOUND TO STRUCTURAL SURFACES. MASK ALL OPERATIONAL MECHANISMS AND VISIBLE AREAS

2 POSSIBLE LOCATION OF CORROSION

Passenger and Crew Doors
Figure 1

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DOORS

1. General

A. Emergency exit doors are used for evacuation and are not normally used for exit. They include structure, latching mechanisms, handles, insulation, lining, controls, and fittings.

B. Overwing Escape Hatches

(1) Areas of possible corrosion are the hatch internal structure, lower corners and connection points and mechanisms.

(2) The hatch should be treated at the same time as the hatch opening.

WARNING: REFER TO MAINTENANCE MANUAL 25-65-00 FOR OFF-WING ESCAPE SYSTEM DISARMING PROCEDURE. IMPROPER DISARMING OF ESCAPE SYSTEM MAY INADVERTENTLY DEPLOY ESCAPE SLIDE, CAUSING INJURY OR DAMAGE.

2. Corrosion Prevention

A. Make periodic inspections as described in Volume 1, 20-20-00 to ensure that the protective finishes provided during manufacture remain intact. BMS 3-23, type II corrosion inhibiting compound has been applied to the hatch interior during manufacture. Refer to Detail I for corrosion inhibiting compound location. Refer to Volume 1, 20-60-00 for details on the application of corrosion inhibiting compound.

B. Overwing Escape Hatches (Ref 52-20-02, Fig. 1)

(1) Remove liner and gain access to the interior of the door.

(2) Clean out drains and drain paths.

(3) Apply corrosion inhibiting compound to the interior of the hatch, giving special attention to the lower corners.

(4) Do not apply corrosion inhibiting compounds on grease joints or sealed bearings. These compounds dissolve grease and other lubricants. They are penetrating compounds and can get around the seals and into the bearings.

(5) Do not apply corrosion inhibiting compounds on interior materials such as liners. The compounds change the flammable quality of these materials.

(6) Relubricate interior hatch fittings as necessary per the maintenance manual.

(7) Reinstall liner and restore door to normal.

C. Frequency of Application. Periodically inspect the structure and condition of the corrosion inhibitor. Reapply corrosion inhibiting compound as required. Local areas where gouges and scratches have occurred should be treated at the first opportunity consistent with the maintenance schedule.

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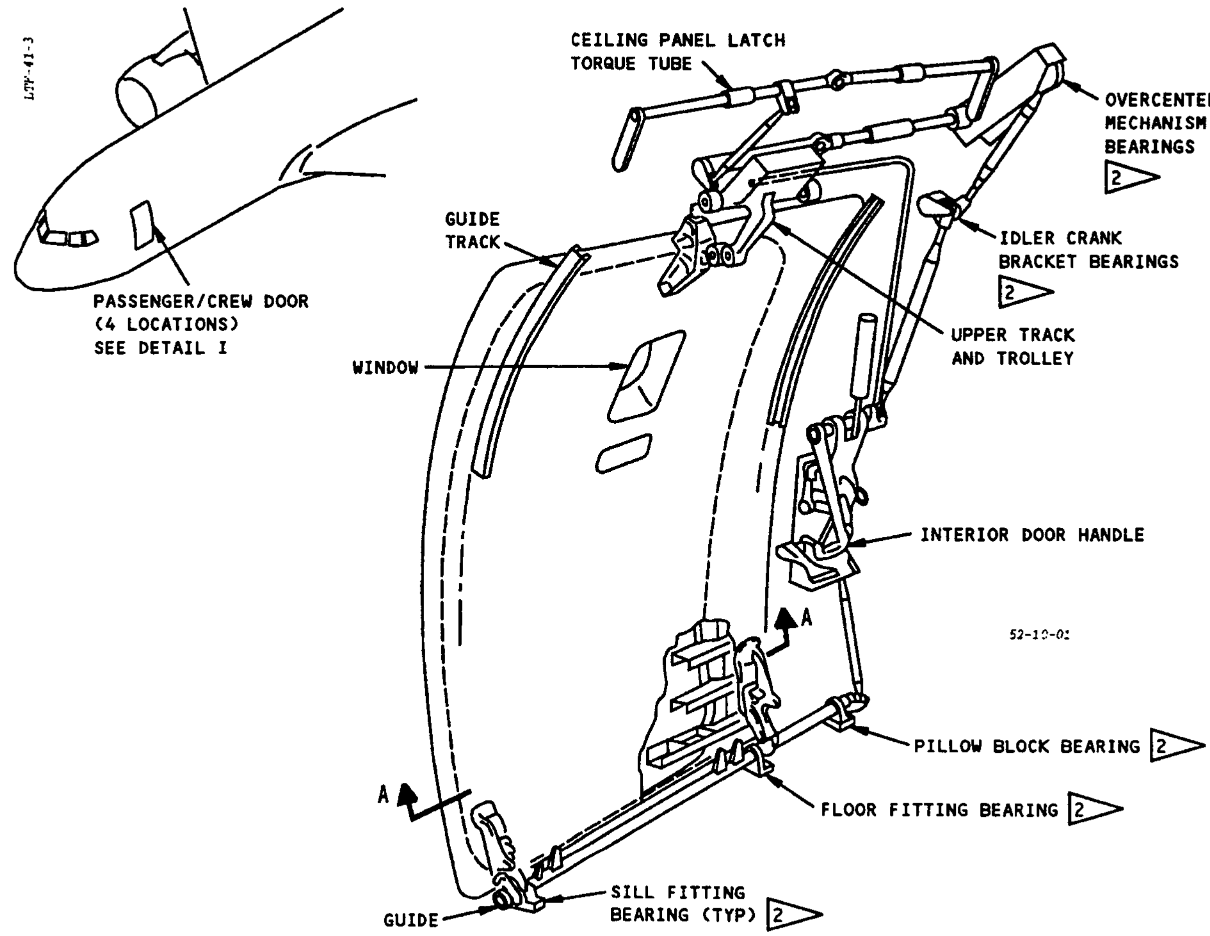
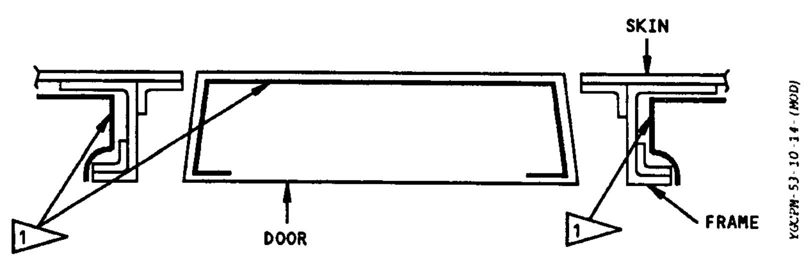


PASSENGER/CREW DOOR (TYP)
DETAIL I

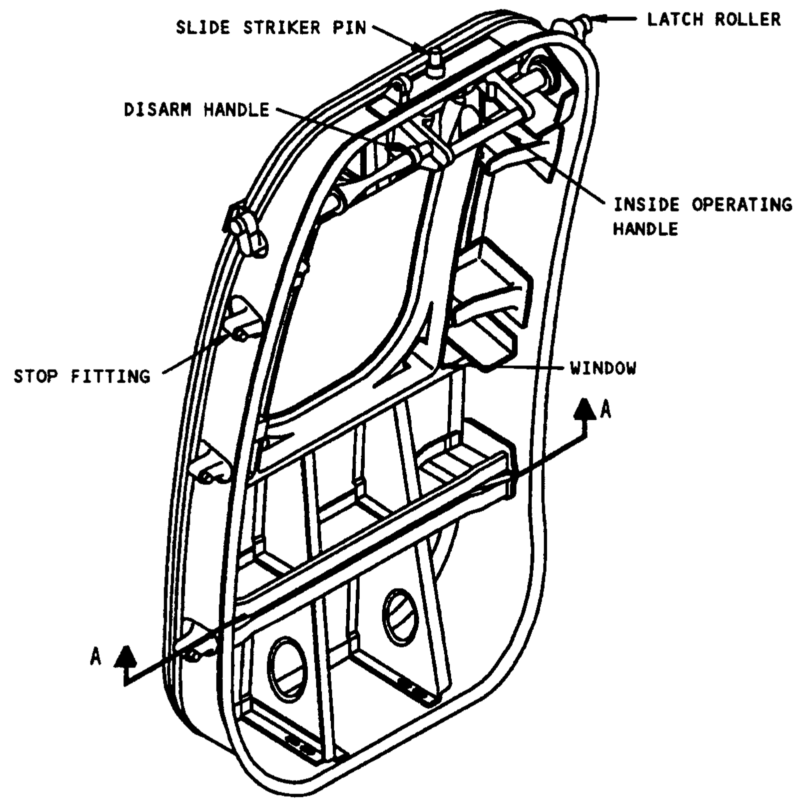


SECTION A-A

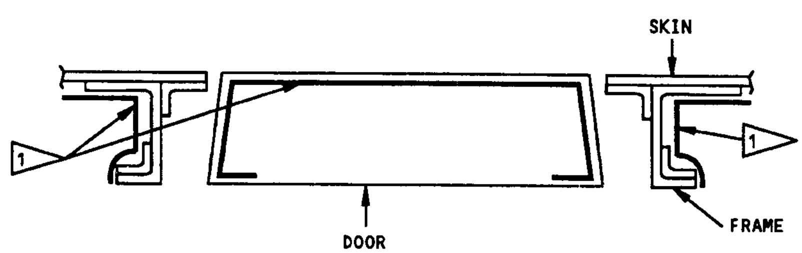
1 APPLY BMS 3-23, TYPE II CORROSION INHIBITING COMPOUND TO STRUCTURAL SURFACES. MASK ALL OPERATIONAL MECHANISMS AND VISIBLE AREAS

2 POSSIBLE LOCATION OF CORROSION

Overwing Escape Hatches
Figure 1



OVERWING ESCAPE HATCH
DETAIL I



1 APPLY BMS 3-23, TYPE II TO STRUCTURAL SURFACES. MASK ALL OPERATIONAL MECHANISMS AND VISIBLE AREAS

SECTION A-A

Overwing Escape Hatches
Figure 2

1. General

A. Cargo doors are exterior doors used primarily to gain access to cargo compartments. Includes items such as structure, latching mechanisms, handles, insulation, lining, controls, integral steps, ramps, handrails, attach/attached fittings, etc. The cargo doors have a corrosion protective finish that consists of chemical finish (Alodine) on clad aluminum parts, anodize surface treatment on non-clad aluminum parts and a coat of BMS 10-11, type I, primer. The exterior surface of the doors is unfinished unless otherwise requested by the operator. Aluminum parts are coated with BMS 10-11, type II, white enamel. All interior surfaces are coated with BMS 3-23, type II, corrosion preventive compound after assembly and painting.

B. Areas of possible corrosion are the internal structure of the door, connection points, mechanisms and on airplane line numbers 1-101 which have the large cargo door, the large cargo door latch fitting fasteners and lower sill (Ref 52-30-03, Fig. 1).

C. H-11 bolts have been found to be susceptible to stress corrosion. It is recommended that operators change existing H-11 bolts to Inconel 718 bolts whenever H-11 bolts are removed.

2. Corrosion Prevention

A. Following cleaning of suspected areas, a thorough inspection as described in Volume 1, 20-20-00 is effective to ensure that the protective finishes provided during manufacture remain intact. Refer to Volume 1, 20-60-00 for details on the application of corrosion inhibiting compound.

B. For minor corrosion, to minimize the downtime of the airplane, the corrosion products should be cleaned off, followed by the application of a corrosion inhibiting compound into the affected area to retard the corrosion process (Ref Volume I, 20-60-00). The finish system should be restored at the first opportunity consistent with the maintenance schedule.

C. Prevention Treatment

(1) Remove liner and gain access to interior structure of the door.

(2) Clean out drains and drain paths.

(3) Check that drain valve is free to open and close.

CAUTION: EXCESSIVE TIGHTENING OF PLUNGER TYPE DRAIN VALVE WILL CAUSE VALVE FLANGE TO CRACK OR BREAK.

(4) If required, remove plunger type drain valve from outside of door, clean out obstructions and reinstall valve until flange contacts skin. The cargo door should be treated at the same time as the cargo door opening.

(5) Apply corrosion inhibiting compound to the interior of the door, giving special attention to the lower corners. Do not apply to drain valves or other operational mechanisms.

(6) Do not apply corrosion inhibiting compounds on grease joints or sealed bearings. These compounds dissolve grease and other lubricants. They are penetrating compounds and can get around the seals and into the bearings.

(7) Do not apply corrosion inhibiting compounds on interior materials such as cargo liners. The compounds change the flammable quality of these materials.

(8) Relubricate interior door fitting as necessary per the maintenance manual.

(9) Reinstall liner and restore door to normal.

D. Improved Corrosion Protection

(1) Latch Fittings

(a) Corrosion has been experienced on the large cargo door latch fitting bolts. On airplane line numbers 102 and on, plus those incorporating SB 52-38, the large cargo door latch fitting fasteners were changed from H-11 alloy steel bolts and nuts to A-286 corrosion resistant steel bolts and nuts. BMS 5-95 sealant was added to the bolt head, bolt shank, nut, and to the fitting as a fillet sealant (Ref 53-30-03, Fig. 1).

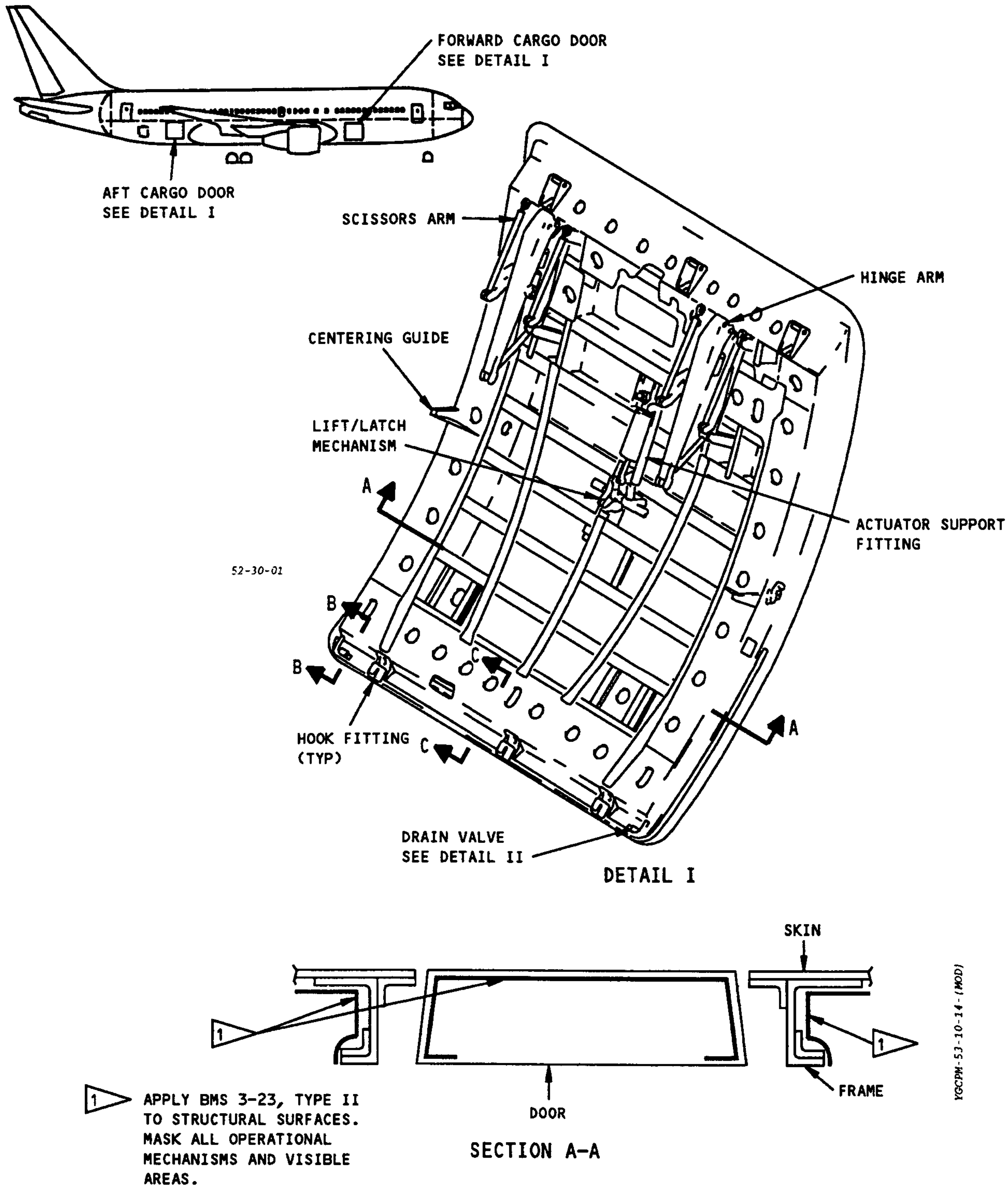
(2) Drain Holes

(a) On airplanes line number 49 and on, with standard size forward and aft cargo doors, plus airplanes incorporating SB 51-0002, additional drain holes and leveling compound were incorporated to improve fluid flow to the drain valves located at the lower forward and aft corners of the doors (Ref 52-30-02, Fig. 1, Section BB,CC).

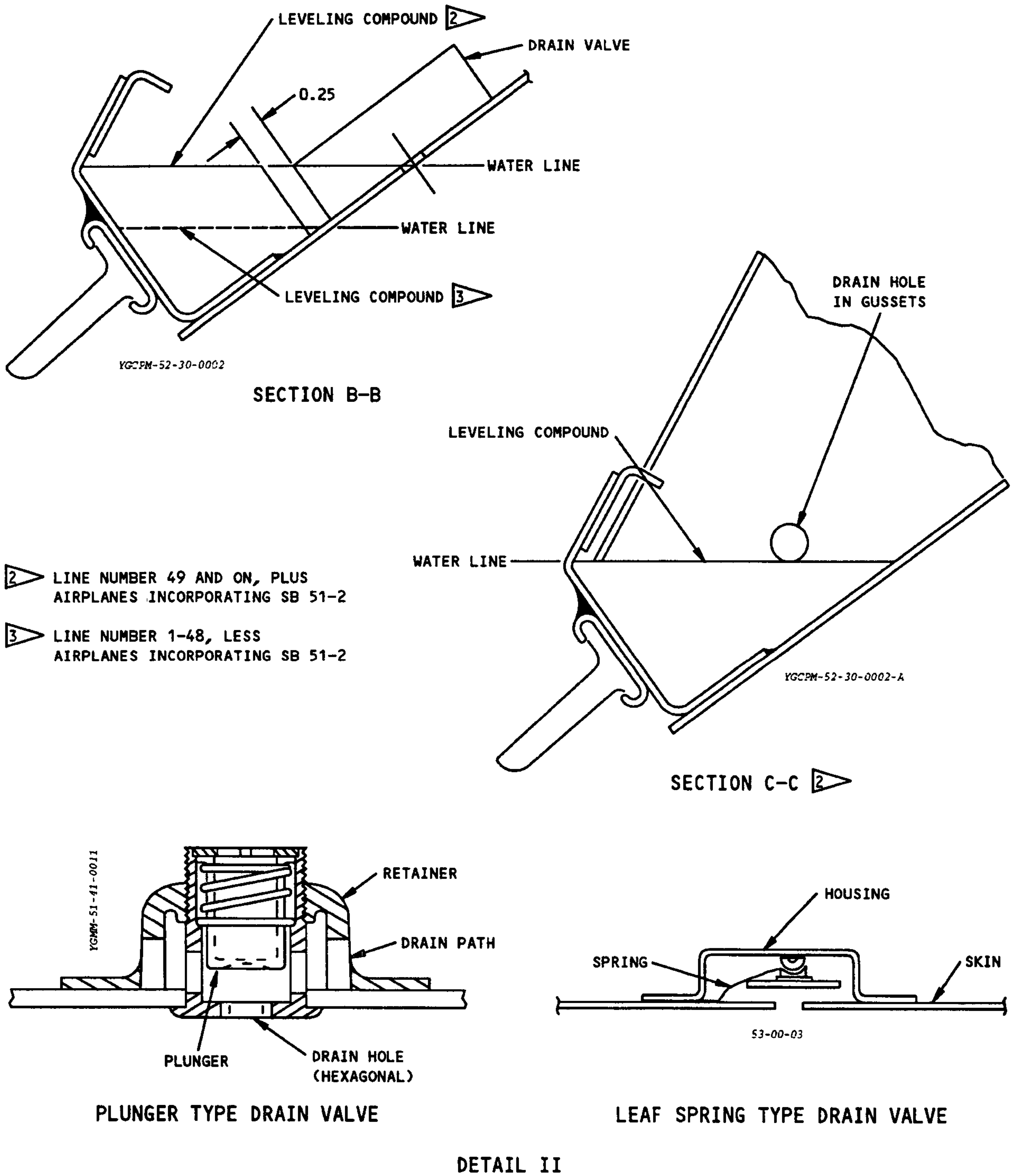
E. Frequency of Application

(1) Periodic inspection is required to areas identified as susceptible to corrosion and should be consistent to the schedules specified in the Maintenance Planning Document. Operators must be aware of reported problems and areas of occurrences.

(2) Periodic application of BMS 3-23 compounds is necessary to areas identified and should be consistent to the schedule specified in the Maintenance Planning Document.



Cargo Door
Figure 1 (Sheet 1)



Cargo Door
Figure 1 (Sheet 2)

DOORS

1. General

A. Service doors are exterior doors used primarily to gain access for servicing aircraft systems and equipment. They include structure, latching mechanisms, handles, insulation, lining, controls, integral steps, handrails and fittings.

B. Lavatory Service Panel (Ref 52-40-02, Fig. 1)

(1) The lavatory service panel is located at BS 1572. The area adjacent to and aft of the lavatory service panel and the door are susceptible to staining and corrosion due to leakage from the lavatory drain.

C. Forward Access Door (Ref 52-40-02, Fig. 2)

(1) The forward access door has a corrosion protective finish that consists of chemical finish (Alodine) on clad aluminum parts, anodize surface treatment on nonclad aluminum parts, a coat of BMS 10-11, type I, primer and a coat of BMS 10-11, type II, enamel. Faying surfaces of parts attached to the door skin were fay sealed with BMS 5-95 sealant. All areas of possible moisture accumulation are drained or filled with BMS 5-125 leveling compound. The exterior of the door was unfinished during production unless otherwise specified by the operator. The interior surface of the door received a coat of BMS 3-23, type II, corrosion preventive compound after assembly and painting.

(2) Areas of possible corrosion are the internal structure of the door, connection points and mechanisms.

(3) The door should be treated at the same time as the door opening.

D. Electrical/Electronics Access Door (52-40-02, Fig. 3)

(1) The electrical/electronics access door has a corrosion protective finish that consists of chemical finish (Alodine) on clad aluminum parts, anodize surface treatment on nonclad aluminum parts, a coat of BMS 10-11, type I, primer and a coat of BMS 10-11, type II, enamel. Faying surfaces of parts attached to the door skin were fay sealed with BMS 5-95 sealant. All areas of possible moisture accumulation are drained or filled with BMS 5-125 leveling compound. The exterior of the door was unfinished during production unless otherwise requested by the operator. The interior surface of the door received a coat of BMS 3-23, type II, corrosion preventive compound after assembly and painting.

(2) Areas of possible corrosion are the internal structure of the door, connection points and mechanisms.

(3) The door should be treated at the same time as the door opening.

2. Corrosion Prevention

A. Following cleaning of suspected areas, a thorough inspection as described in Volume 1, 20-20-00 is effective to ensure that protective finishes provided during manufacture remain intact. Refer to Volume 1, 20-60-00 for details on the application of corrosion inhibiting compound.

B. Where corrosion exists (noticeable bulges of the skin or white deposits of corrosion products at fasteners heads of joint edges), refer to the index column in 52-00-01 for reference rework chapter.

C. For minor corrosion, to minimize the downtime of the airplane, the corrosion products should be cleaned off, followed by the application of a corrosion inhibiting compound into the affected area to retard the corrosion process (Ref Volume 1, 20-60-00). The finish system should be restored at the first opportunity consistent with the maintenance schedule.

D. Prevention Treatment

(1) At first opportunity consistent with scheduled maintenance activity, corrosion prevention treatment should be accomplished on all exterior service doors.

(2) Lavatory Service Panel

(a) After servicing the toilet tank, the panel area should be flushed with clean water.

(b) Inspect lavatory service panel and fuselage skin aft of panel for damaged finish and corrosion annually.

(3) Forward Access Door

(a) Gain access to interior structure of the door.

(b) Clean out drains and drain paths.

(c) Check that drain valve is free to open and close.

CAUTION: EXCESSIVE TIGHTENING OF PLUNGER TYPE DRAIN VALVE WILL CAUSE VALVE FLANGE TO CRACK OR BREAK.

(d) If required, remove plunger type drain valve from outside of door, clean out obstructions and reinstall valve until flange contacts skin.

(4) Electrical/Electronic Access Door

(a) Gain access to interior structure of the door.

(b) Clean out drains and drain paths.

(c) Check that drain valve is free to open and close.

CAUTION: EXCESSIVE TIGHTENING OF PLUNGER TYPE DRAIN VALVE WILL CAUSE VALVE FLANGE TO CRACK OR BREAK.

(d) If required, remove plunger type drain valve from outside of door, clean out obstructions and reinstall valve until flange contacts skin.

(e) Apply corrosion inhibiting compound to the accessible interior surfaces of the door, giving special attention to the structural seams. Do not apply to drain valve or other operational mechanisms.

(f) Lubricate interior door fittings as necessary.

(5) Do not apply corrosion inhibiting compounds on grease joints or sealed bearings. These compounds dissolve grease and other lubricants. They are penetrating compounds and can get around the seals and into the bearings.

(6) Do not apply corrosion inhibiting compounds on interior materials such as liners. The compounds change the flammable quality of these materials.

E. Frequency of Application

(1) Periodic inspection is required in areas that can get corrosion and should be consistent to the schedules specified in the Maintenance Planning Document. Operators must be aware of reported problems and areas of occurrences.

(2) Periodic application of BMS 3-23 compounds is necessary on areas identified and should be consistent to the schedule specified in the Maintenance Planning Document.

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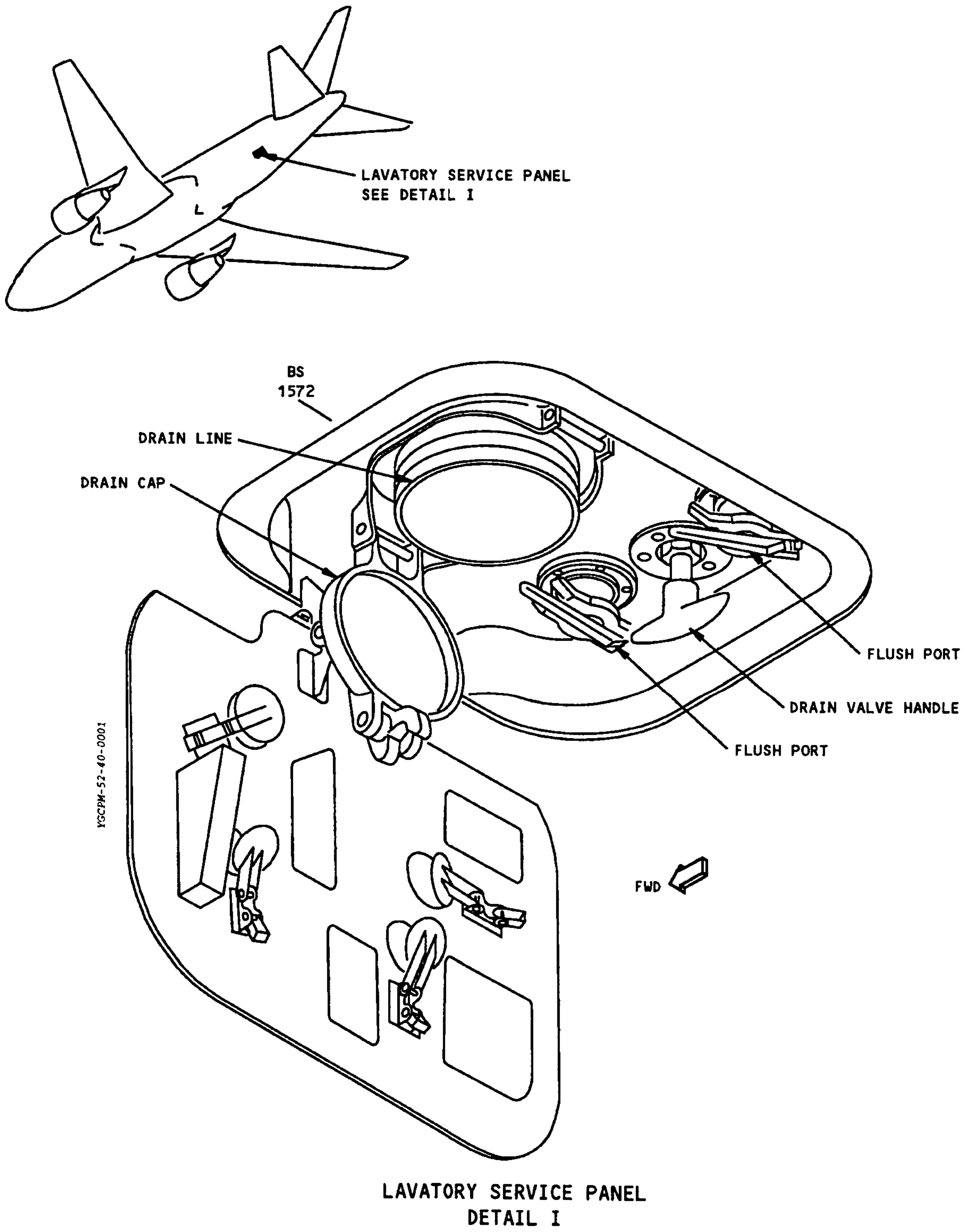
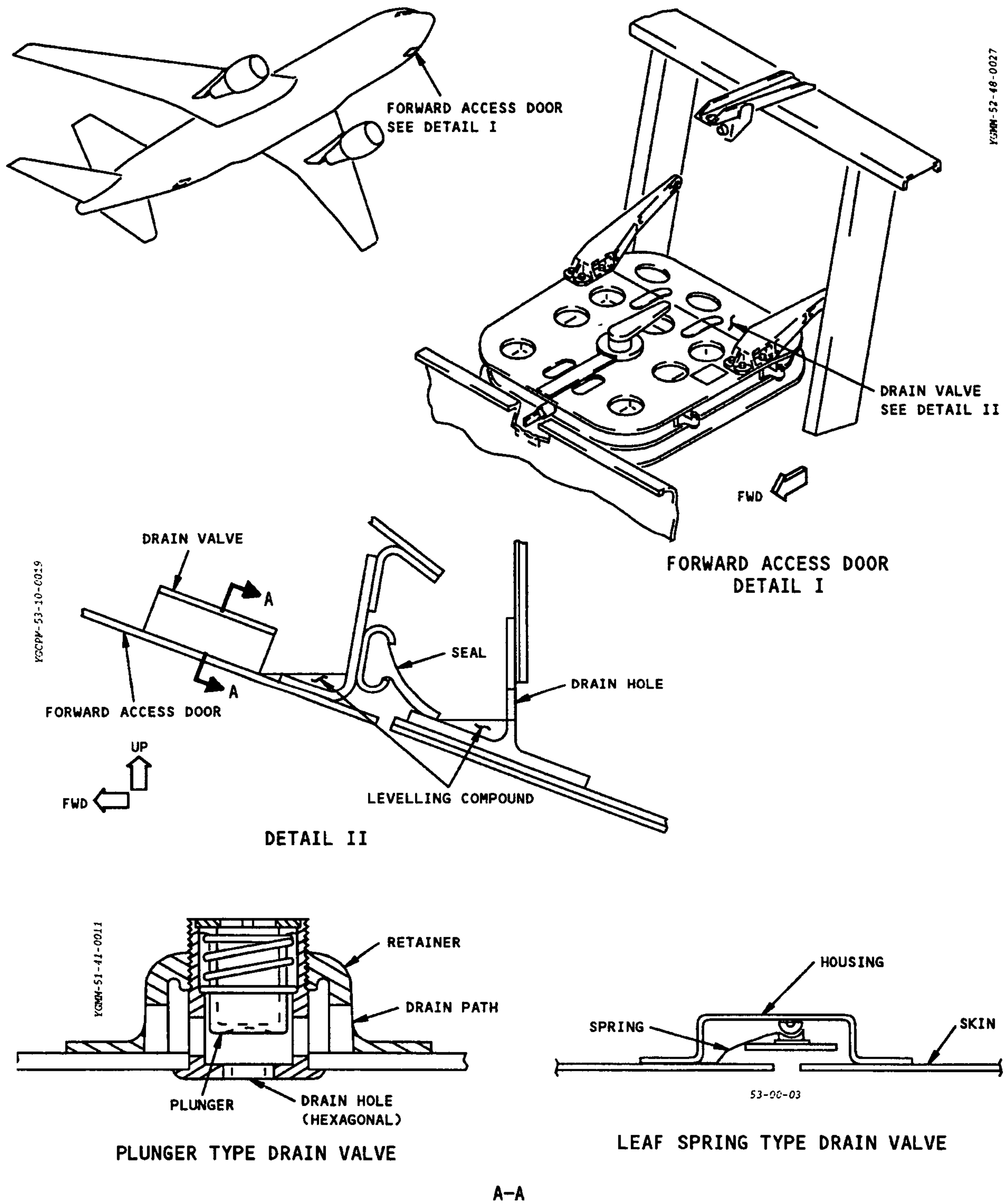
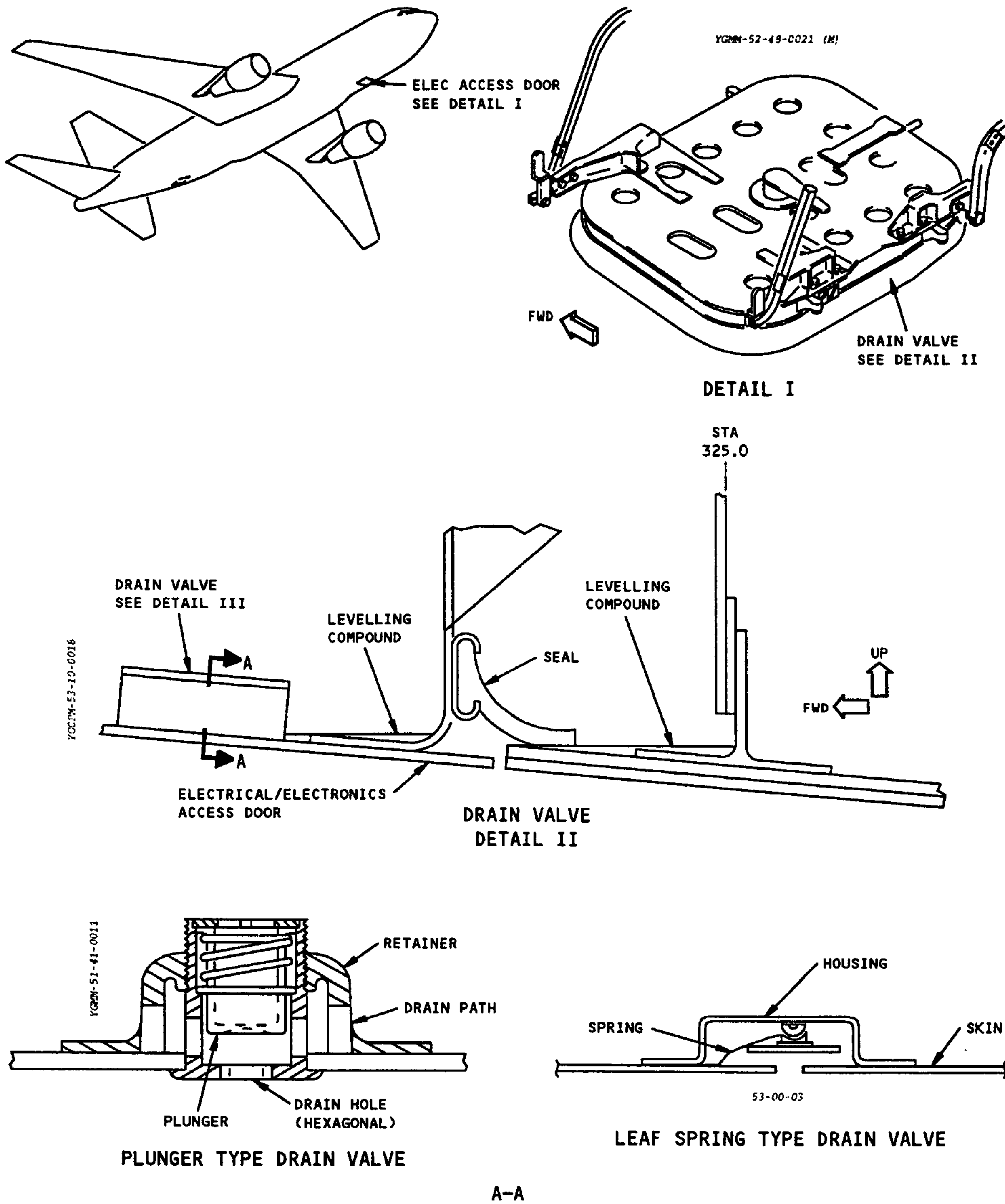


Lavatory Service Panel
Figure 1



Lavatory Service Panel
Figure 2



Lavatory Service Panel
Figure 3

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CHAPTER

53

FUSELAGE

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AREA	PROBLEM	INDEX PREVENTION VOLUME 2	TERMINATING ACTION (IF ANY)
Section 41	Corrosion of interior structure	53-10-01	
	Plugged drains	53-10-01	--
	Corrosion of inside wheel well surfaces	53-10-01	53-10-01
	Corrosion of door surrounding structure	53-10-01	
	Stress-corrosion cracks on H-11 bolts	53-10-01	SL 51-8 Retrofit
	Corrosion of window fasteners	53-10-01	
Section 43	Corrosion of interior structure	53-30-01	
	Corrosion of external fuselage skin	53-30-01	
	Plugged drains	53-30-01	
	Corrosion of door surrounding structure	53-30-01	
	Stress-corrosion cracks on H-11 bolts and nuts	53-30-01	SL 51-8 and Retrofit SL 52-10
	Corrosion of fairing skin and structure	53-30-01	
	Corrosion of interior cargo compartment structure	53-30-01	
	Corrosion of window fasteners	53-30-01	
	Corrosion of seat tracks	53-30-01	
Section 45	Corrosion of interior structure	53-50-01	
	Plugged drains	53-50-01	
	Corrosion of inside surface of main wheel well and keel beam	53-50-01	
	Stress-corrosion cracks on H-11 bolts	53-50-01	SL 51-8 Retrofit
	Corrosion of emergency exit door structure	53-50-01	
	Corrosion of seat tracks	53-50-01	
	Corrosion of fairing skin and structure	53-50-01	
Section 46	Corrosion of interior structure	53-60-01	
	Plugged drains	53-60-01	

AREA	PROBLEM	INDEX PREVENTION VOLUME 2	TERMINATING ACTION (IF ANY)
	Corrosion of door surrounding structures	53-60-01	
	Corrosion at stringer 26 left skin lap joint forward of the bulk cargo door	53-60-01	
	Corrosion of interior cargo compartment structure	53-60-01	
	Corrosion of seat tracks	53-60-01	SB 53-0049
	Stress-corrosion cracks on H-11 bolts	53-60-01	SL 51-8
	Corrosion of fairing skin and structure	53-60-01	
Aft Pressure Bulkhead	Corrosion of pressure bulkhead fore and aft	53-70-01	
	Stress-corrosion cracks on H-11 bolts	53-70-01	SL 51-8
Section 48	Corrosion of interior structure	53-80-01	
Fuselage Skin Lap Joints	Corrosion of external/ internal lap joints	53-90-01	
	Corrosion at stringer 26 left skin lap joint forward of the bulk cargo door	53-90-01	
Galleys and Lavatories	Corrosion of structure under galleys and lavatories	53-95-01	

Specific Corrosion Problems - Fuselage
Figure 1 (Sheet 1 and 2)

FUSELAGE

1. General

A. The fuselage is of semimonocoque construction utilizing aluminum skins, frames and hat section stringers. The fuselage skin is installed with butt joints and longitudinal lap joints that are generally flush riveted. Skins should be treated with the fuselage structure.

B. The stringers, frames and skins have been found susceptible to corrosion due to moisture entrapment between the skin and insulation blankets. Corrosion can readily start where protective finishes have been broken or deteriorated.

2. Corrosion Prevention

A. Make the periodic inspection described in Volume 1, 20-20-00 to detect the early stages of corrosion. Skin bulges, missing fasteners or white powdery deposits are evidence of corrosion which should alert operators that some corrective action is required. A corrosion prevention program should be initiated to prevent the accumulation of moisture or corrosive compounds to minimize the occurrence of corrosion.

B. For minor corrosion detected during the periodic inspections and to minimize the downtime of the airplane, corrosion products should be cleaned off. Corrosion inhibiting compound applied to the cleaned corrosion area will retard the corrosion process.

C. For details of the application of corrosion inhibiting compound, refer to Volume 1, 20-60-00.

WARNING: DO NOT APPLY CORROSION INHIBITING COMPOUNDS INTO AREAS WHICH COULD POTENTIALLY BE IN CONTACT WITH OXYGEN SYSTEM COMPONENTS. MIXING OF CORROSION INHIBITORS AND OXYGEN MAY RESULT IN AN EXPLOSION.

CAUTION: INSULATION BLANKETS SOAKED WITH CORROSION INHIBITORS ARE POTENTIAL FIRE HAZARDS, BLANKETS INADVERTENTLY SPATTERED SHOULD BE ALLOWED TO DRY BEFORE REINSTALLTION.

D. For minor corrosion detected during the periodic inspections and to minimize the downtime of the airplane, the corrosion products should be cleaned off, followed by an application of a corrosion inhibiting compound into the affected area to retard the corrosion process.

NOTE: The treatment of internal structure described above should be made at first opportunity the area is exposed. Location of the area should be noted and monitored from the outside every 3 months for visual indication of corrosion progression. Any noticeable skin bulges would require scheduling corrosion removal.

E. Prevention Treatment

(1) At first opportunity when scheduled maintenance work allows access to the structure, corrosion prevention treatment should be accomplished.

(2) Remove insulation blankets to expose frame, stringer and skin. Dry blankets thoroughly if found wet.

(3) Open plugged drains; if any.

(4) Replace broken or damaged finishes. Refer to Volume 1, 20-60-00 for protective finish systems.

(5) Apply water displacing corrosion inhibiting compound to all exposed structure. The use of spray equipment with nozzle directed into faying surfaces is recommended.

(6) Allow solvent to evaporate before reinstalling insulation blankets.

(7) Reinstall blankets so they are taut and so that the outboard surface of the upper blanket overlaps the lower blanket.

(8) Reinstall liner and restore airplane to normal.

F. Corrosion inhibiting compound should not be used in the vicinity of oxygen system components. If corrosion is discovered close to oxygen system components the following steps are recommended:

(1) Clean up corrosion products and repair as required per the Structural Repair Manual.

(2) Alodize all bare material.

(3) Apply one coat BMS 10-11, type 1 green primer.

(4) Apply one coat BMS 10-11, type 1 yellow primer.

(5) Top coat with BMS 10-11, type 2 epoxy or BMS 10-60 polyurethane enamel.

(6) Frequency of Application. Perform a sample inspection at major overhaul or approximately 5 years. Determine the condition of the corrosion inhibitor on the structure and primer coat on the stringer flanges. Reapply corrosion inhibitor or primer coat if required.

1. General

A. The exterior surfaces of fuselage skins at fastener locations and panel edges have been found to be susceptible to filiform corrosion. The small gap between the dimpled or countersunk skin and the head of flush fasteners leaves an unsupported area for the paint system leading to cracking of the paint around the fastener head and an opening for moisture and contaminants to enter. Breaks between skin and protruding head fasteners and edges of skin panels where the paint system has cracked or flaked are starting points for filiform corrosion.

B. Corrosion has been experienced on the Section 48 lower body skin panels. The corrosion occurred in the vicinity of the rivets through the skin panels from body station 1582 to 1832.

C. The preventive action described in this figure applies to the exterior surfaces of either butt jointed or lap spliced skin panels. See 53-00-06 when working with lap spliced panel edges so that the preventive action for the lap joints may be worked together.

2. Corrosion Prevention

A. Make the periodic inspection described in Volume 1, 20-20-00, to ensure that the protective finishes provided at manufacture remain intact. The preferred treatment for damaged finishes is to restore the finish. Refer to Volume 1, 20-60-00 for protective finish systems. Since in some cases, it is impractical or impossible to use this approach between overhaul cycles, the following treatment is recommended:

(1) For details of application of water displacing corrosion inhibiting compound, refer to Volume 1, 20-60-00.

(2) For corrosion prevention, apply water displacing corrosion inhibiting compound to fastener heads or edges of skin panels where the paint system has been cracked or flaked. Wipe off excess.

(3) In cases where cleaning has been accomplished with steam and high pressure water and detergent, the corrosion inhibitor coating should be reapplied in areas noted in par. (2) above.

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FUSELAGE

1. General

A. The fuselage is of semimonocoque construction divided in five sections. The first forward section is Section 41 extending from stations 143.5 to 434. The fiberglass radome is hinged at the top of the forward pressure bulkhead. Aft of the forward pressure bulkhead are the flight compartment and nose gear wheel well. Structural openings in Section 41 include flight compartment and passenger doors, and forward access door.

B. The fuselage skin is installed with butt joints and longitudinal lap joints that were generally flush riveted. The faying surfaces at skin laps and skin splices are either bonded or fay surface sealed.

C. The stringers, frames and skins have been found susceptible to corrosion due to moisture entrapment between the skin and insulation blankets. Corrosion can readily start where protective finishes have been broken or deteriorated.

D. H-11 bolts can get stress-corrosion cracks. When you remove H-11 bolts, replace them with Inconel 718 bolts, which do not get stress-corrosion cracks. Refer to SL 51-8 for further information.

E. External drains are either leaf spring or plunger type drain valves which close when the airplane is pressurized. Drain paths through the internal structure lead to the external drain valves. Refer to 53-10-02, Fig. 1 for valve locations.

F. The nose gear wheel well is a rigid box structure consisting of a ceiling, sidewalls, and end walls and is located in the forward fuselage. The nose gear attachment fittings are located in the wheel well (Ref 53-10-03, Fig. 1). The wheel well surfaces get a treatment of BMS 3-23 type 2 corrosion inhibiting compound. Some airplanes have Dinitrol AV-5 compound on the exposed hydraulic tubing and wall surfaces of the wheel well.

G. The corrosion protective finish for the structure surrounding forward entry and service door opening consists of a chemical conversion coating (alodine) on clad aluminum parts, anodize surface treatment for non-clad parts and a coat of BMS 10-11, type 1, primer. The doubters around the doors are installed with fay surface sealant. All non-aluminum fasteners which penetrate the exterior skin are installed with wet sealant. After assembly, a touchup coat of BMS 10-11, type 1, primer is applied to bare fasteners and a coat of BMS 10-11, type 2, white enamel is applied around the doors. A coat of BMS 3-23 corrosion inhibiting compound is applied except on the door assembly and door opening (Ref 53-10-04, Fig. 1).

H. The primary corrosion area is under the door sill, floor panels, floor beams and doubters or triplers at door openings. Contaminants are tracked in by passengers, crew members, cargo and service personnel or by driven rain/snow when door is opened.

I. Corrosion can occur on the upper flange of the floor beams at stations 287 and 325. The corrosion starts at broken sealant near the entry, the F1 galley and the gutter.

J. Corrosion can occur in the bilge skin panel near the splice between Sections 41 and 43. The splice fittings themselves can also get corrosion.

K. Insulation blankets are provided on cabin interiors for passenger comfort and to minimize the condensation of warm cabin air on cold skins and stringers. Corrosion can occur in areas where the blankets are not installed taut and wrap around stringers or touch the skins. Corrosion can also occur on window fasteners near wet insulation blankets.

2. Corrosion Prevention

A. After you clean the areas, do the inspections of Volume 1, 20-20-00 to make sure that protective finishes stay serviceable. Also, refer to SB 53-0047 for inspection of the skin and stringers in the lower body.

B. Where corrosion exists (noticeable bulges of the skin or white deposits of corrosion products at fastener heads or joint edges), refer to the index column in 53-00-01 for reference rework chapter.

C. For minor corrosion, to minimize the downtime of the airplane, the corrosion products should be cleaned off, followed by the application of a corrosion inhibiting compound into the affected area to retard the corrosion process (Ref Volume 1, 20-60-00). The finish system should be restored at the first opportunity consistent with the maintenance schedule.

D. Prevention Treatment

(1) At first opportunity consistent with scheduled maintenance activity, corrosion prevention treatment should be accomplished in the external drains, wheel well opening, and door opening.

(2) External Drains:

(a) Clean out drains and drain paths.

(b) Check that drain valve is free to open and close.

CAUTION: OBSERVE DRAIN VALVE TORQUE LIMITS. EXCESSIVE TIGHTENING OF PLUNGER TYPE DRAIN VALVE WILL CAUSE VALVE FLANGE TO CRACK OR BREAK.

(c) If required, remove plunger type drain valve from outside the fuselage, clean out obstructions and reinstall valve until flange contacts skin. Tighten to 15 lb-in. maximum.

(3) Nose Wheel Well Opening:

(a) Treatment of the wheel well at the same time as the nose gear is recommended.

(b) Remove runway debris and generally clean the entire wheel well.

(c) Replace damaged or broken protective finishes if at all possible. Refer to Volume 1, 20-60-00 for protective finish systems.

(d) Apply corrosion inhibiting compound to all exposed wheel well structure. Special effort should be made to apply the compound along doubter edges, along faying surfaces and on fastener heads. The use of spray equipment with nozzle directed into faying surfaces is recommended.

(e) Forward Entry and Service Door Opening

(f) Treatment of the door at the same time as the door opening is recommended.

(g) Remove traffic debris and generally clean the entire door opening area. Remove reveal and scuff plate where applicable.

(h) Relubricate all tube points per standard servicing procedures.

(i) Where accessible, apply corrosion inhibitor to the internal lowersill area.

(j) Special effort should be made to apply the corrosion inhibitor along doubter edges, along faying surfaces and on fastener heads. Spray all door and fuselage fittings at the faying surfaces. The use of spray equipment with nozzle directed into faying surface is recommended.

(k) Apply BMS 3-23 corrosion inhibiting compound to nose gear door operator support fitting and miscellaneous other fittings. Ensure that all lugs and lug faces are treated.

(4) If you clean an area with steam or high pressure water and detergent, reapply the corrosion inhibitor.

(5) Do not apply corrosion inhibiting compounds on grease joints or sealed bearings. These compounds dissolve grease and other lubricants. They are penetrating compounds and can get around the seals and into the bearings.

(6) Do not apply corrosion inhibiting compounds on insulation blankets. The compounds reduce the water-repellent quality of the blankets.

E. Frequency of Application

(1) Periodic inspection is required in areas identified as susceptible to corrosion and should be consistent to the schedules specified in the Maintenance Planning Document. Operators must be aware of reported problems and areas of occurrences.

(2) Periodic application of BMS 3-23 compound is necessary to areas identified and should be consistent to the schedule specified in the Maintenance Planning Document.

F. Improved Corrosion Protection

(1) External Drains

(a) On airplanes line number 1, 35, 60 and on, PRR B10978 added a a drain hole and valve at BS 343.4, BL 0. This change can be incorporated on other airplanes per SB 51-0003.

(b) On airplanes line number 1, 117 and on, PRR B10988 replaced all leaf-spring-type drain valves by plunger-type valves. This change can be incorporated on other airplanes per SB 51-0006.

(2) Forward Entry and Service Door Opening

(a) At line number 141, PRR B11211 sprayed the door sill, frame, and doubter in an area approximately 3 inches up from the WL 199.5 sill with BMS 5-95 sealant and painted these areas with BMS 10-60, type 2 enamel. Then the sill fittings and the scuff plate support blocks were installed. Leveling compound was added over the scuff sill fittings, to fill the entire sill corner, before the scuff plate was installed. These changes can be incorporated on other airplanes per SB 53-0016.

(b) At line number 396, PRR B12196 applied BMS 10-11, type 1 primer on the titanium gutters that touch the Flexane 80 sealant at the floor panels.

(3) Fuselage Crown Panels

(a) At line number 248, PRR B11816-1 applied BMS 3-23 corrosion inhibiting compound on the crown panels and frames. This treatment is between stringers S-8L and S-8R, from station 246 aft. This can be incorporated on other airplanes with SL 20-9 and 51-9.

(b) At line number 480, PRR B12388-2 applied BMS 3-23 compound to all metallic structure between WL 200 and stringer S-8.

(4) Window Fasteners

(a) Some airplanes have BMS 3-26 type 1 corrosion inhibiting compound on the exposed surfaces of nutplates around the windows, per RR B41012-22 and MC 5120MP6023.

(5) Floor Structure

(a) At line number 423, PRR B12189 installed a titanium corrosion shield on the upper chord of the floor beam at station 287.

(b) At line number 480, PRRs B12388-1 and B12388-2 added BMS 3-23 compound to all metallic floor structure and seat tracks.

(6) Bilge Skin

(a) At line number 360, a production change sealed the stringers in the lower lobe with a different procedure.

(b) At line number 393, PRR B12180 applied more fay surface sealant between the skin panels and the stringers near the skin splice at station 434. This change also removed the fillet seal from the lower side of the stringer, and added BMS 3-26 type I corrosion preventive compound to the area.

(c) At line number 480, PRR B12388-2 replaced the two-layer system of BMS 3-23 and BMS 3-26 compounds with BMS 3-29 compound. This change also replaced BMS 3-23 compound with BMS 3-29 compound in the bilge below WL 124.4.

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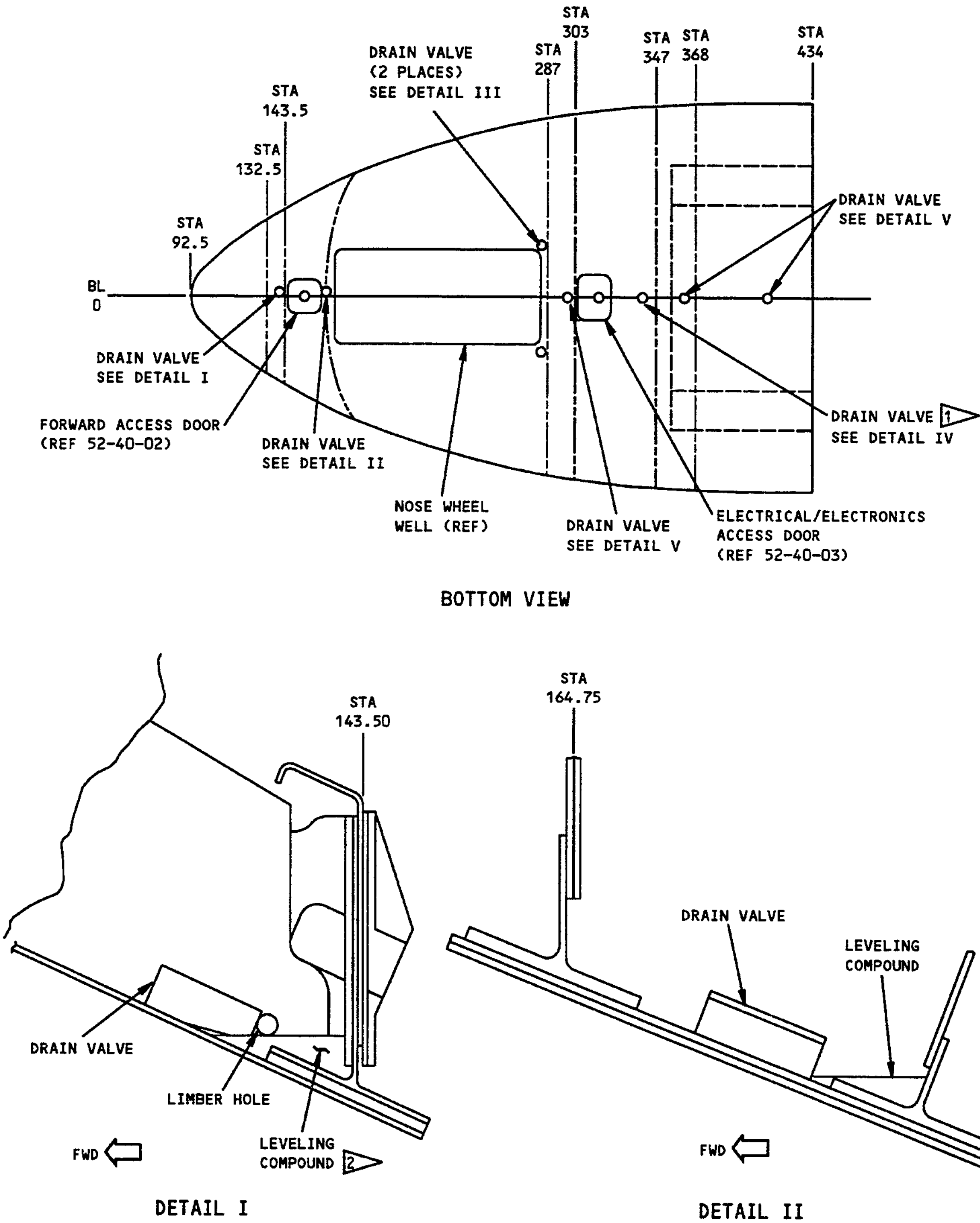
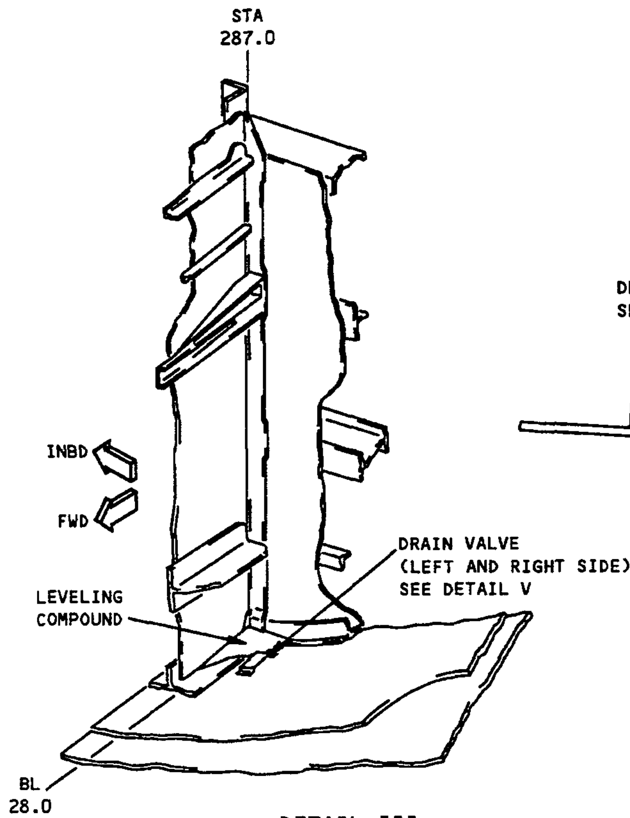
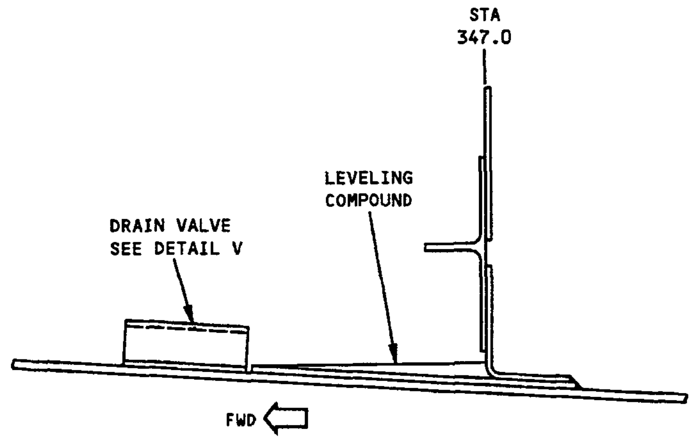


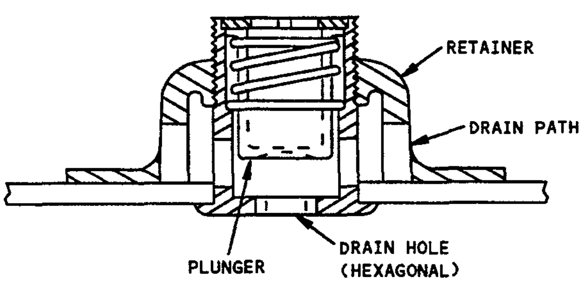
Section 41 External Drains
Figure 1 (Sheet 1)



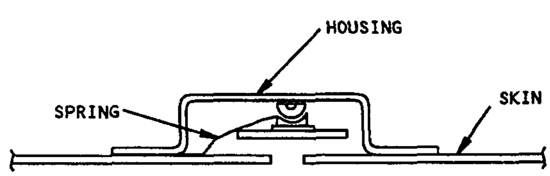
DETAIL III



DETAIL IV



PLUNGER TYPE DRAIN VALVE



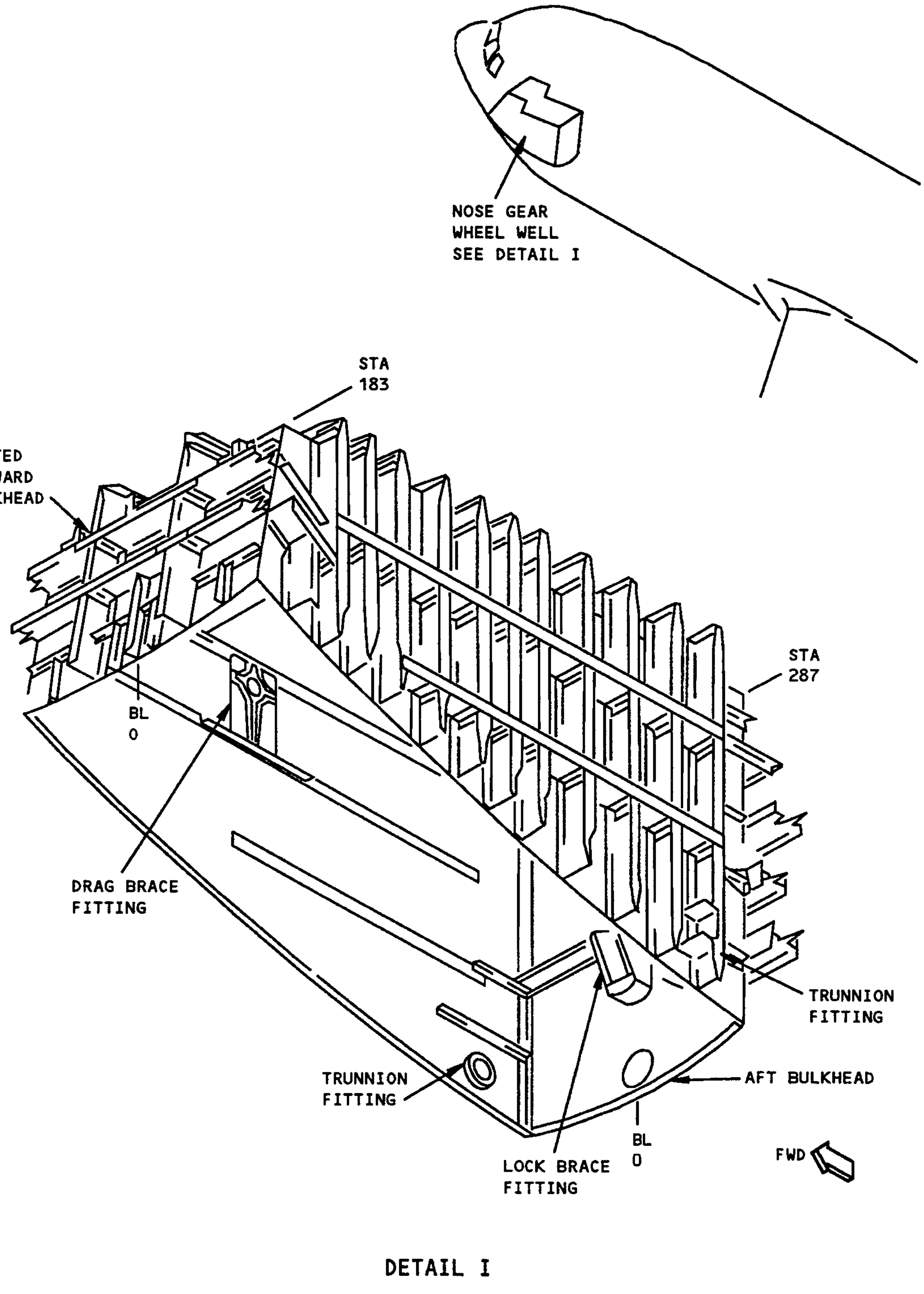
LEAF SPRING TYPE DRAIN VALVE

DETAIL V

1 LINE NUMBER 1,35,60 AND ON, PLUS AIRPLANES INCORPORATING SB 51-0003

2 LEFT SIDE - UP TO EDGE OF DRAIN VALVE. RIGHT SIDE - UP TO BOTTOM OF LIMBER HOLE

Section 41 External Drains
Figure 1 (Sheet 2)



Nose Landing Gear Wheel Well
Figure 1

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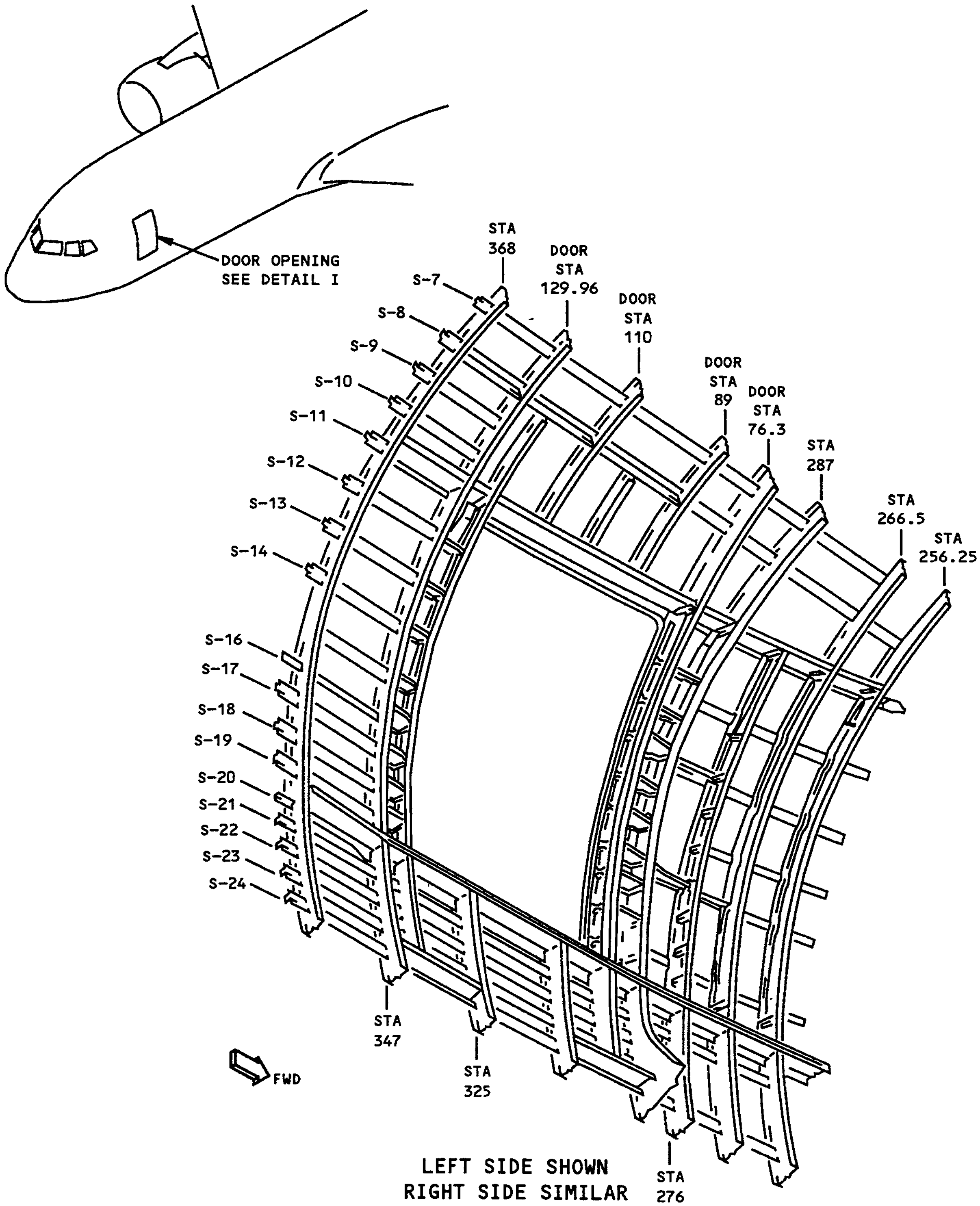

Forward Entry and Service Door Opening
Figure 1

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1. General

A. Section 43 extends from stations 434 to 785.9. The upper lobe contains the passenger compartment with left and right passenger doors and windows. The lower lobe houses the electrical/electronic compartment and forward cargo compartment. Access to the electrical/electronic compartment during ground servicing is through a door aft of the nose gear wheel well doors. An in-flight access door is also provided. The forward cargo compartment door is approximately 70 by 69 inches and located on the right side of the fuselage. The forward section of the wing/body fairing attaches to section 43.

B. The stringers, frames and skins have been found susceptible to corrosion due to moisture entrapment between the skin and insulation blankets. Corrosion can readily start where protective finishes have been broken or deteriorated.

C. H-11 bolts can get stress-corrosion cracks. When you remove H-11 bolts, replace them with bolts made of Inconel 718 or A-286, as applicable. These bolts do not get stress-corrosion cracks. Refer to SL 51-8 and 52-10 for further information.

D. External drains are either leaf spring or plunger type drain valves which close when the airplane is pressurized. Drain paths through the internal structure lead to the external drain valves. Refer to 53-30-02, Fig. 1 for valve locations.

E. Corrosion can occur on the seat tracks. Fittings of a different metal touch these tracks. When the carpets are cleaned, moisture can get on the tracks and permit galvanic corrosion to start.

F. Corrosion can occur in the bilge skin panel near the splice between Sections 41 and 43.

G. The corrosion protective finish for the structure surrounding the No. 1 cargo and No. 2 passenger door opening consists of a chemical conversion coating (alodine) on clad aluminum parts, anodize surface treatment for non-clad parts and a coat of BMS 10-11, type I primer. The doubters around the doors are installed with fay surface sealant. All non-aluminum fasteners which penetrate the exterior skin are installed with wet sealant. After assembly, a touchup coat of BMS 10-11, type I primer is applied to bare fasteners and a coat of BMS 10-11, type II white enamel is applied around the doors. A coat of BMS 3-23 is applied except on the door assembly and door opening (Ref 53-30-03, Fig. 1).

(1) The primary corrosion area is under the door sill, floor panels, floor beams and doubters or triplers at door openings. Contaminants are tracked in by passengers, crew members, cargo and service personnel or by driven rain/snow when door is opened.

(2) On airplanes that have the large cargo door, corrosion can occur on the latch fittings and the bearstrap. The corrosion on the bearstrap was on the inboard surface of the upper aft corner.

(3) Corrosion can occur on the internal surfaces of the failsafe strap, at the sill of the forward cargo door.

(4) Corrosion can occur on the forward cargo door sill area fuselage bolts at body station 577.

(5) Some airplanes use H-11 bolts to attach the latch fittings. H-11 bolts can get stress-corrosion cracks. When you remove H-11 bolts, replace them with A-286 CRES bolts. Refer to SL 52-10 for further information.

H. Insulation blankets are provided on cabin interiors for passenger comfort and to minimize the condensation of warm cabin air on cold skins and stringers. Corrosion can occur in areas where the blankets are not installed taut and wrap around stringers or touch the skins. (For example, wet insulation blankets could be the cause of corrosion of stringer splice fittings at Station 434 between stringers 35 Left and 35 Right as told by Structural Item Interim Advisory 767-11 and SB 53-0047.) Corrosion can also occur on window fasteners near wet insulation blankets.

I. The wing-to-body fairing is constructed of nonmetallic sandwich material and is attached by an aluminum frame to the fuselage. The wing-to-body fairing frame has a corrosion protective finish that consists of chemical finish (alodine) on clad aluminum parts, anodize surface treatment of non-clad parts, a coat of BMS 10-11, type I primer and BMS 10-11, type II white enamel. All fairing structure permanently attached to the outside of the body skin is fay sealed with BMS 5-95 sealant. The outside of the body skin covered by the fairing gets BMS 10-79, type II primer and a coat of BMS 10-60, type II gray enamel. Where removable fairings contact the body skin, the body skins are coated with BMS 10-86 teflon coating. All fairing structure receives BMS 3-23 after assembly and installation. Beginning with line number 37, the surface contacted by the fairing access doors when in the closed position is coated with BMS 10-86, type 1, teflon-filled coating (Ref 53-30-03, Fig. 1).

2. Corrosion Prevention

A. After you clean the areas, do the inspections of Volume 1, 20-20-00 to make sure that protective finishes stay serviceable. Also, refer to SB 53-0047 for inspection of the skin and stringers in the lower body.

B. Where corrosion exists (noticeable bulges of the skin or white deposits of corrosion products at fastener heads or joint edges), refer to the index column in 53-00-01 for reference rework chapter.

C. For minor corrosion, to minimize the downtime of the airplane, the corrosion products should be cleaned off, followed by the application of a corrosion inhibiting compound into the affected area to retard the corrosion process (Ref Volume 1, 20-60-00). The finish system should be restored at the first opportunity consistent with the maintenance schedule.

D. Prevention Treatment

(1) At first opportunity consistent with scheduled maintenance activity, corrosion prevention treatment should be accomplished in the external drains, cargo compartment, door opening, and wing to body fairing.

(2) External Drains (Ref 53-30-02, Fig. 1)

(a) Clean out drains and drain paths.

(b) Check that drain valve is free to open and close.

CAUTION: OBSERVE DRAIN VALVE TORQUE LIMITS. EXCESSIVE TIGHTENING OF PLUNGER TYPE DRAIN VALVE WILL CAUSE VALVE FLANGE TO CRACK OR BREAK.

(c) If required, remove plunger type drain valve from outside the fuselage, clean out obstructions and reinstall valve until flange contacts skin. Tighten to 15 lb-in. maximum.

(3) No. 1 Cargo Compartment

(a) Remove sidewall lining and insulation blankets in the cargo compartment and beneath the main deck entry and cargo doors to expose frame, stringer, doubters and skin.

(b) Remove floor liners to gain access to bilge areas, if any.

(c) Remove ceiling lining for access to main deck floor beams and intercostals.

(d) Replace broken or damaged finishes. Refer to Volume 1, 20-60-00 for protective finish systems.

(e) Replace or repair broken or damaged leveling compounds used for drainage.

(f) Apply corrosion inhibiting compound on all open structure under the cargo floor, and on the sidewalls below the upper lobe entry and cargo doors. Use spray equipment with nozzle turned into faying surfaces.

(g) Let the solvent dry before you put back the insulation blankets.

(h) Install blankets so they are tight.

(i) Install the liners and floor panels. Install the floor panel fasteners with BMS 3-24 grease.

(4) No. 1 Cargo Door Opening (Ref 53-30-03, Fig. 1)

(a) Treatment of the door at the same time as the door opening is recommended.

(b) Remove traffic debris and generally clean the entire door opening area. Remove reveal and scuff plate where applicable.

(c) Relubricate all tube points per standard servicing procedures.

(d) Where accessible, apply corrosion inhibitor to the internal lower sill area.

(e) Inspect latch fitting assembly for corrosion. Apply BMS 5-95 sealant as shown.

(f) Special effort should be made to apply the corrosion inhibitor along doubter edges, along faying surfaces and on fastener heads. Spray all doors and fuselage fittings at the faying surfaces. The use of spray equipment with nozzle directed into faying surface is recommended.

(5) Wing-to-Body Fairing (Ref 53-30-04, Fig. 1)

(a) Apply a coat of BMS 5-95, Class F sprayable sealant followed with BMS 10-60 enamel, to all external fairing surfaces. This applies to airplanes before line number 140 per SB 51-0008.

(6) If you clean an area with steam or high pressure water and detergent, apply the corrosion inhibitor again.

(7) Do not apply corrosion inhibiting compounds on interior materials such as cargo liners. The compounds change the flammable quality of these materials.

(8) Do not apply corrosion inhibiting compounds on insulation blankets. The compounds reduce the water-repellent quality of the blankets.

(9) Do not apply corrosion inhibiting compounds on grease joints or sealed bearings. These compounds dissolve grease and other lubricants. They are penetrating compounds and can get around the seals and into the bearings.

E. Frequency of Application

(1) Periodic inspection is required in areas identified as susceptible to corrosion and should be consistent to the schedules specified in the Maintenance Planning Document. Operators must be aware of reported problems and areas of occurrences.

(2) Periodic application of BMS 3-23 compound is necessary to areas identified and should be consistent to the schedule specified in the Maintenance Planning Document.

F. Improved Corrosion Protection

(1) External Drains:

(a) On airplanes line number 1, 35, 60 and on, PRR B10978 added a drain hole and valve are added at BS 777.6, BL 0. This change can be incorporated on other airplanes per SB 51-0003.

(b) On airplanes line number 1, 117 and on, PRR B10988 replaced all leaf spring type drain valves by plunger type valves. This change can be incorporated on other airplanes per SB 51-0006.

(c) On airplanes line number 328 and on, PRR B12008 added three drain holes and valves at BS 736. This change was made to some other airplanes by RR 41036-21. This change can be incorporated on other airplanes per SB 51-0013.

(2) Wing-to-Body Fairing

(a) On airplanes line number 140 and on, structural honeycomb components covered with Kevlar fabric were replaced with components covered with fiberglass fabric to reduce cracking and subsequent water intrusion.

(3) Latch Fittings for Large Cargo Door

(a) On airplanes line number 102 and on, PRR B11154 replaced the H-11 bolts and nuts that attach the fittings to structure by bolts and nuts made of A-286 CRES. Sealant is added on these fasteners. These changes can be incorporated on other airplanes per SL 52-10.

(4) Fuselage Crown Panels

(a) At line number 248, PRR B11816-1 applied BMS 3-23 corrosion inhibiting compound on the crown panels and frames. This treatment is between stringers S-8L and S-8R, the full length of Section 43. This can be incorporated on other airplanes with SL 20-9 and SL 51-9.

(b) At line number 480, PRR B12388-2 added BMS 3-23 compound to all metallic floor structure, seat tracks, and sidewalls between WL 200 and stringers S-8.

(5) Window Fasteners

(a) Some airplanes have BMS 3-26 type 1 corrosion inhibiting compound on the exposed surfaces of nutplates around the windows, per RR B41012-22 and MC 5120MP6023.

(6) Entry Door Openings

(a) At line number 396, PRR B12196 applied BMS 10-11, type 1 primer on the titanium gutters that touch the Flexane 80 sealant at the floor panels.

(7) Bilge Skin

(a) At line number 360, a production change sealed the stringers in the lower lobe with a different procedure.

(b) At line number 393, PRR B12180 applied more fay surface sealant between the skin panels and the stringers near the skin splices at stations 434 and 654. This change also removed the fillet seal from the lower side on the stringer, and added BMS 3-26 type I corrosion preventive compound to the area.

(c) At line number 480, PRR B12388-2 replaced the two-layer system of BMS 3-23 and BMS 3-26 compounds with BMS 3-29 compound. This change also replaced BMS 3-23 compound with BMS 3-29 compound in the bilge below WL 124.4.

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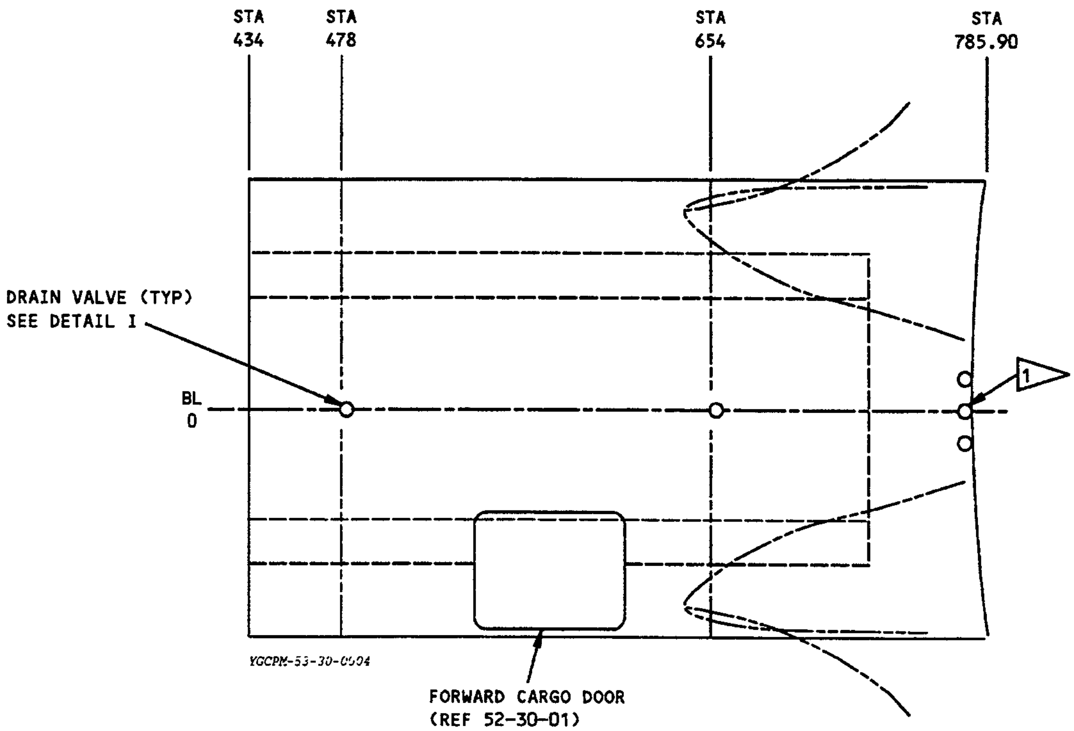
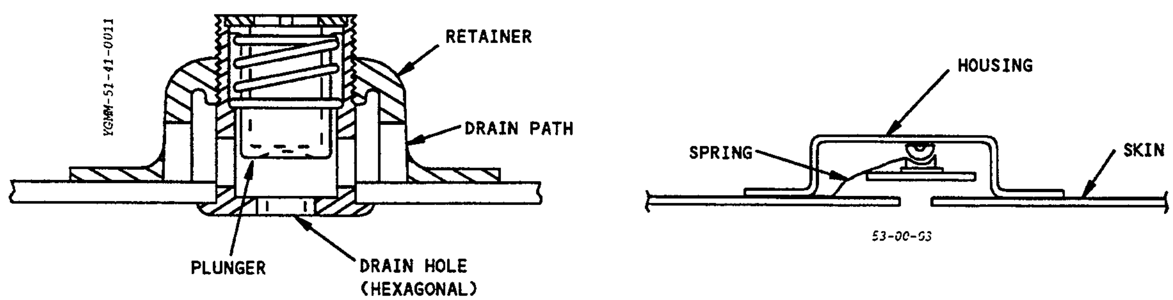


BOTTOM VIEW



PLUNGER TYPE DRAIN VALVE

LEAF SPRING TYPE DRAIN VALVE

DETAIL I

[1] LINE NUMBER 1,35,60 AND ON, PLUS
AIRPLANES INCORPORATING SB 51-3

Section 43 External Drains
Figure 1

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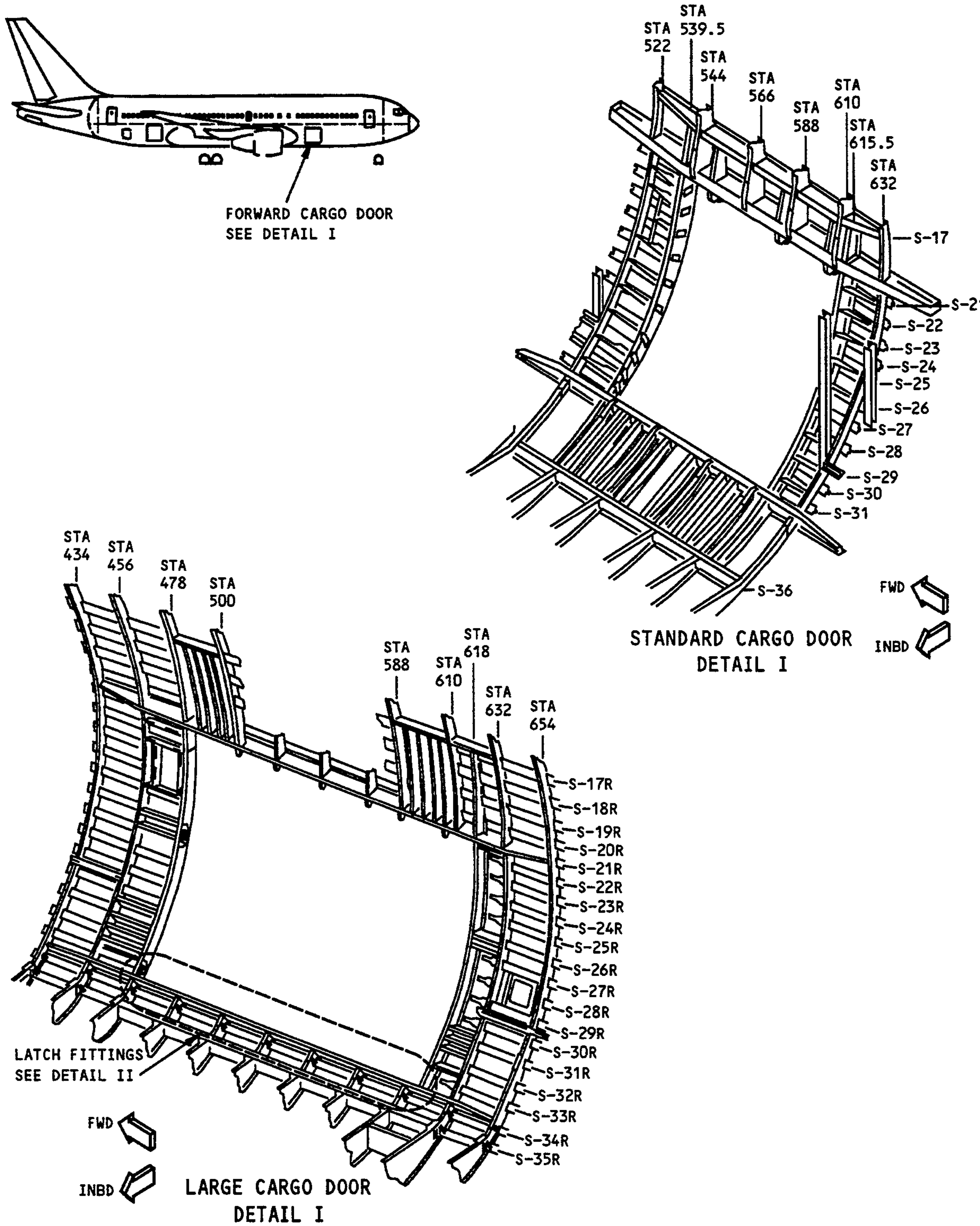
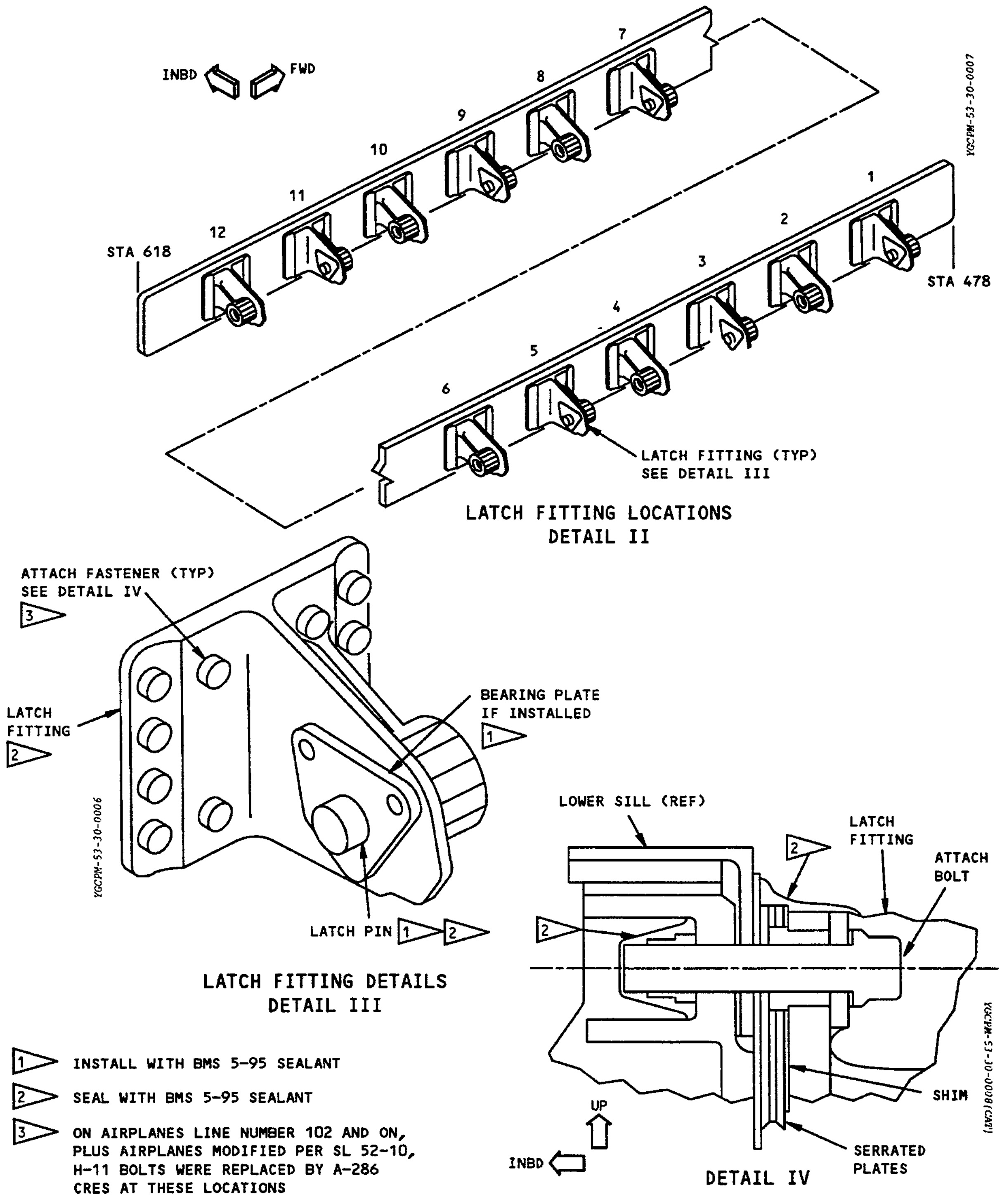
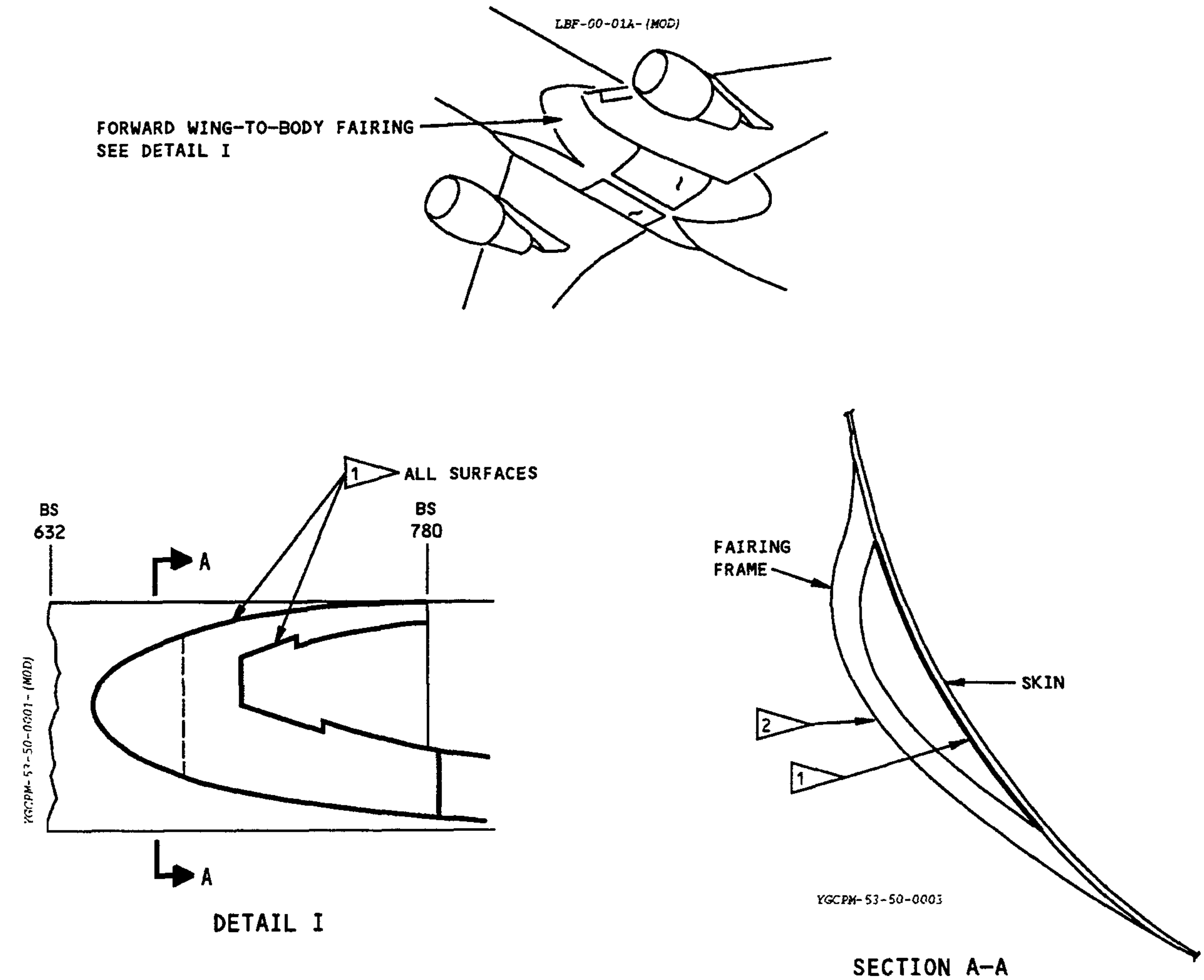


Forward Cargo Door Opening
Figure 1 (Sheet 1)



Forward Cargo Door
Figure 1 (Sheet 2)



1 APPLY BMS 3-23, TYPE II CORROSION INHIBITING COMPOUND TO ALL STRUCTURAL SEAMS AND ACCESSIBLE SURFACES WITHIN INDICATED AREA

2 APPLY BMS 3-23, TYPE II CORROSION INHIBITING COMPOUND TO SEAMS OF ALL STRUCTURAL PARTS WITHIN INDICATED AREA

Section 43 Wing-to-Body Fairing
Figure 1

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1. General

   A. Section 45 is the center section of the fuselage bordered by the front spar bulkhead and wheel well bulkhead. The upper lobe strictly contains the passenger compartment with windows. The lower lobe contains non pressurized main gear wheel wells and provisions for wing center section. Structural components of the main gear wheel wells include a rear spar bulkhead and wheel well bulkhead connected by keel beam. The keel beam separates the left and right main gear wheel wells and support the pressure deck. Main gear doors enclose the wheel wells.

   B. The stringers, frames and skins have been found susceptible to corrosion due to moisture entrapment between the skin and insulation blankets. Corrosion can readily start where protective finishes have been broken or deteriorated. Refer to 53-50-02, Fig. 1 for lower lobe structure.

   C. H-11 bolts can get stress-corrosion cracks. When you remove H-11 bolts replace them with Inconel 718 bolts, which do not get stress-corrosion cracks. Refer to SL 51-8 for further information.

   D. External drains are either leaf spring or plunger type drain valves which close when the airplane is pressurized. Drain paths through internal structure lead to the drain valves. Refer to 53-50-02, Fig. 1 for valve locations. A drain valve and continuous overboard drain are installed on the pressure deck above the left and right main gear wheel wells. Each continuous overboard drain tube is covered by a drain screen to prevent clogging of drain holes. Drain tubes on the forward bulkhead of the left and right wheel wells connect the valves and drains to fittings in the wing-body fairing.

   E. Corrosion can occur on the seat tracks. Fittings of a different metal touch these tracks. When the carpets are cleaned, moisture can get on the tracks and permit galvanic corrosion to start.

   F. The main gear wheel well and keel beam have a corrosion protective finish that consists of chemical finish (alodine) on clad aluminum parts, anodize surface treatment on non-clad aluminum parts, a coat of BMS 10-11, type 1 primer and a coat of BMS 10-11, type 2 enamel. The forward and aft wheel well bulkheads and the keel beam are assembled with BMS 5-95 fay surface sealant. All non-aluminum fasteners are installed with wet BMS 5-95 sealant (Ref 53-50-03, Fig. 1). The wheel well surfaces get a treatment of BMS 3-23 type 2 corrosion inhibiting compound. Some airplanes have Dinitrol AV-5 compound on the exposed hydraulic tubing and wall surfaces of the wheel well.

      (1) The surfaces inside the wheel well are exposed to air contaminants and runway splash and are subject to corrosion.

      (2) Surface corrosion and exfoliation corrosion can occur on the keel beam lower chord horizontal outboard leg from STA 820 to 930. The corrosion started at broken paint around fasteners.

      (3) Exfoliation corrosion can occur at rivet heads on the underside of the keel beam chord outboard flange common to the restraining strip for the outboard panel from station 804 to station 860. Bulges can be from 1/16 to 1/8 inch below the metal surface.

(4) Corrosion can occur on the longeron chord in the wheel wells (Ref 53-50-03, Fig. 1, Detail IV).

(5) Corrosion can occur on the left fuselage main frame keel beams at BS 1010.

(6) Corrosion can occur at nutplate locations on the keel beam at the fairing panels. SL 53-6 gives much data about fuselage keel beam chord corrosion.

G. The corrosion protective finish for the structure surrounding the emergency exit door opening consists of a chemical conversion coating (alodine) on clad aluminum parts, anodize surface treatment for non-clad parts and a coat of BMS 10-11, type 1 primer. The doubters around the doors are installed with fay surface sealant. All non-aluminum fasteners which penetrate the exterior skin are installed with wet sealant. After assembly, a touchup coat of BMS 10-11, type 1 primer is applied to bare fasteners and a coat of BMS 10-11, type 2 white enamel is applied around the doors. A coat of BMS 3-23 is applied except on the door assembly and door opening (Ref 53-50-04, Fig. 1).

(1) The primary corrosion area is under the door sill, floor panels, floor beams and doubters or triplers at door openings.

(2) Insulation blankets are provided on cabin interiors for passenger comfort and to minimize the condensation of warm cabin air on cold skins and stringers. Corrosion has been experienced in areas where the blankets are not installed taut and wrap around stringers or contact the skins.

H. The wing-to-body fairing is constructed of nonmetallic sandwich material and is attached by an aluminum frame to the fuselage. The wing-to-body fairing frame has a corrosion protective finish that consists of chemical finish (alodine) on clad aluminum parts, anodize surface treatment of nonclad parts, a coat of BMS 10-11, type 1 primer and BMS 10-11, type 2 white enamel. All fairing structure permanently attached to the outside of the body skin is fay sealed with BMS 5-95 sealant. The outside of the body skin covered by the fairing gets BMS 10-79, type 2 primer and a coat of BMS 10-60, type 2 gray enamel. Where removable fairings contact the body skin, the body skins are coated with BMS 10-86 teflon coating. All fairing structure receives BMS 3-23 after assembly and installation. Beginning with line number 37, the surface contacted by the fairing access doors when in the closed position is coated with BMS 10-86, type 1 teflon filled coating (Ref 53-50-05, Fig. 1, 2).

(1) Corrosion has been reported on upper wing skin panels under the overwing fairings.

2. Corrosion Prevention

A. After you clean the areas, do the inspections of Volume 1, 20-20-00 to make sure that protective finishes stay serviceable. Also, refer to SB 53-0047 for inspection of the skin and stringers in the lower body.

B. Where corrosion exists (noticeable bulges of the skin or white deposits of corrosion products at fastener heads or joint edges), refer to the index column in 53-00-01 for reference rework chapter.

C. For minor corrosion, to minimize the downtime of the airplane, the corrosion products should be cleaned off, followed by the application of a corrosion inhibiting compound into the affected area to retard the corrosion process (Ref Volume 1, 20-60-00). The finish system should be restored at the first opportunity consistent with the maintenance schedule.

D. Prevention Treatment

(1) At first opportunity consistent with scheduled maintenance activity, corrosion prevention treatment should be accomplished in the external drains, wheel well opening, door opening and wing to body fairing.

(2) External Drains:

(a) Clean out drains and drain paths.

(b) Check that drain valve is free to open and close.

CAUTION: OBSERVE DRAIN VALVE TORQUE LIMITS. EXCESSIVE TIGHTENING OF PLUNGER TYPE DRAIN VALVE WILL CAUSE VALVE FLANGE TO CRACK OR BREAK.

(c) If required, remove plunger type drain valve from outside the fuselage, clean out obstructions and reinstall valve until flange contacts skin. Tighten to 15 lb-in. maximum.

(3) Wheel Well and Keel Beam:

(a) Treatment of wheel well at the same time as the main gear is recommended.

(b) Remove runway debris and generally clean the entire wheel well area.

(c) Remove keel beam fairing panels 139AL thru 139DL, 149AL, 149CL and open hydraulic ground connection access panel 149BL.

NOTE: It is not necessary to remove every fairing panel. Remove only enough panels for easy access to keel beam cavity and inner structure of the sidewalls.

(d) Remove keel box access covers to gain access to cavity area. Check for the presence of stop pads on the hydraulic service access door latches.

(e) Check the keel chord surfaces which mate with the fairing and access panels. Replace any missing primer, enamel or teflon coating, including that over rivet heads. Alodine any bare aluminum prior to touchup.

(f) Check the inside diameters of the panel fastener holes through the keel chord. Alodine and prime any bare holes.

(g) On airplanes line number 1-113, remove fasteners common to the keel chord and seal depressor panels. Coat the keel chord fastener hole inside diameters with BMS 5-95 sealant and install fasteners with sealant.

(h) Check the underside of the outboard flange at C checks for breaks in the paint system and corrosion under fastener heads. Remove fasteners if necessary. After cleanup, alodine and prime any bare areas with BMS 10-79 primer. Reinstall fasteners with BMS 5-95 sealant. Lightly sand and apply BMS 5-95 sealant followed by BMS 10-60, type 2, enamel. See Detail II.

(i) Apply water displacing corrosion inhibiting the compound to the inner surface of keel beam fairing panels, entire structure and all nutplates on inside of keel beam for entire length, and the outboard side of the keel chord.

(j) Apply water displacing corrosion inhibiting compound to the inside surface of panels removed for access.

(k) On airplane line numbers 1, 99 and on, plus airplanes incorporating SB 51-0005, check that drain holes in keel beam horizontal web are unobstructed.

(l) Apply water displacing corrosion inhibiting compound to landing gear attachment fittings, trunnion backup fittings and skin, and keel beam chords. Ensure that all lugs and lug faces are treated.

(m) If toilet effluent leakage is observed in the keel beam area, remove keel beam side panels, wash and reapply corrosion inhibiting compound in all areas contaminated.

(4) Emergency Exit Door Opening:

(a) Treatment of the door at the same time as the door opening is recommended.

(b) Remove debris and generally clean the entire door opening area. Remove reveal scuff plate where applicable.

(c) Special effort should be made to apply the corrosion inhibitor along the doubter edges, along faying surfaces and on fastener heads. Spray all doors and fuselage fittings at the faying surfaces. The use of spray equipment with nozzle directed into faying surfaces is recommended.

(d) Relubricate all tube points per standard servicing procedures.

(e) Where accessible, apply corrosion inhibitor to the internal lower area.

(5) Wing-to-Body Fairing

(a) Apply a coat of BMS 5-95, class F sprayable sealant followed with BMS 10-60 enamel, to all external fairing surfaces. Applicable to airplanes prior to line number 140 per SB 51-0008.

(6) If you clean an area with steam or high pressure water and detergent, apply the corrosion inhibiting compound again.

(7) Do not apply corrosion inhibiting compounds on interior materials such as cargo liners. The compounds change the flammable quality of these materials.

(8) Do not apply corrosion inhibiting compounds on insulation blankets. The compounds reduce the water-repellent quality of the blankets.

(9) Do not apply corrosion inhibiting compounds on grease joints or sealed bearings. These compounds dissolve grease and other lubricants. They are penetrating compounds and can get around the seals and into the bearings.

E. Frequency of Application

(1) Periodic inspection is required in areas which can get corrosion and should agree with the schedules in the Maintenance Planning Document. Operators must be aware of reported problems and areas of occurrences.

(2) Periodic application of BMS 3-23 compound is necessary to areas identified and should agree with the schedule in the Maintenance Planning Document.

F. Improved Corrosion Protection

(1) Wheel Well and Keel Beam

(a) On airplanes line number 132 and on, plus those incorporating SB 51-0005, additional applications of overcoat and fillet seal BMS 5-95 sealant were added to the keel beam horizontal web and lower flange. Finish on the bottom of the lower chord flange was changed to BMS 10-60, type 1 enamel. On airplanes line number 190 and on, the primer coat under the sealant is changed to BMS 10-79, type 3.

(b) On airplanes line number 1, 99 and on, plus airplanes incorporating SB 51-0005, the finish on the bottom of the keel chord flange is changed from BMS 10-11, type 2, enamel to BMS 10-11, type I, primer and BMS 10-86, type 1, white teflon filled coating and keel beam fairing panel fasteners are installed with BMS 3-24 grease. On airplane line numbers 114 and on, keel beam seal depressor panel fasteners common to the keel chord are installed with wet BMS 5-95 sealant. On airplane line numbers 127 and on, standard nutplates on the inboard flange of the keel chord are replaced by swaged nutplates installed with sealant. On airplane line numbers 158 and on, BACB30LH3 bolts common to lower outboard flange of keel chord are installed with wet BMS 5-95 sealant.

(c) On airplanes line number 141 and on, PRR B11491 replaced the H-11 bolts with Inconel 718 bolts at the aft wheel well bulkhead (refer to 53-50-03, Detail IV, Fig. 1). The Inconel 718 bolt is equivalent to the H-11 bolt, but the Inconel 718 does not get stress corrosion cracks. Bolt changes can be incorporated on other airplanes per SL 51-8.

(d) On airplanes line number 237 and on, keel beam chord material was changed from 7150-T6511 to 7150-T77511 for improved corrosion resistance.

(2) External Drain:

(a) On airplanes line number 1, 99 and on, PRR B11207 added four drain holes (Fig. 1) to the keel beam horizontal web to allow accumulated water to drain to the outside through drain holes in the fairing panels. This change can be incorporated on other airplanes per SB 51-0005.

(b) On airplanes line number 1, 117 and on, PRR B10988 replaced all leaf spring type drain valves by plunger type valves. This change can be incorporated on other planes per SB 51-0006.

(3) Wing-to-Body Fairing

(a) On airplanes line number 140 and on, honeycomb fairing components covered with Kevlar fabric were changed to components covered with fiberglass fabric to reduce cracking and subsequent water intrusion.

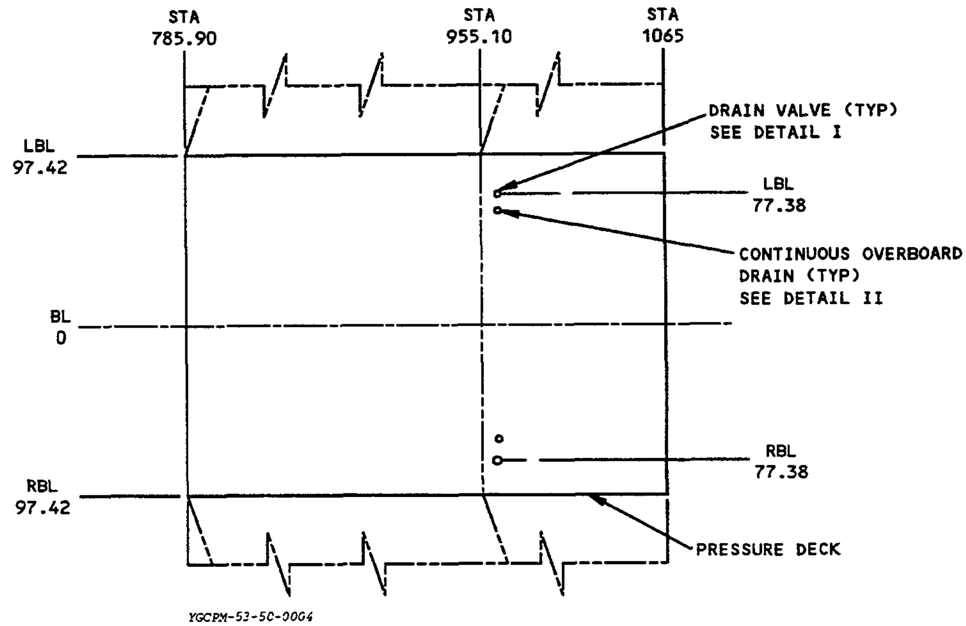
(4) Fuselage Crown Panels

(a) At line number 248, PRR B11816-1 applied BMS 3-23 corrosion inhibiting compound on the crown panels and frames. This treatment is between stringers S-8L and S8-R, the full length of Section 45. This can be incorporated on other airplanes with SL 20-9 and SL 51-9.

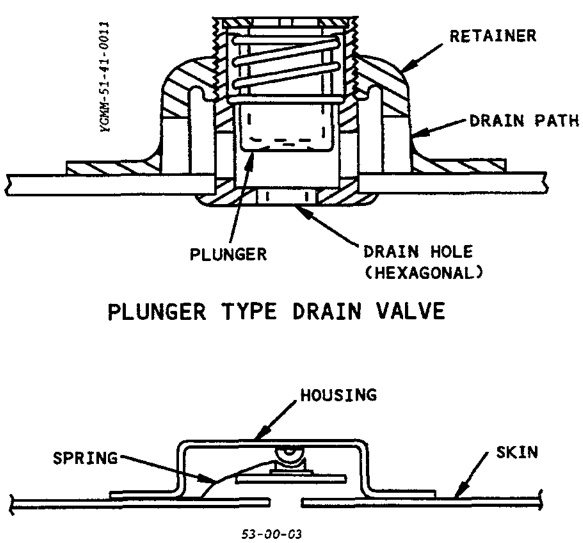
(5) At line number 253, PRR B11816 added BMS 3-26, type 2 corrosion inhibiting compound on the web of the canted pressure deck from stations 993 to 999, on the chords of the lower keel beam, and on the interior of the keel beam box. The change also applied BMS 3-23 corrosion inhibiting compound on the support structure for the landing gear doors, and also on the overwing longeron. All of these changes can be incorporated on other airplanes per SL 20-9 and SL 51-9.

(6) At line number 360, a production change sealed the stringers in the lower lobe with a different procedure.

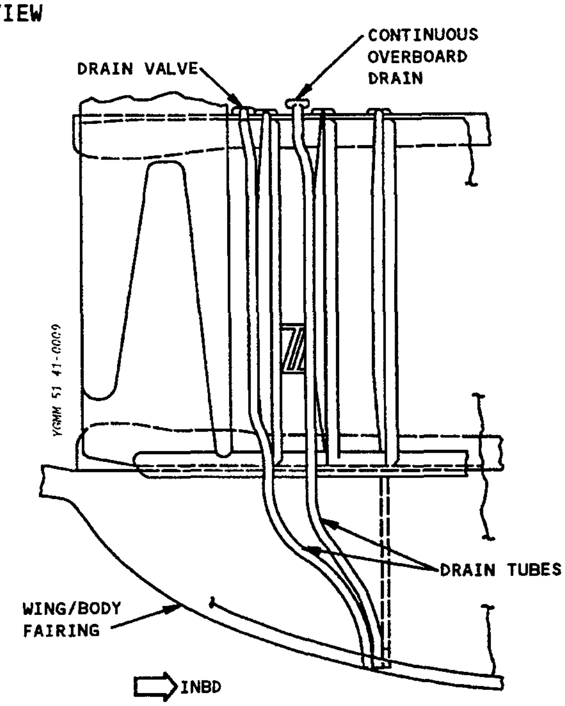
(7) At line number 480, PRRs B12388-1 and B12388-2 added BMS 3-23 compound to all metallic floor structure, seat tracks, and sidewalls between WL 200 and stringers S-8. PRR B12388-2 also replaced the two-layer system of BMS 3-23 and BMS 3-26 compounds with BMS 3-29 compound, and applied BMS 3-29 compound in the bilge below WL 124.4.



BOTTOM VIEW

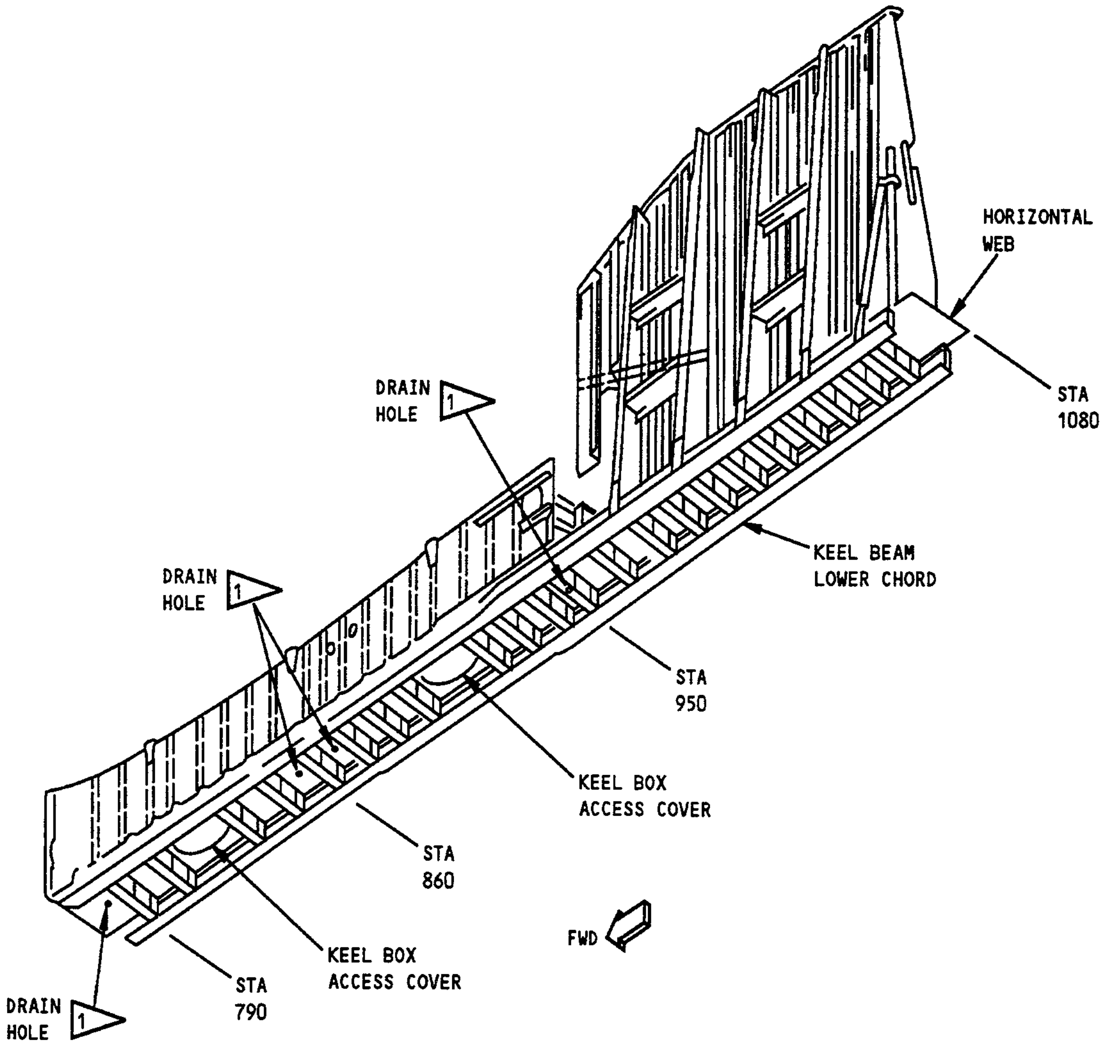


DETAIL I



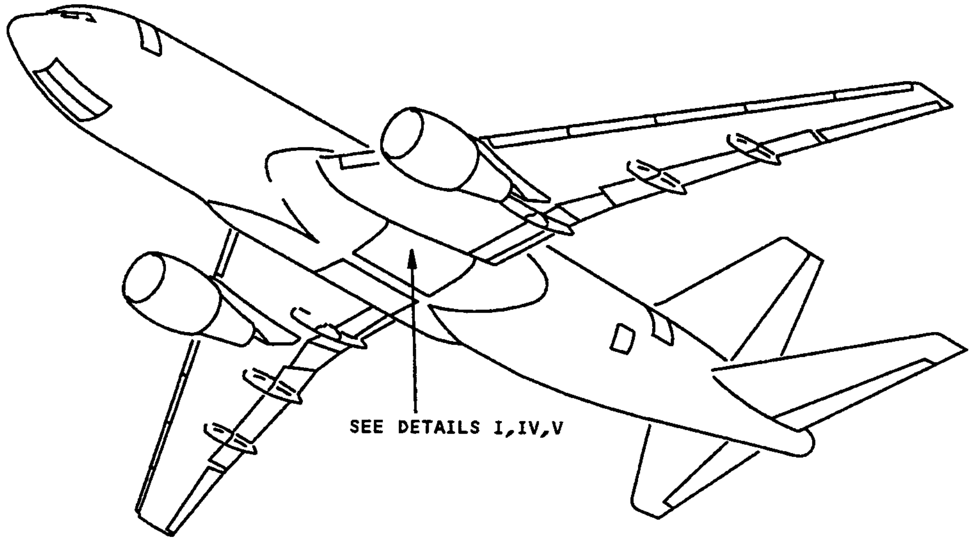
DETAIL II

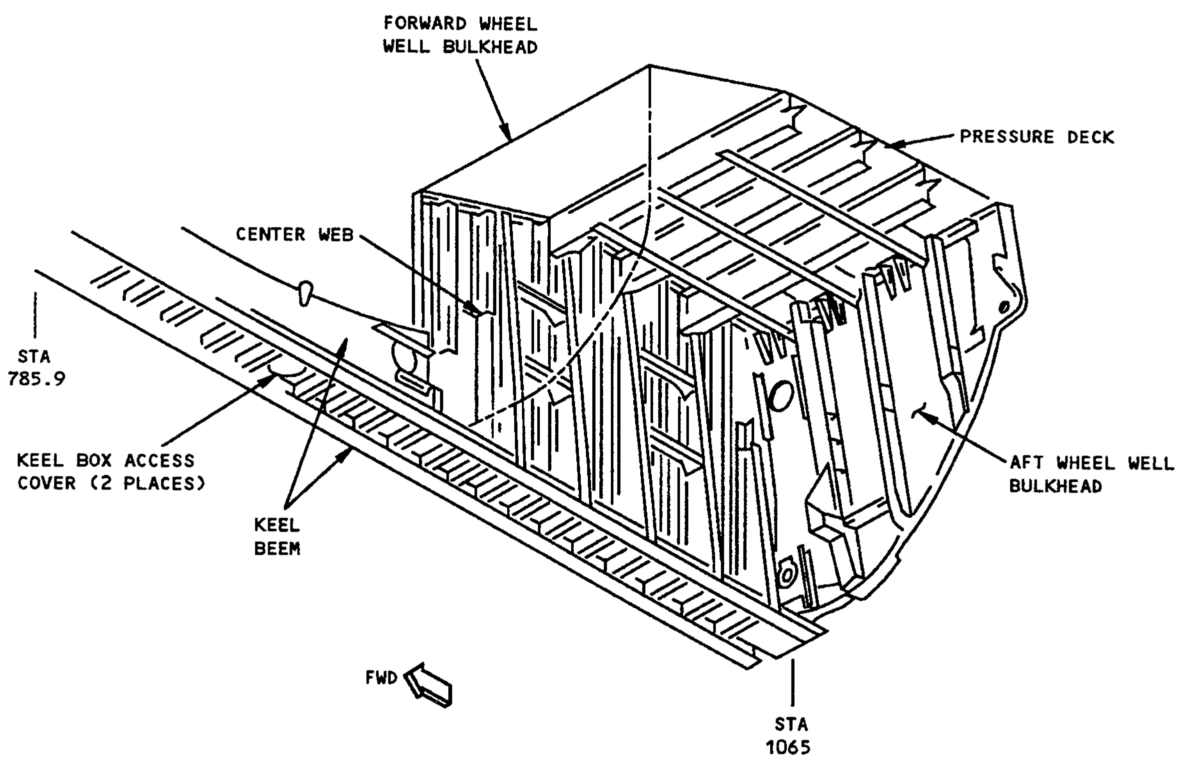
Section 45 External Drains
Figure 1 (Sheet 1)



1 AIRPLANE LINE NUMBERS 1, 99 AND ON, PLUS AIRPLANES INCORPORATING SB 767-51-0005

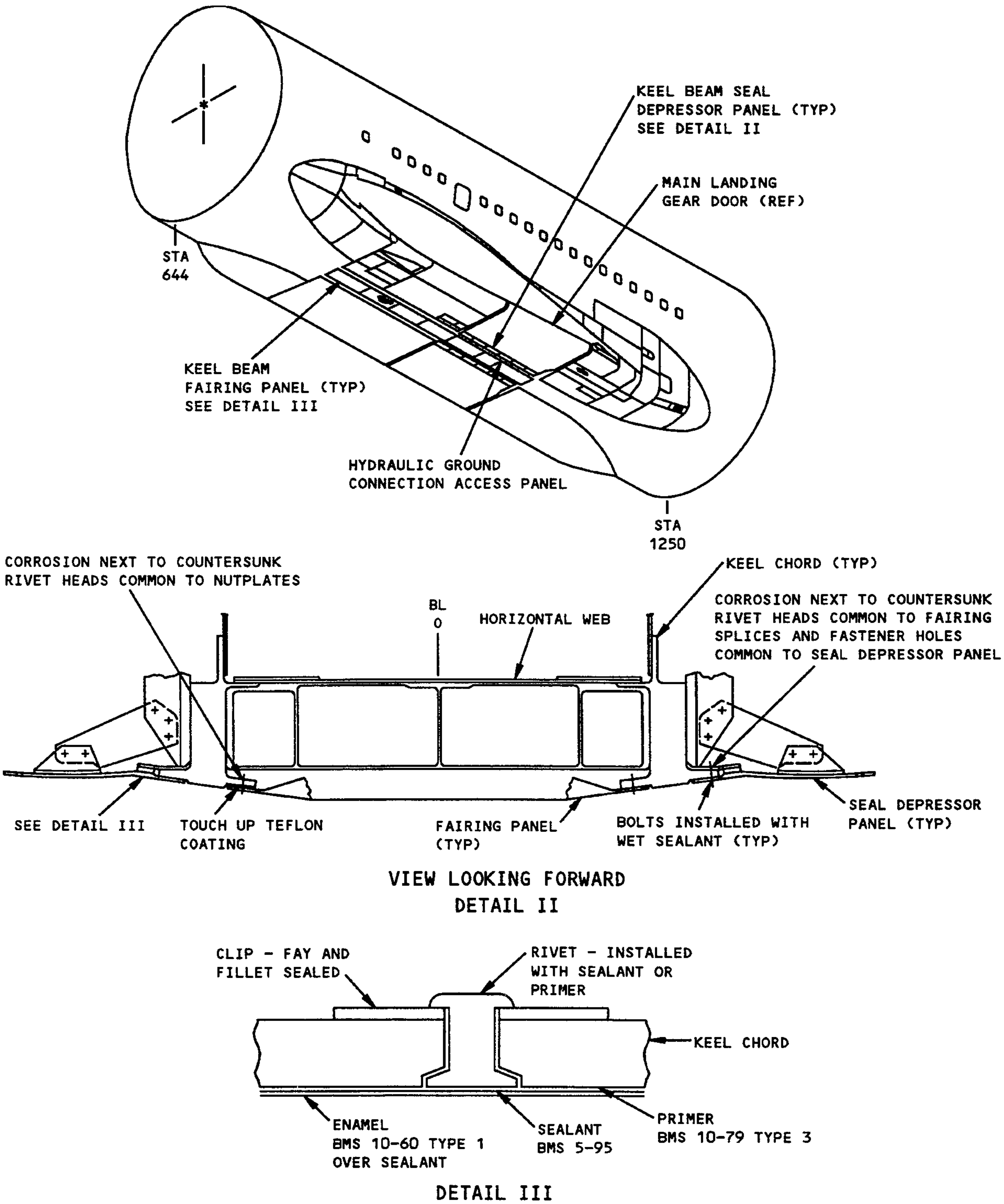
Section 45 External Drains
Figure 1 (Sheet 2)



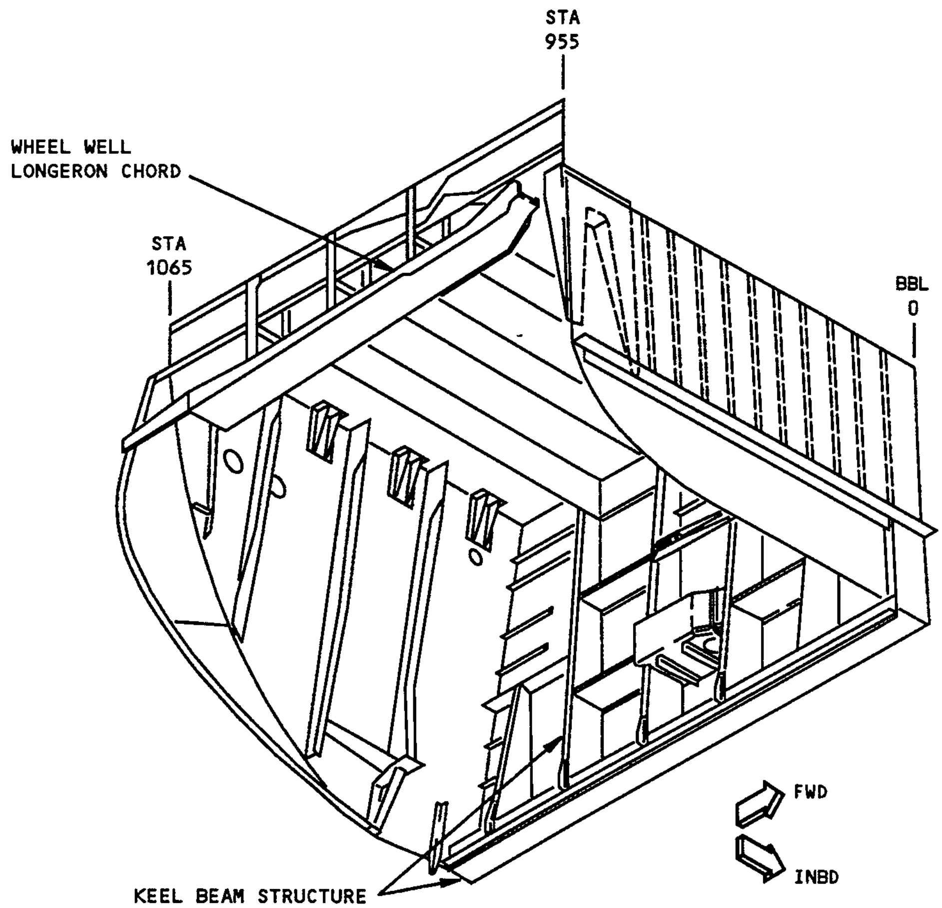


DETAIL I

Main Landing Gear Wheel Well and Keel Beam
Figure 1 (Sheet 1)

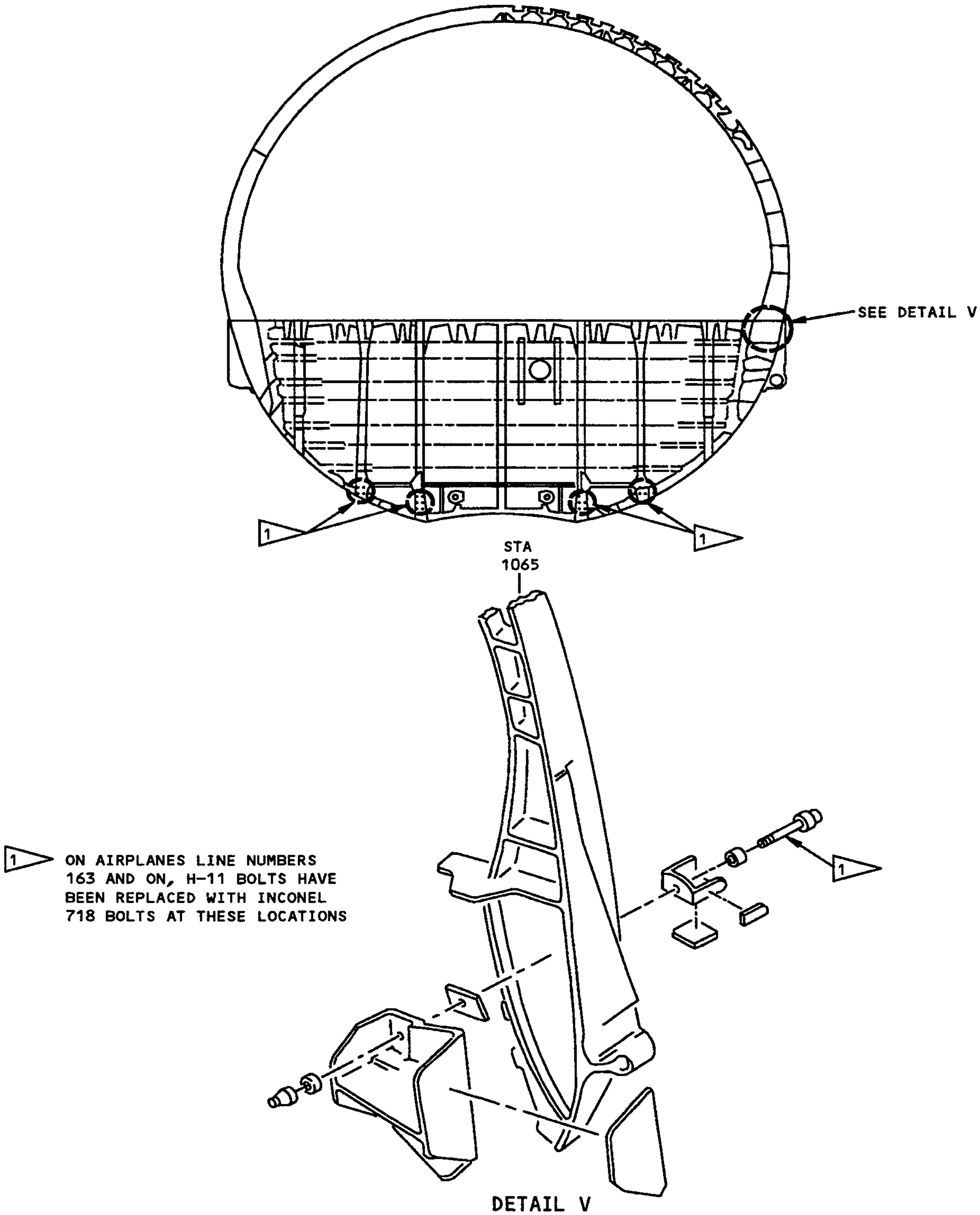


Main Landing Gear Wheel Well and Keel Beam
Figure 1 (Sheet 2)

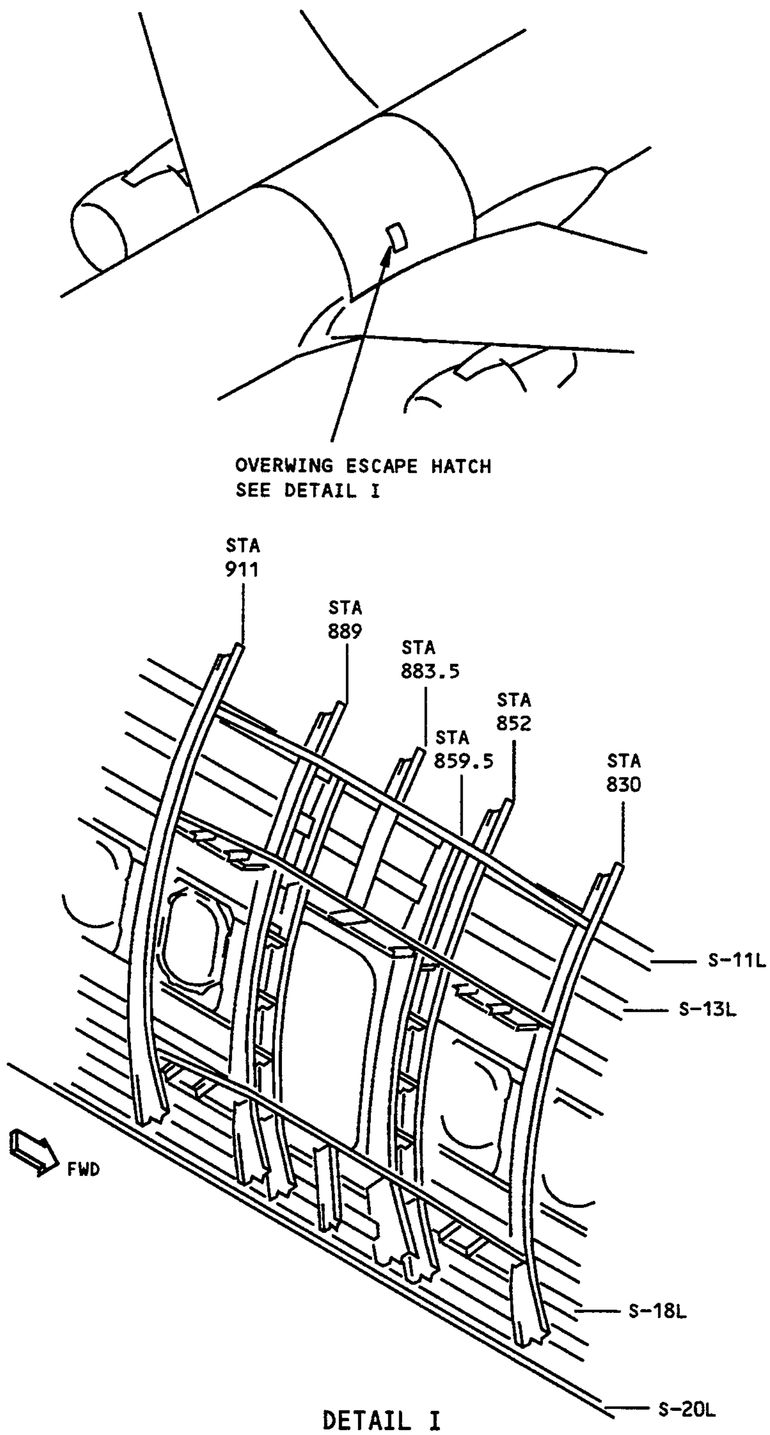


RIGHT SIDE SHOWN
LEFT SIDE OPPOSITE
DETAIL IV

Main Landing Gear Wheel Well and Keel Beam
Figure 1 (Sheet 3)



Main Landing Gear Wheel Well and Keel Beam
Figure 1 (Sheet 4)



Section 45 Overwing Escape Hatch Opening
Figure 1

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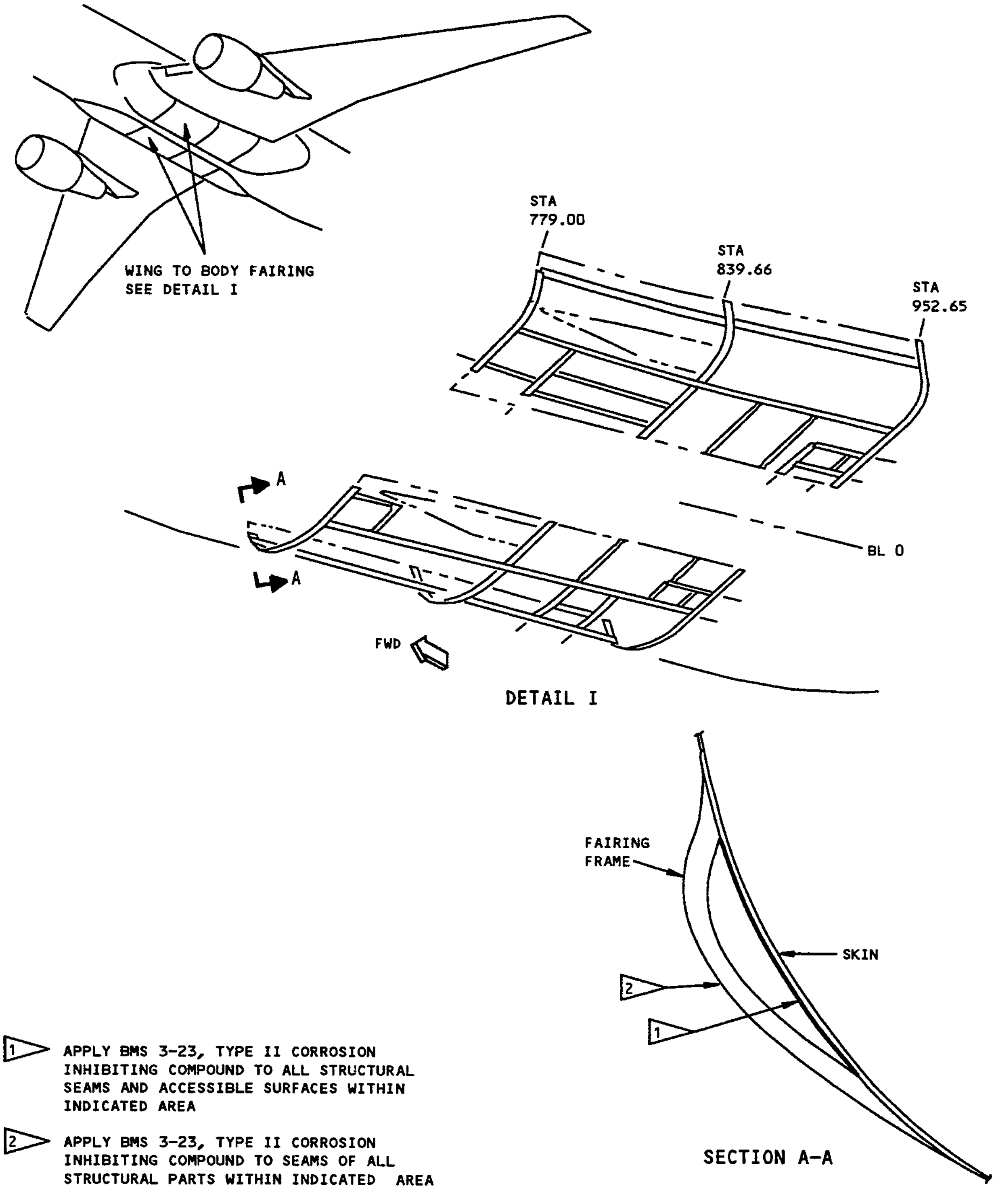
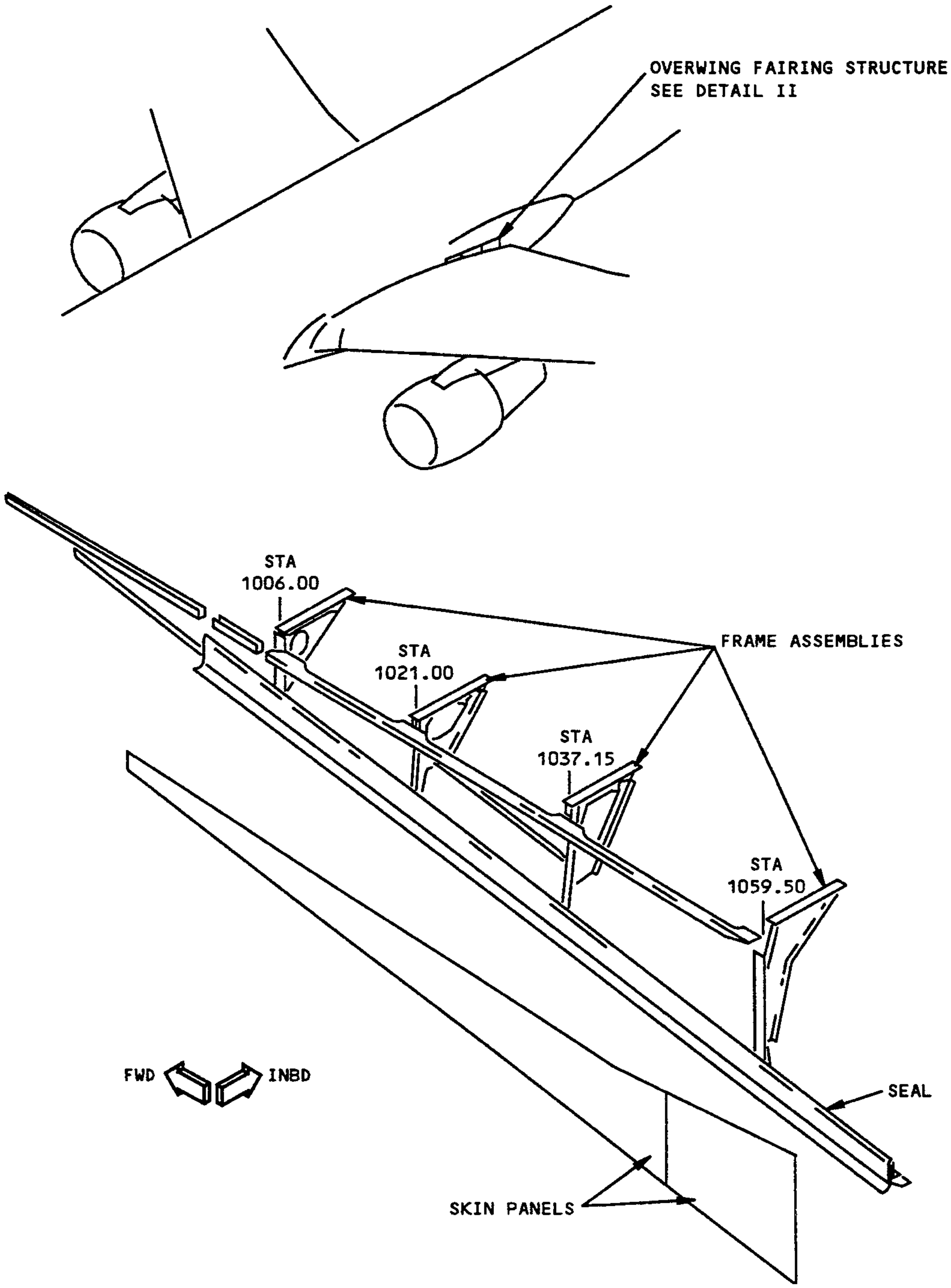


[1] APPLY BMS 3-23, TYPE II CORROSION INHIBITING COMPOUND TO ALL STRUCTURAL SEAMS AND ACCESSIBLE SURFACES WITHIN INDICATED AREA

[2] APPLY BMS 3-23, TYPE II CORROSION INHIBITING COMPOUND TO SEAMS OF ALL STRUCTURAL PARTS WITHIN INDICATED AREA

Section 45 Wing-to-Body Fairing
Figure 1 (Sheet 1)



SECTION 45 - OVERWING FAIRING SKIN AND STRUCTURE
DETAIL I

Section 45 Wing-to-Body Fairing
Figure 1 (Sheet 2)

FUSELAGE

1. General

A. Section 46 extends from stations 1087 to 1582. The upper lobe contains the passenger compartment. Structural opening in the passenger compartment are left and right emergency exit doors, left and right passenger doors, and passenger windows. The lower lobe contains the aft cargo compartment. A right-hand cargo door has approximately 70 by 90 inches of clear opening. The aft section of the wing/body fairing attaches to section 46. The aft pressure bulkhead connects sections 46 and 48.

B. The stringers, frames and skins can get corrosion because of moisture caught between the skin and the insulation blankets. Corrosion can start at broken or bad protective finishes. Some examples of corrosion are:

(1) On the inside surface of the skin at BBL 0.0 between stringer 39R and 39L, between stations 1268 and 1276, and on these stringers at station 1307.

(2) On stringers 36R and 36L between stations 1087 and 1582.

(3) On a skin panel forward of station 1582 near stringer 25L.

C. H-11 bolts can get stress-corrosion cracks. When you remove H-11 bolts, replace them with Inconel 718 bolts, which do not get stress-corrosion cracks. Refer to SL 51-8 for more data.

D. External drains are either leaf spring or plunger type drain valves which close when the airplane is pressurized. Drain paths through the internal structure lead to the external drain valves. Refer to 53-60-02, Fig. 1 for valve locations.

E. Corrosion can occur on the seat tracks. Fittings of a different metal touch these tracks. When the carpets are cleaned, moisture can get on the tracks and permit galvanic corrosion to start. On some airplanes, sealant could be missing at Station 1148, LBL 71.50. SB 53-0049 gives details of inspection and repair procedures.

F. Corrosion can occur in the bilge skin panels near the skin splices.

G. Corrosion can occur at the skin lap joint near stringer 26 left, forward of the bulk cargo door. An air leak at this location could let water come in and cause corrosion. SB 53-0046 gives more details.

H. The corrosion protective finish for the structure surrounding the aft cargo, bulk cargo, aft entry and service door opening consists of a chemical conversion coating (alodine) on clad aluminum parts, anodize surface treatment for non-clad parts and a coat of BMS 10-11, type I primer. The doubters around the doors are installed with fay surface sealant. All nonaluminum fasteners which penetrate the exterior skin are installed with wet sealant. After assembly, a touchup coat of BMS 10-11, type I primer is applied to bare fasteners and a coat of BMS 10-11, type II white enamel is applied around the doors. A coat of BMS 3-23 is applied except on the door assembly and door opening (Ref 53-60-02, Fig. 1).

I. The primary corrosion area is under the door sill, floor panels, floor beams and doubters or triplers at door openings.

J. Corrosion occurred on a floor support tee at the lower sill of a passenger entry door. The corrosion was worst between body stations 1500.5 and 1507.

K. Insulation blankets are provided on cabin interiors for passenger comfort and to minimize the condensation of warm cabin air on cold skins and stringers. Corrosion has been experienced in areas where the blankets are not installed taut and wrap around stringers or contact the skins.

L. The wing-to-body fairing is constructed of nonmetallic sandwich material and is attached by an aluminum frame to the fuselage. The wing-to-body fairing frame has a corrosion protective finish that consists of chemical finish (alodine) on clad aluminum parts, anodize surface treatment of nonclad parts, a coat of BMS 10-11, type I primer and BMS 10-11, type II white enamel. All fairing structure permanently attached to the outside of the body skin are fay sealed with BMS 5-95 sealant. The outside of the body skin covered by the fairing gets BMS 10-79, type II primer and a coat of BMS 10-60, type II gray enamel. Where removable fairings contact the body skin, the body skins are coated with BMS 10-86 teflon coating. All fairing structure receives BMS 3-23 after assembly and installation (Ref 53-60-04, Fig. 1).

2. Corrosion Prevention

A. After you clean the areas, do the inspections of Volume 1, 20-20-00 to make sure that protective finishes stay serviceable. Refer to SB 53-0046 for details for the area near the stringer 26 left skin lap joint forward of the bulk cargo door. Refer to SB 53-0047 for inspection of the skin and stringers in the lower body. Refer to SB 53-0049 for inspection of the seat track and intercostals at Station 1148, LBL 71.50.

B. Where corrosion exists (noticeable bulges of the skin or white deposits of corrosion products at fastener heads or joint edges), refer to the index column in 53-00-01 for reference rework chapter.

C. For minor corrosion, corrosion products off, followed with by the application of a corrosion inhibiting compound into the affected area to retard the corrosion process (Ref Volume 1, 20-60-00).Prevention Treatment

(1) At first opportunity consistent with scheduled maintenance activity, corrosion prevention treatment should be accomplished in the external drain and drain paths, cargo door area, and door openings.

(2) External Drains:

(a) Clean out drains and drain paths.

(b) Check that drain valve is free to open and close.

CAUTION: OBSERVE DRAIN VALVE TORQUE LIMITS. EXCESSIVE TIGHTENING OF PLUNGER TYPE DRAIN VALVE WILL CAUSE VALVE FLANGE TO CRACK OR BREAK.

(c) If required, remove plunger type drain valve from outside the fuselage, clean out obstructions and reinstall valve until flange contacts skin. Tighten to 15 lb-in. maximum.

(3) Aft and Bulk Cargo Compartment:

(a) Remove sidewall lining and insulation blankets in the cargo compartment and beneath the main deck entry and cargo doors to expose frame, stringer, doublers and skin.

(b) Remove floor liners to gain access to bilge areas, if any.

(c) Remove ceiling lining for access to main deck floor beams and intercostals.

(d) Replace broken or damaged finishes. Refer to Part 1, 20-60-00 for protective finish systems.

(e) Replace or repair broken or damaged leveling compounds used for drainage.

(f) Apply water displacing corrosion inhibiting compound to all exposed structure under the cargo floor and to the sidewalls beneath the upper lobe entry and cargo doors. The use of spray equipment with nozzle directed into faying surfaces is recommended. Do not apply excessively.

(g) Replace or repair broken or damaged leveling compounds used for drainage. On airplanes prior to line number 41, externally inspect for corrosion at location of leveling compound. If necessary, remove leveling compound and apply corrosion resistant finish per SB 53-0023.

(h) Allow solvent to evaporate before reinstalling insulation blankets.

(i) Install blankets so they are taut.

(j) Install liners and floor panels. Install the floor panel fasteners with BMS 3-24 grease.

(k) Apply water displacing corrosion inhibiting compound to skin and structure in Section 48. Refer to 53-70-01 for corrosion prevention of the aft pressure bulkhead which should be treated concurrently.

(4) Door Openings:

(a) Treatment of the door at the same time as the door opening is recommended.

(b) Remove traffic debris and generally clean the entire door opening area. Remove reveal and scuff plate where applicable.

(c) Replace damaged or broken finishes if at all possible. Refer to Volume 1, 20-60-00 for protective finish systems.Relubricate all tube points per standard servicing procedures.

(d) Relubricate all lube points per standard servicing procedures.

(e) Where accessible, apply corrosion inhibitor to the internal lower sill area.

(f) Special effort should be made to apply the corrosion inhibitor along doubter edges, along faying surfaces and on fastener heads. Spray all doors and fuselage fittings at the faying surfaces. The use of spray equipment with nozzle directed into faying surface is recommended.

(5) Wing-to-Body Fairing

(a) Apply a coat of BMS 5-95, class F sprayable sealant followed with BMS 10-60 enamel, to all external fairing surfaces. This can be incorporated on airplanes prior to line number 140 per SB 51-0008.

(6) Do not apply corrosion inhibiting compounds on interior materials such as cargo liners. The compounds change the flammable quality of these materials.

(7) Do not apply corrosion inhibiting compounds on insulation blankets. The compounds reduce the water-repellent quality of the blankets.

(8) Do not apply corrosion inhibiting compounds on grease joints or sealed bearings. These compounds dissolve grease and other lubricants. They are penetrating compounds and can get around the seals and into the bearings.

D. Frequency of Application

(1) Periodic inspection is required in areas identified as susceptible to corrosion and should be consistent to the schedules specified in the Maintenance Planning Document. Operators must be aware of reported problems and areas of occurrences.

(2) Periodic application of BMS 3-23 compound is necessary to areas identified and should be consistent to the schedule specified in the Maintenance Planning Document.

E. Improved Corrosion Protection

(1) Door Openings

(a) On airplanes line number 143 and on, PRR B11211 sprayed the door sill, frame, and doubter in an area approximately 3 inches up from the WL 199.5 sill with BMS 5-95 sealant and painted these areas with BMS 10-60, Type 2 enamel. Then the sill fittings and scuff plate support blocks were installed. Leveling compound was added over the sill fittings, to fill the entire sill corner, before the scuff plate was installed. These changes can be incorporated on other airplanes per SB 53-0016.

(b) At line number 396, PRR B12196 applied BMS 10-11, type 1 primer on the titanium gutters that touch the Flexane 80 sealant at the floor panels.

(c) At line number 480, PRR B12388-2 applied BMS 3-23 compound to all metallic structure on the interior (non-pressure side) of the service panels at station 1380, stringer S-38L and station 1570, BL zero.

(2) External Drains -- On airplanes line number 1, 117 and on, PRR B10988 replaced all leaf spring type drain valves by plunger type valves. This change can be incorporated on other airplanes per SB 51-0006.

(3) Wing-to-Body Fairing -- On airplanes line number 140 and on, honeycomb fairing components covered with Kevlar fabric were replaced with components covered by fiberglass fabric.

(4) Fuselage Crown Panels

(a) At line number 248, PRR B11816-1 applied BMS 3-23 corrosion inhibiting compound on the crown panels and frames per PRR B11816-1. This treatment is between stringers S-8L and S-8R, the full length of Section 46. This can be incorporated on other airplanes per SL 20-9 and 51-9.

(b) At line number 480, PRRs B12388-1 and B12388-2 added BMS 3-23 compound to all metallic floor structure, seat tracks and sidewalls between WL 200 and stringers S-8.

(5) Fuselage Lower Structure

(a) At line number 253, a production change applied BMS 3-26, type 2 corrosion inhibiting compound on the lower frames, skins, and stringers. This treatment is between stringers S-34L and S-34R, the full length of Section 46. This can be incorporated on other airplanes with SL 20-9 and 51-9.

(b) At line number 360, a production change sealed the stringers in the lower lobe with a different procedure.

(c) At line number 393, more fay surface sealant between the skin panels and the stringers near the skin splice at station 1219, per PRR B12180. This change also removed the fillet seal from the lower side of the stringer, and added BMS 3-26 type I corrosion preventive compound to the area.

(d) At line number 480, PRR B12388-2 replaced the two-layer system of BMS 3-23 and BMS 3-26 compounds with BMS 3-29 compound and applied BMS 3-29 compound in the bilge below WL 124.4.

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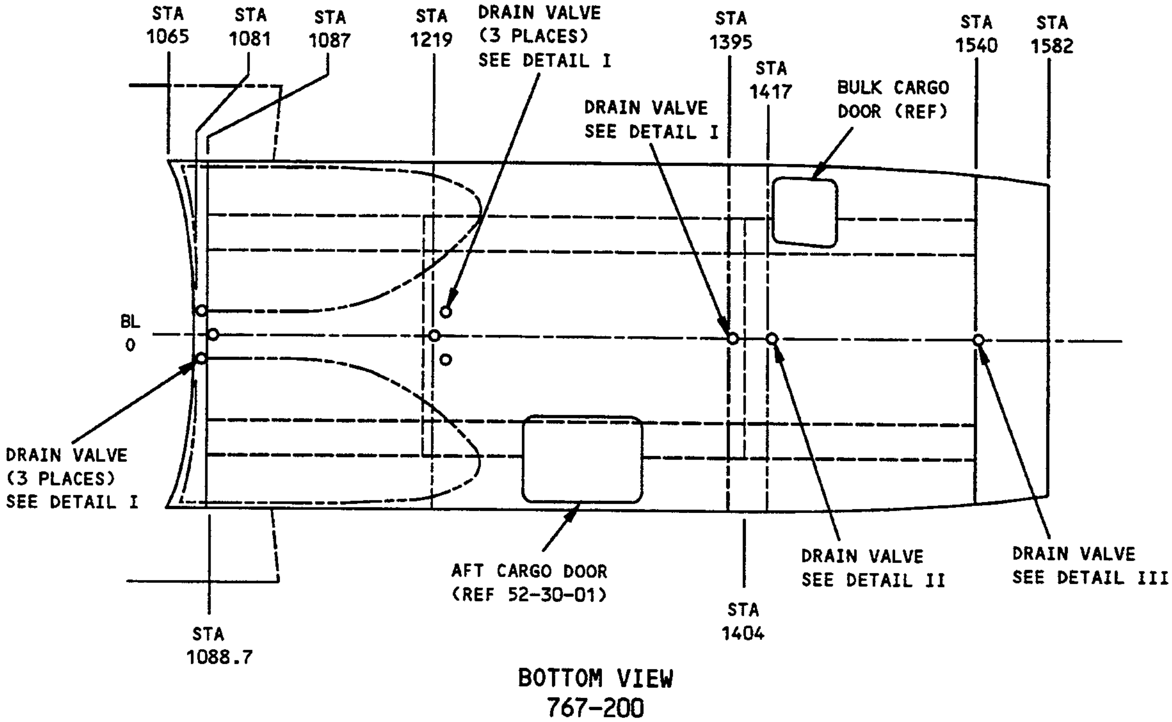
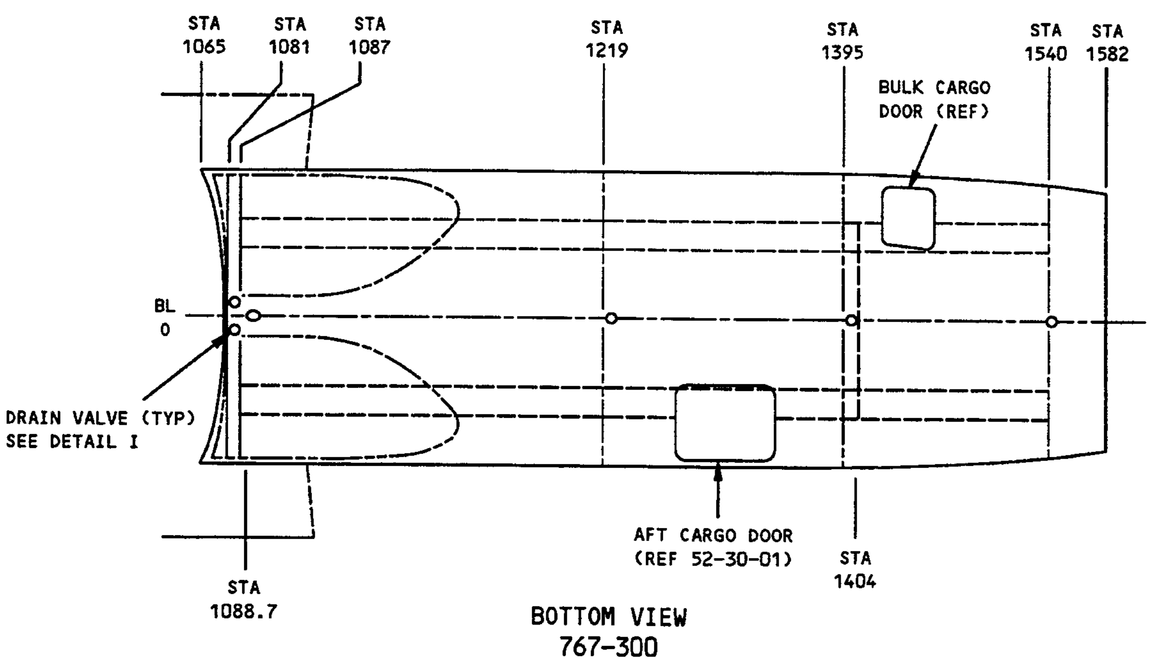
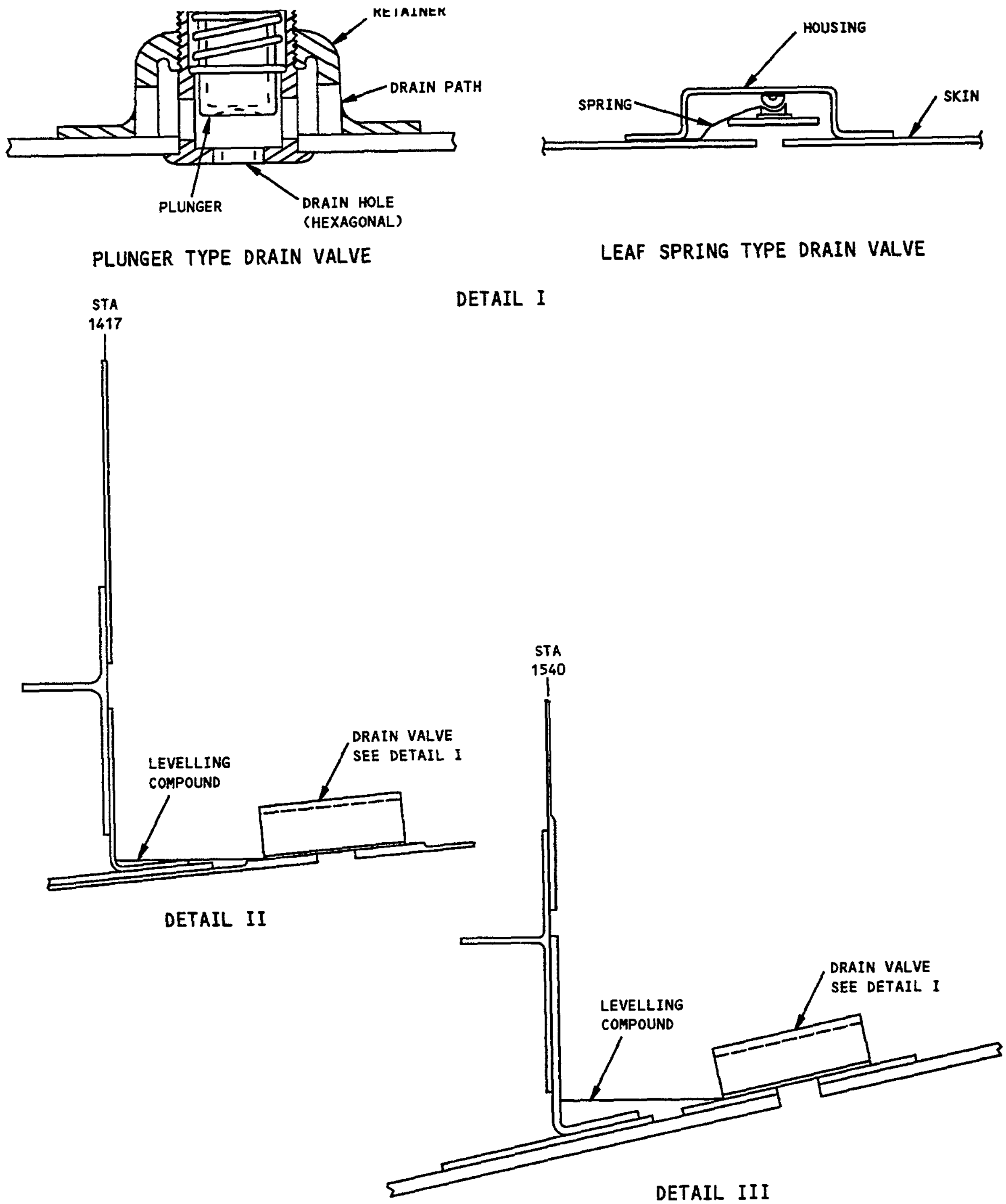




Section 46 External Drains
Figure 1 (Sheet 1)



Section 46 External Drains
Figure 1 (Sheet 2)

1. General

A. Section 46 extends from stations 1087 to 1582. The upper lobe contains the passenger compartment. Structural opening in the passenger compartment are left and right emergency exit doors, left and right passenger doors, and passenger windows. The lower lobe contains the aft cargo compartment. A right-hand cargo door has approximately 70 by 90 inches of clear opening. The aft section of the wing/body fairing attaches to section 46. The aft pressure bulkhead connects sections 46 and 48.

B. The stringers, frames and skins can get corrosion because of moisture caught between the skin and the insulation blankets. Corrosion can start at broken or bad protective finishes. Some examples of corrosion are:

(1) On the inside surface of the skin at BBL 0.0 between stringer 39R and 39L, between stations 1268 and 1276, and on these stringers at station 1307.

(2) On stringers 36R and 36L between stations 1087 and 1582.

(3) On a skin panel forward of station 1582 near stringer 25L.

C. H-11 bolts can get stress-corrosion cracks. When you remove H-11 bolts, replace them with Inconel 718 bolts, which do not get stress-corrosion cracks. Refer to SL 51-8 for more data.

D. External drains are either leaf spring or plunger type drain valves which close when the airplane is pressurized. Drain paths through the internal structure lead to the external drain valves. Refer to 53-60-02, Fig. 1 for valve locations.

E. Corrosion can occur on the seat tracks. Fittings of a different metal touch these tracks. When the carpets are cleaned, moisture can get on the tracks and permit galvanic corrosion to start. On some airplanes, sealant could be missing at Station 1148, LBL 71.50. SB 53-0049 gives details of inspection and repair procedures.

F. Corrosion can occur in the bilge skin panels near the skin splices.

G. Corrosion can occur at the skin lap joint near stringer 26 left, forward of the bulk cargo door. An air leak at this location could let water come in and cause corrosion. SB 53-0046 gives more details.

H. The corrosion protective finish for the structure surrounding the aft cargo, bulk cargo, aft entry and service door opening consists of a chemical conversion coating (alodine) on clad aluminum parts, anodize surface treatment for non-clad parts and a coat of BMS 10-11, type I primer. The doublers around the doors are installed with fay surface sealant. All non-aluminum fasteners which penetrate the exterior skin are installed with wet sealant. After assembly, a touchup coat of BMS 10-11, type I primer is applied to bare fasteners and a coat of BMS 10-11, type II white enamel is applied around the doors. A coat of BMS 3-23 is applied except on the door assembly and door opening (Ref 53-60-02, Fig. 1).

I. The primary corrosion area is under the door sill, floor panels, floor beams and doubters or triplers at door openings. Contaminants are tracked in by passengers, crewmembers, cargo and service personnel or by driven rain or snow when door is opened.

J. Corrosion occurred on a floor support tee at the lower sill of a passenger entry door. The corrosion was worst between body stations 1500.5 and 1507.

K. Insulation blankets are provided on cabin interiors for passenger comfort and to minimize the condensation of warm cabin air on cold skins and stringers. Corrosion has been experienced in areas where the blankets are not installed taut and wrap around stringers or contact the skins.

L. The wing-to-body fairing is constructed of nonmetallic sandwich material and is attached by an aluminum frame to the fuselage. The wing-to-body fairing frame has a corrosion protective finish that consists of chemical finish (alodine) on clad aluminum parts, anodize surface treatment of non-clad parts, a coat of BMS 10-11, type I primer and BMS 10-11, type II white enamel. All fairing structure permanently attached to the outside of the body skin are fay sealed with BMS 5-95 sealant. The outside of the body skin covered by the fairing gets BMS 10-79, type II primer and a coat of BMS 10-60, type II gray enamel. Where removable fairings contact the body skin, the body skins are coated with BMS 10-86 teflon coating. All fairing structure receives BMS 3-23 after assembly and installation (Ref 53-60-04, Fig. 1).

2. Corrosion Prevention

A. After you clean the areas, do the inspections of Volume 1, 20-20-00 to make sure that protective finishes stay serviceable. Refer to SB 53-0046 for details for the area near the stringer 26 left skin lap joint forward of the bulk cargo door. Refer to SB 53-0047 for inspection of the skin and stringers in the lower body. Refer to SB 53-0049 for inspection of the seat track and intercostals at Station 1148, LBL 71.50.

B. Where corrosion exists (noticeable bulges of the skin or white deposits of corrosion products at fastener heads or joint edges), refer to the index column in 53-00-01 for reference rework chapter.

C. For minor corrosion, to minimize the downtime of the airplane, the corrosion products should be cleaned off, followed by the application of a corrosion inhibiting compound into the affected area to retard the corrosion process (Ref Volume 1, 20-60-00). The finish system should be restored at the first opportunity consistent with the maintenance schedule.

D. Prevention Treatment

(1) At first opportunity consistent with scheduled maintenance activity, corrosion prevention treatment should be accomplished in the external drain and drain paths, cargo door area, and door openings.

(2) External Drains:

(a) Clean out drains and drain paths.

(b) Check that drain valve is free to open and close.

CAUTION: OBSERVE DRAIN VALVE TORQUE LIMITS. EXCESSIVE TIGHTENING OF PLUNGER TYPE DRAIN VALVE WILL CAUSE VALVE FLANGE TO CRACK OR BREAK.

(c) If required, remove plunger type drain valve from outside the fuselage, clean out obstructions and reinstall valve until flange contacts skin. Tighten to 15 lb-in. maximum.

(3) Aft and Bulk Cargo Compartment:

(a) Remove sidewall lining and insulation blankets in the cargo compartment and beneath the main deck entry and cargo doors to expose frame, stringer, doubters and skin.

(b) Remove floor liners to gain access to bilge areas, if any.

(c) Remove ceiling lining for access to main deck floor beams and intercostals.

(d) Replace broken or damaged finishes. Refer to Volume 1, 20-60-00 for protective finish systems.

(e) Relubricate all tube points per standard servicing procedures.

(f) Where accessible, apply corrosion inhibitor to the internal lower sill area.

(g) Special effort should be made to apply the corrosion inhibitor along doubter edges, along faying surfaces and on fastener heads. Spray all doors and fuselage fittings at the faying surfaces. The use of spray equipment with nozzle directed into faying surface is recommended.

(4) Wing-to-Body Fairing

(a) Apply a coat of BMS 5-95, class F sprayable sealant followed with BMS 10-60 enamel, to all external fairing surfaces. This can be incorporated on airplanes prior to line number 140 per SB 51-0008.

(5) Do not apply corrosion inhibiting compounds on interior materials such as cargo liners. The compounds change the flammable quality of these materials.

(6) Do not apply corrosion inhibiting compounds on insulation blankets. The compounds reduce the water-repellent quality of the blankets.

(7) Do not apply corrosion inhibiting compounds on grease joints or sealed bearings. These compounds dissolve grease and other lubricants. They are penetrating compounds and can get around the seals and into the bearings.

E. Frequency of Application

(1) Periodic inspection is required in areas identified as susceptible to corrosion and should be consistent to the schedules specified in the Maintenance Planning Document. Operators must be aware of reported problems and areas of occurrences.

(2) Periodic application of BMS 3-23 compound is necessary to areas identified and should be consistent to the schedule specified in the Maintenance Planning Document.

F. Improved Corrosion Protection

(1) Door Openings

(a) On airplanes line number 143 and on, PRR B11211 sprayed the door sill, frame, and doubter in an area approximately 3 inches up from the WL 199.5 sill with BMS 5-95 sealant and painted these areas with BMS 10-60, Type 2 enamel. Then the sill fittings and scuff plate support blocks were installed. Leveling compound was added over the sill fittings, to fill the entire sill corner, before the scuff plate was installed. These changes can be incorporated on other airplanes per SB 53-0016.

(b) At line number 396, PRR B12196 applied BMS 10-11, type 1 primer on the titanium gutters that touch the Flexane 80 sealant at the floor panels.

(c) At line number 480, PRR B12388-2 applied BMS 3-23 compound to all metallic structure on the interior (non-pressure side) of the service panels at station 1380, stringer S-38L and station 1570, BL zero.

(2) External Drains -- On airplanes line number 1, 117 and on, PRR B10988 replaced all leaf spring type drain valves by plunger type valves. This change can be incorporated on other airplanes per SB 51-0006.

(3) Wing-to-Body Fairing -- On airplanes line number 140 and on, honeycomb fairing components covered with Kevlar fabric were replaced with components covered by fiberglass fabric.

(4) Fuselage Crown Panels

(a) At line number 248, PRR B11816-1 applied BMS 3-23 corrosion inhibiting compound on the crown panels and frames per PRR B11816-1. This treatment is between stringers S-8L and S-8R, the full length of Section 46. This can be incorporated on other airplanes per SL 20-9 and 51-9.

(b) At line number 480, PRRs B12388-1 and B12388-2 added BMS 3-23 compound to all metallic floor structure, seat tracks and sidewalls between WL 200 and stringers S-8.

(5) Fuselage Lower Structure

(a) At line number 253, a production change applied BMS 3-26, type 2 corrosion inhibiting compound on the lower frames, skins, and stringers. This treatment is between stringers S-34L and S-34R, the full length of Section 46. This can be incorporated on other airplanes with SL 20-9 and 51-9.

(b) At line number 360, a production change sealed the stringers in the lower lobe with a different procedure.

(c) At line number 393, more fay surface sealant between the skin panels and the stringers near the skin splice at station 1219, per PRR B12180. This change also removed the fillet seal from the lower side of the stringer, and added BMS 3-26 type I corrosion preventive compound to the area.

(d) At line number 480, PRR B12388-2 replaced the two-layer system of BMS 3-23 and BMS 3-26 compounds with BMS 3-29 compound and applied BMS 3-29 compound in the bilge below WL 124.4.

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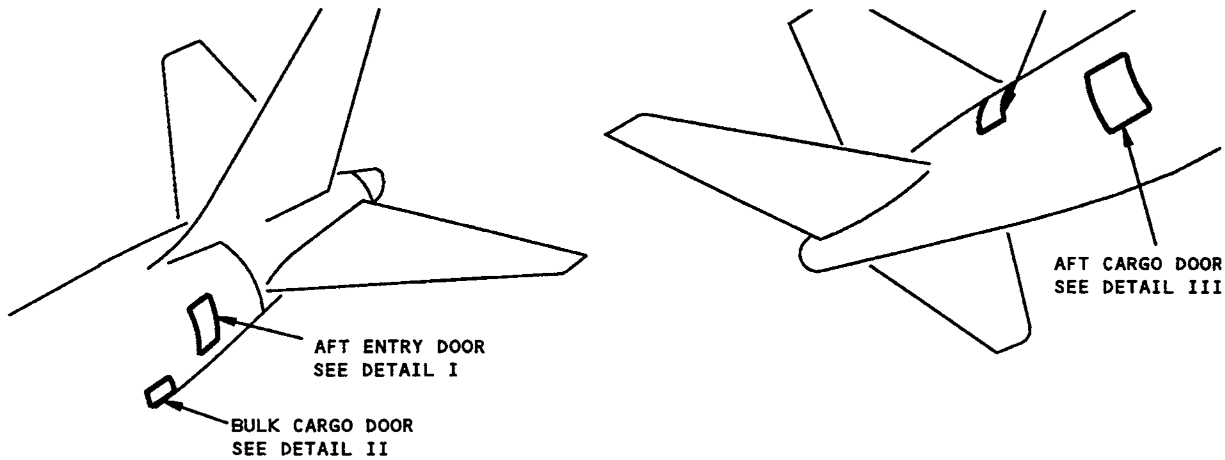
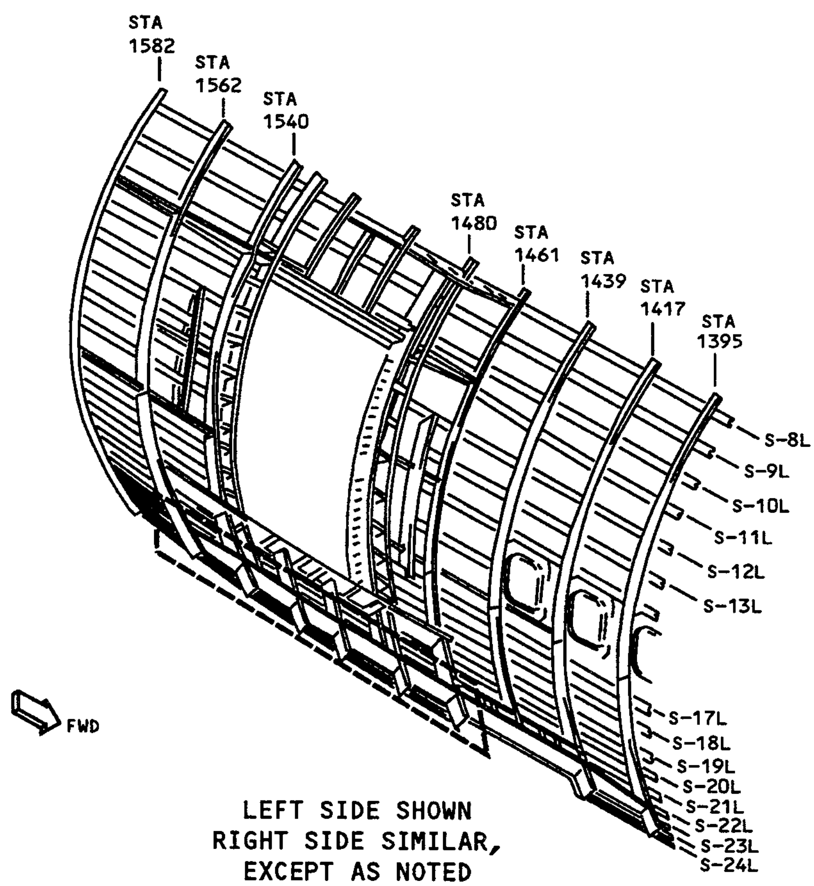
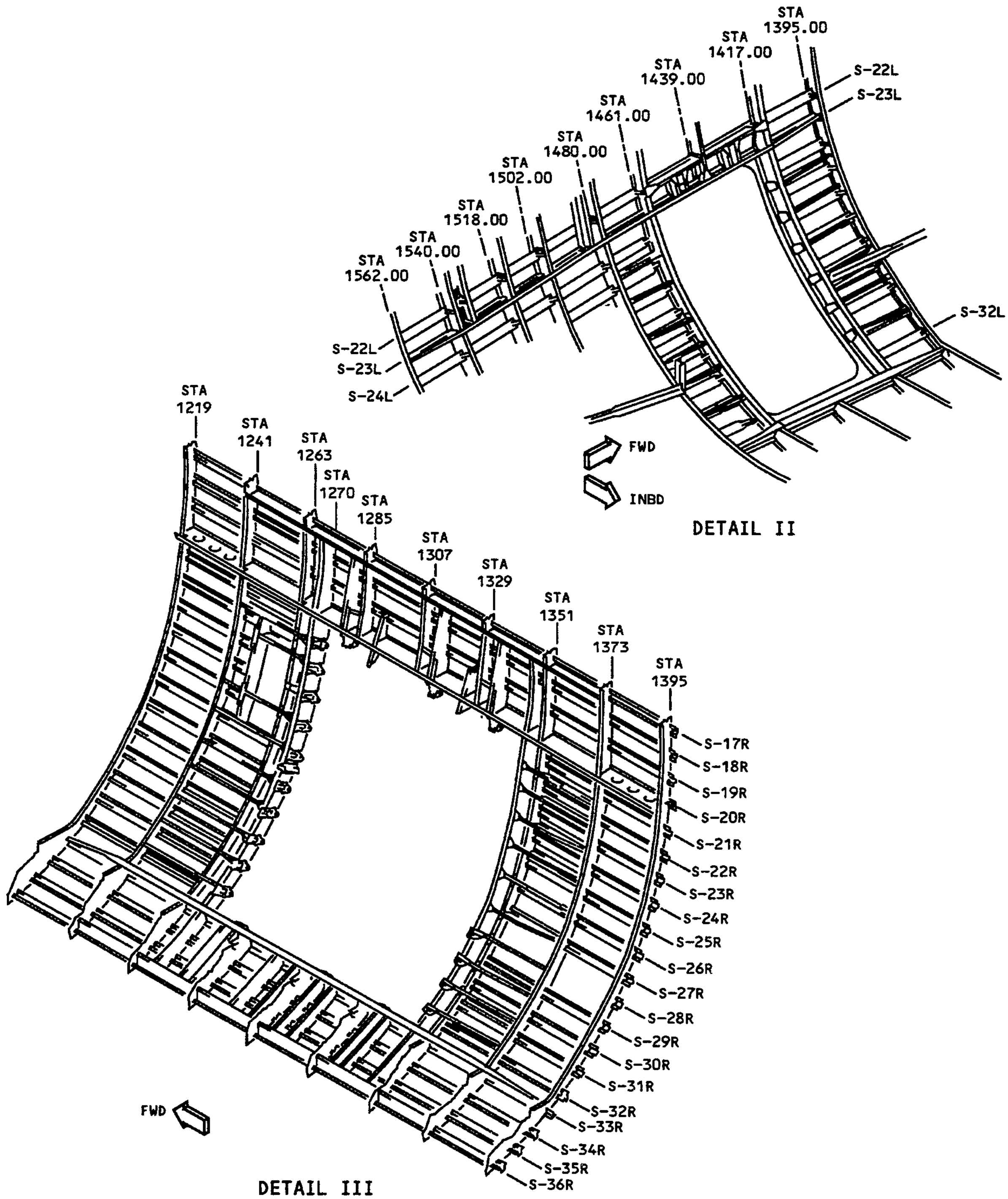




Section 46 Aft Cargo, Bulk Cargo, Aft Entry and Service Door Opening
Figure 1 (Sheet 1)



Section 46 Aft Cargo, Bulk Cargo, Aft Entry and Service Door Opening
Figure 1 (Sheet 2)

1. General

A. Section 46 extends from stations 1087 to 1582. The upper lobe contains the passenger compartment. Structural opening in the passenger compartment are left and right emergency exit doors, left and right passenger doors, and passenger windows. The lower lobe contains the aft cargo compartment. A right-hand cargo door has approximately 70 by 90 inches of clear opening. The aft section of the wing/body fairing attaches to section 46. The aft pressure bulkhead connects sections 46 and 48.

B. The stringers, frames and skins can get corrosion because of moisture caught between the skin and the insulation blankets. Corrosion can start at broken or bad protective finishes. Some examples of corrosion are:

(1) On the inside surface of the skin at BBL 0.0 between stringer 39R and 39L, between stations 1268 and 1276, and on these stringers at station 1307.

(2) On stringers 36R and 36L between stations 1087 and 1582.

(3) On a skin panel forward of station 1582 near stringer 25L.

C. H-11 bolts can get stress-corrosion cracks. When you remove H-11 bolts, replace them with Inconel 718 bolts, which do not get stress-corrosion cracks. Refer to SL 51-8 for more data.

D. External drains are either leaf spring or plunger type drain valves which close when the airplane is pressurized. Drain paths through the internal structure lead to the external drain valves. Refer to 53-60-02, Fig. 1 for valve locations.

E. Corrosion can occur on the seat tracks. Fittings of a different metal touch these tracks. When the carpets are cleaned, moisture can get on the tracks and permit galvanic corrosion to start. On some airplanes, sealant could be missing at Station 1148, LBL 71.50. SB 53-0049 gives details of inspection and repair procedures.

F. Corrosion can occur in the bilge skin panels near the skin splices.

G. Corrosion can occur at the skin lap joint near stringer 26 left, forward of the bulk cargo door. An air leak at this location could let water come in and cause corrosion. SB 53-0046 gives more details.

H. The corrosion protective finish for the structure surrounding the aft cargo, bulk cargo, aft entry and service door opening consists of a chemical conversion coating (alodine) on clad aluminum parts, anodize surface treatment for non-clad parts and a coat of BMS 10-11, type I primer. The doubters around the doors are installed with fay surface sealant. All non-aluminum fasteners which penetrate the exterior skin are installed with wet sealant. After assembly, a touchup coat of BMS 10-11, type I primer is applied to bare fasteners and a coat of BMS 10-11, type II white enamel is applied around the doors. A coat of BMS 3-23 is applied except on the door assembly and door opening (Ref 53-60-02, Fig. 1).

I. The primary corrosion area is under the door sill, floor panels, floor beams and doubters or triplers at door openings. Contaminants are tracked in by passengers, crewmembers, cargo and service personnel or by driven rain or snow when door is opened.

J. Corrosion occurred on a floor support tee at the lower sill of a passenger entry door. The corrosion was worst between body stations 1500.5 and 1507.

K. Insulation blankets are provided on cabin interiors for passenger comfort and to minimize the condensation of warm cabin air on cold skins and stringers. Corrosion has been experienced in areas where the blankets are not installed taut and wrap around stringers or contact the skins.

L. The wing-to-body fairing is constructed of nonmetallic sandwich material and is attached by an aluminum frame to the fuselage. The wing-to-body fairing frame has a corrosion protective finish that consists of chemical finish (alodine) on clad aluminum parts, anodize surface treatment of non-clad parts, a coat of BMS 10-11, type I primer and BMS 10-11, type II white enamel. All fairing structure permanently attached to the outside of the body skin are fay sealed with BMS 5-95 sealant. The outside of the body skin covered by the fairing gets BMS 10-79, type II primer and a coat of BMS 10-60, type II gray enamel. Where removable fairings contact the body skin, the body skins are coated with BMS 10-86 teflon coating. All fairing structure receives BMS 3-23 after assembly and installation (Ref 53-60-04, Fig. 1).

2. Corrosion Prevention

A. After you clean the areas, do the inspections of Volume 1, 20-20-00 to make sure that protective finishes stay serviceable. Refer to **SB** 53-0046 for details for the area near the stringer 26 left skin lap joint forward of the bulk cargo door. Refer to **SB** 53-0047 for inspection of the skin and stringers in the lower body. Refer to **SB** 53-0049 for inspection of the seat track and intercostals at Station 1148, **LBL** 71.50.

B. Where corrosion exists (noticeable bulges of the skin or white deposits of corrosion products at fastener heads or joint edges), refer to the index column in 53-00-01 for reference rework chapter.

C. For minor corrosion, to minimize the downtime of the airplane, the corrosion products should be cleaned off, followed by the application of a corrosion inhibiting compound into the affected area to retard the corrosion process (Ref Volume 1, 20-60-00). The finish system should be restored at the first opportunity consistent with the maintenance schedule.

D. Prevention Treatment

(1) At first opportunity consistent with scheduled maintenance activity, corrosion prevention treatment should be accomplished in the external drain and drain paths, cargo door area, and door openings.

(2) External Drains:

(a) Clean out drains and drain paths.

(b) Check that drain valve is free to open and close.

CAUTION: OBSERVE DRAIN VALVE TORQUE LIMITS. EXCESSIVE TIGHTENING OF PLUNGER TYPE DRAIN VALVE WILL CAUSE VALVE FLANGE TO CRACK OR BREAK.

(c) If required, remove plunger type drain valve from outside the fuselage, clean out obstructions and reinstall valve until flange contacts skin. Tighten to 15 lb-in. maximum.

(3) Aft and Bulk Cargo Compartment:

(a) Remove sidewall lining and insulation blankets in the cargo compartment and beneath the main deck entry and cargo doors to expose frame, stringer, doubters and skin.

(b) Remove floor liners to gain access to bilge areas, if any.

(c) Remove ceiling lining for access to main deck floor beams and intercostals.

(d) Replace broken or damaged finishes. Refer to Volume 1, 20-60-00 for protective finish systems.

(e) Relubricate all tube points per standard servicing procedures.

(f) Where accessible, apply corrosion inhibitor to the internal lower sill area.

(g) Special effort should be made to apply the corrosion inhibitor along doubter edges, along faying surfaces and on fastener heads. Spray all doors and fuselage fittings at the faying surfaces. The use of spray equipment with nozzle directed into faying surface is recommended.

(4) Wing-to-Body Fairing

(a) Apply a coat of BMS 5-95, class F sprayable sealant followed with BMS 10-60 enamel, to all external fairing surfaces. This can be incorporated on airplanes prior to line number 140 per SB 51-0008.

(5) Do not apply corrosion inhibiting compounds on interior materials such as cargo liners. The compounds change the flammable quality of these materials.

(6) Do not apply corrosion inhibiting compounds on insulation blankets. The compounds reduce the water-repellent quality of the blankets.

(7) Do not apply corrosion inhibiting compounds on grease joints or sealed bearings. These compounds dissolve grease and other lubricants. They are penetrating compounds and can get around the seals and into the bearings.

E. Frequency of Application

(1) Periodic inspection is required in areas identified as susceptible to corrosion and should be consistent to the schedules specified in the Maintenance Planning Document. Operators must be aware of reported problems and areas of occurrences.

(2) Periodic application of BMS 3-23 compound is necessary to areas identified and should be consistent to the schedule specified in the Maintenance Planning Document.

F. Improved Corrosion Protection

(1) Door Openings

(a) On airplanes line number 143 and on, PRR B11211 sprayed the door sill, frame, and doubter in an area approximately 3 inches up from the WL 199.5 sill with BMS 5-95 sealant and painted these areas with BMS 10-60, Type 2 enamel. Then the sill fittings and scuff plate support blocks were installed. Leveling compound was added over the sill fittings, to fill the entire sill corner, before the scuff plate was installed. These changes can be incorporated on other airplanes per SB 53-0016.

(b) At line number 396, PRR B12196 applied BMS 10-11, type 1 primer on the titanium gutters that touch the Flexane 80 sealant at the floor panels.

(c) At line number 480, PRR B12388-2 applied BMS 3-23 compound to all metallic structure on the interior (non-pressure side) of the service panels at station 1380, stringer S-38L and station 1570, BL zero.

(2) External Drains -- On airplanes line number 1, 117 and on, PRR B10988 replaced all leaf spring type drain valves by plunger type valves. This change can be incorporated on other airplanes per SB 51-0006.

(3) Wing-to-Body Fairing -- On airplanes line number 140 and on, honeycomb fairing components covered with Kevlar fabric were replaced with components covered by fiberglass fabric.

(4) Fuselage Crown Panels

(a) At line number 248, PRR B11816-1 applied BMS 3-23 corrosion inhibiting compound on the crown panels and frames per PRR B11816-1. This treatment is between stringers S-8L and S-8R, the full length of Section 46. This can be incorporated on other airplanes per SL 20-9 and 51-9.

(b) At line number 480, PRRs B12388-1 and B12388-2 added BMS 3-23 compound to all metallic floor structure, seat tracks and sidewalls between WL 200 and stringers S-8.

(5) Fuselage Lower Structure

(a) At line number 253, a production change applied BMS 3-26, type 2 corrosion inhibiting compound on the lower frames, skins, and stringers. This treatment is between stringers S-34L and S-34R, the full length of Section 46. This can be incorporated on other airplanes with SL 20-9 and 51-9.

(b) At line number 360, a production change sealed the stringers in the lower lobe with a different procedure.

(c) At line number 393, more fay surface sealant between the skin panels and the stringers near the skin splice at station 1219, per PRR B12180. This change also removed the fillet seal from the lower side of the stringer, and added BMS 3-26 type I corrosion preventive compound to the area.

(d) At line number 480, PRR B12388-2 replaced the two-layer system of BMS 3-23 and BMS 3-26 compounds with BMS 3-29 compound and applied BMS 3-29 compound in the bilge below WL 124.4.

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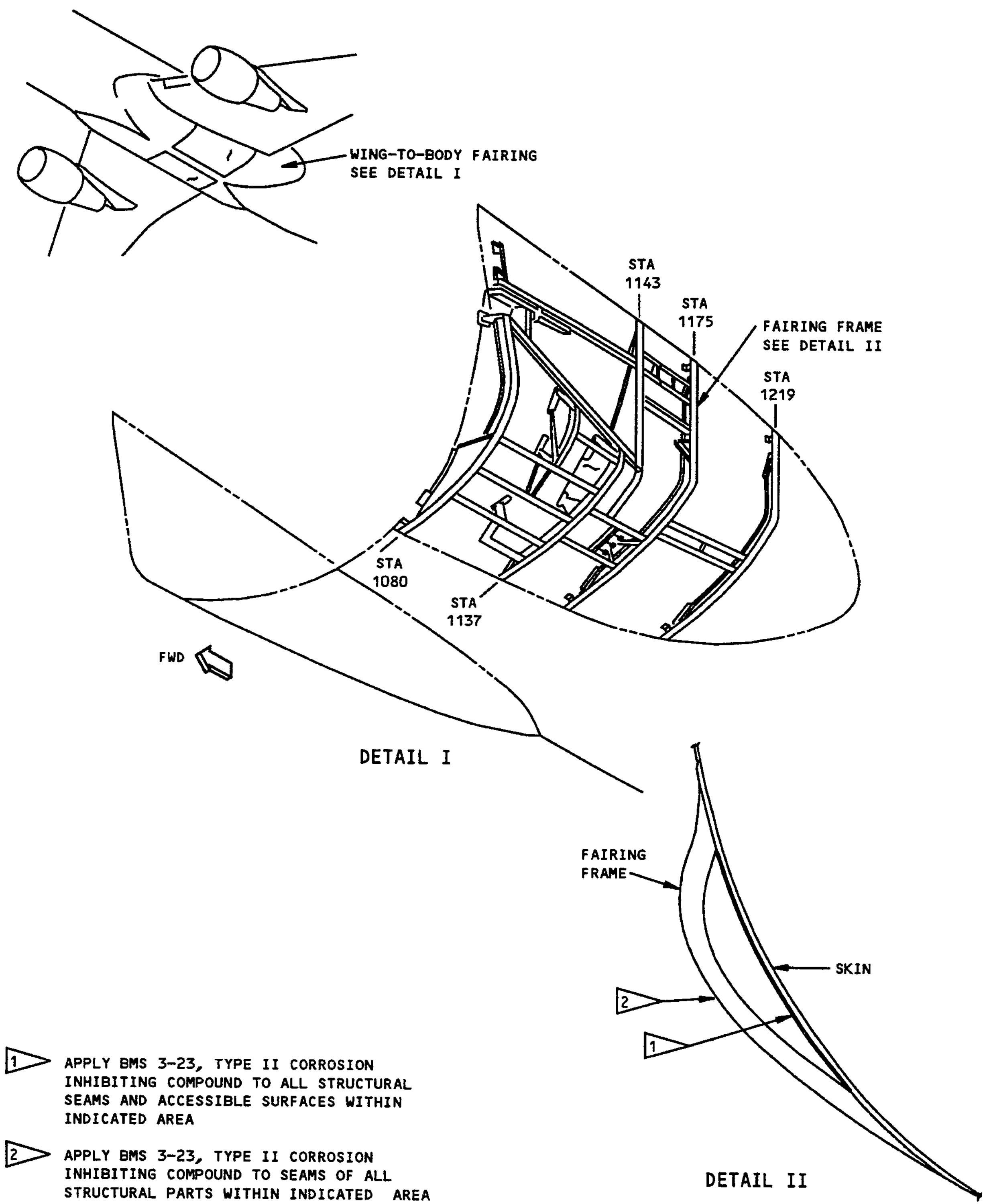

1 APPLY BMS 3-23, TYPE II CORROSION INHIBITING COMPOUND TO ALL STRUCTURAL SEAMS AND ACCESSIBLE SURFACES WITHIN INDICATED AREA

2 APPLY BMS 3-23, TYPE II CORROSION INHIBITING COMPOUND TO SEAMS OF ALL STRUCTURAL PARTS WITHIN INDICATED AREA

Section 46 Wing-to-Body Fairing
Figure 1

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1. General

A. The aft pressure bulkhead at station 1582 consists of web panels with stiffeners on the forward face. The pressure bulkhead forms the rear of the pressurized structure of the fuselage. Corrosion protection for the aft pressure bulkhead consists of chromic acid anodize surface treatment, a coat of BMS 10-11, type 1, primer and, on the pressurized side, a coat of BMS 10-11, type 2 enamel. All structure attached to the pressure bulkhead web is fay sealed with BMS 5-95. All fasteners that penetrate the bulkhead break ring are installed with wet sealant. Up to airplane number 217, these fasteners are fillet sealed on the aft face of the bulkhead. Airplanes line number 218 and on have sealant at both ends of the fasteners. A coat of BMS 3-23 corrosion inhibiting compound is applied to the forward and aft face of the pressure bulkhead. Airplanes line number 253 and on have a top coat of BMS 3-26, type 2 corrosion inhbiting compound applied over the BMS 3-23 on the forward face of the bulkhead below WL 220 per PRR B11816. Some airplanes up to line number 279 have the Dinitrol AV-100B form of BMS 3-26, type 2 compound on this area of the bulkhead per PRR B12019.

B. The aft face of the bulkhead is susceptible to corrosion due to moisture and contamination. The web lap splices and fastener heads leave unsupported areas of the paint system, which leads to cracking of the paint or flaking which are starting points for corrosion.

C. Damage to the aft face of the bulkhead during maintenance activities, and fatigue cracks, are the subject of SB 53-0026 and Airworthiness Directive 88-19-03.

D. H-11 bolts can get stress-corrosion cracks. When you remove H-11 bolts, replace them with Inconel 718 bolts, which do not get stress-corrosion cracks. Refer to SL 51-8 for further information.

2. Corrosion Prevention

A. After you clean the areas, do the inspections of SB 53-0026 and Volume 1, 20-20-00 to make sure that protective finishes stay serviceable.

B. For minor corrosion, to minimize the downtime of the airplane, the corrosion products should be cleaned off, followed by the application of a corrosion inhibiting compound into the affected area to retard the corrosion process (Ref Part 1, 20-60-00). The finish system should be restored at the first opportunity consistent with the maintenance schedule.

C. Frequency of Application

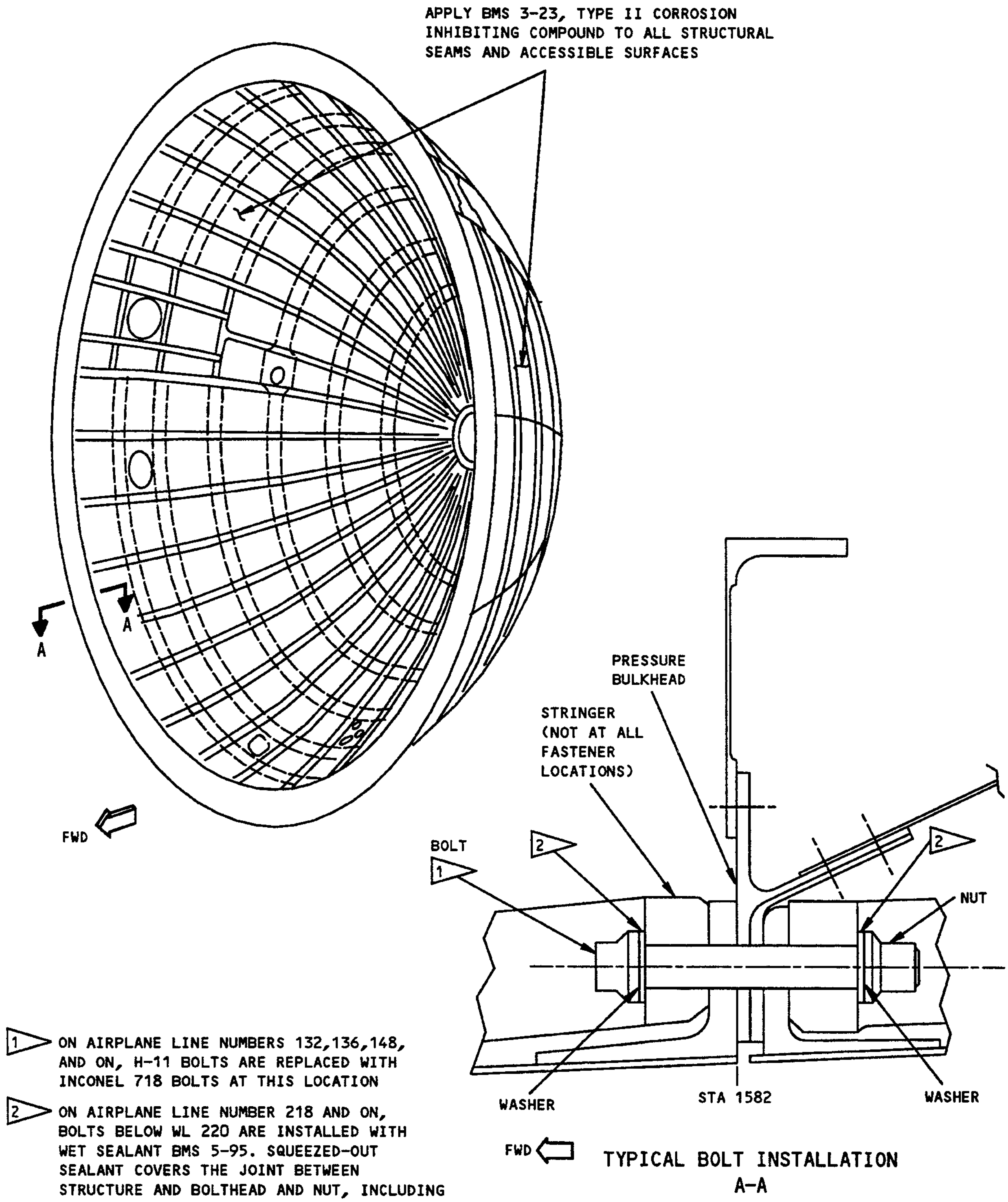
(1) Periodic inspection is required in areas identified as susceptible to corrosion and should be consistent to the schedules specified in the Maintenance Planning Document. Operators must be aware of reported problems and areas of occurrences.

(2) Periodic application of BMS 3-23 compound is necessary to areas identified and should be consistent to the schedule specified in the Maintenance Planning Document.

D. Improved Corrosion Protection

(1) On airplanes line numbers 132,136,148 and on, PRR B11491 replaced H-11 bolts with Inconel 718 bolts at the aft pressure bulkhead (refer to 53-70-02, Fig. 1, Detail I). The Inconel 718 bolt is made of corrosion resistant alloy and does not get stress corrosion cracks.

(2) At line number 480, PRR B12388-2 replaced the two-layer system of BMS 3-23 and BMS 3-26 compounds with BMS 3-29 compound and applied BMS 3-29 compound to surfaces below WL 124.4.



1 ON AIRPLANE LINE NUMBERS 132,136,148, AND ON, H-11 BOLTS ARE REPLACED WITH INCONEL 718 BOLTS AT THIS LOCATION

2 ON AIRPLANE LINE NUMBER 218 AND ON, BOLTS BELOW WL 220 ARE INSTALLED WITH WET SEALANT BMS 5-95. SQUEEZED-OUT SEALANT COVERS THE JOINT BETWEEN STRUCTURE AND BOLTHEAD AND NUT, INCLUDING THE WASHER. MORE SEALANT MAY BE ADDED AFTER FASTENER INSTALLATION.

Aft Pressure Bulkhead
Figure 1

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FUSELAGE

NOTE: For coverage of galleys and lavatories formerly covered here, refer to 53-95-01.

1. General

A. Section 48 extends from stations 1582 to 1952. This is the aft, unpressurized section of the fuselage. Section 48 includes the APU compartment aft of the firewall at stations 1832 and 1843. The horizontal and vertical stabilizers attach to Section 48.

B. The corrosion protection for the interior aluminum consists of anodize surface treatment and a coat of BMS 10-11, type 1 primer on the detail parts. All stringers below stringer 22 are installed with BMS 5-95 fay surface sealant. This includes the parts on the APU access doors. After assembly, all parts of the interior get a coat of BMS 10-11, type 2 enamel. BMS 3-23 corrosion inhibiting compound is applied to all interior surfaces after assembly and paint application.

C. The APU firewall is made of titanium alloy. The faying surfaces that touch the aluminum body structure are sealed with BMS 5-63 sealant.

D. Corrosion can occur on the lower body skin panels, near the rivets that go through the skin panels.

2. Corrosion Prevention

A. After you clean the areas, do the inspection of Volume 1, 20-20-02 to make sure that protective finishes stay serviceable.

B. For less-important corrosion, to decrease the downtime of the airplane, clean off the corrosion products. Apply corrosion inhibiting compound on the affected areas. Refer to Volume 1, 20-60-00 for how to apply corrosion inhibiting compound. Repair the finish system when the maintenance schedule permits.

C. Frequency of Application

(1) Regular inspection is required in areas which can get corrosion. Use the schedules in the Maintenance Planning Document. Operators must know of reported problems and areas.

(2) Regular application of BMS 3-23 corrosion inhibiting compound is necessary in areas identified. Use the schedules in the Maintenance Planning Document.

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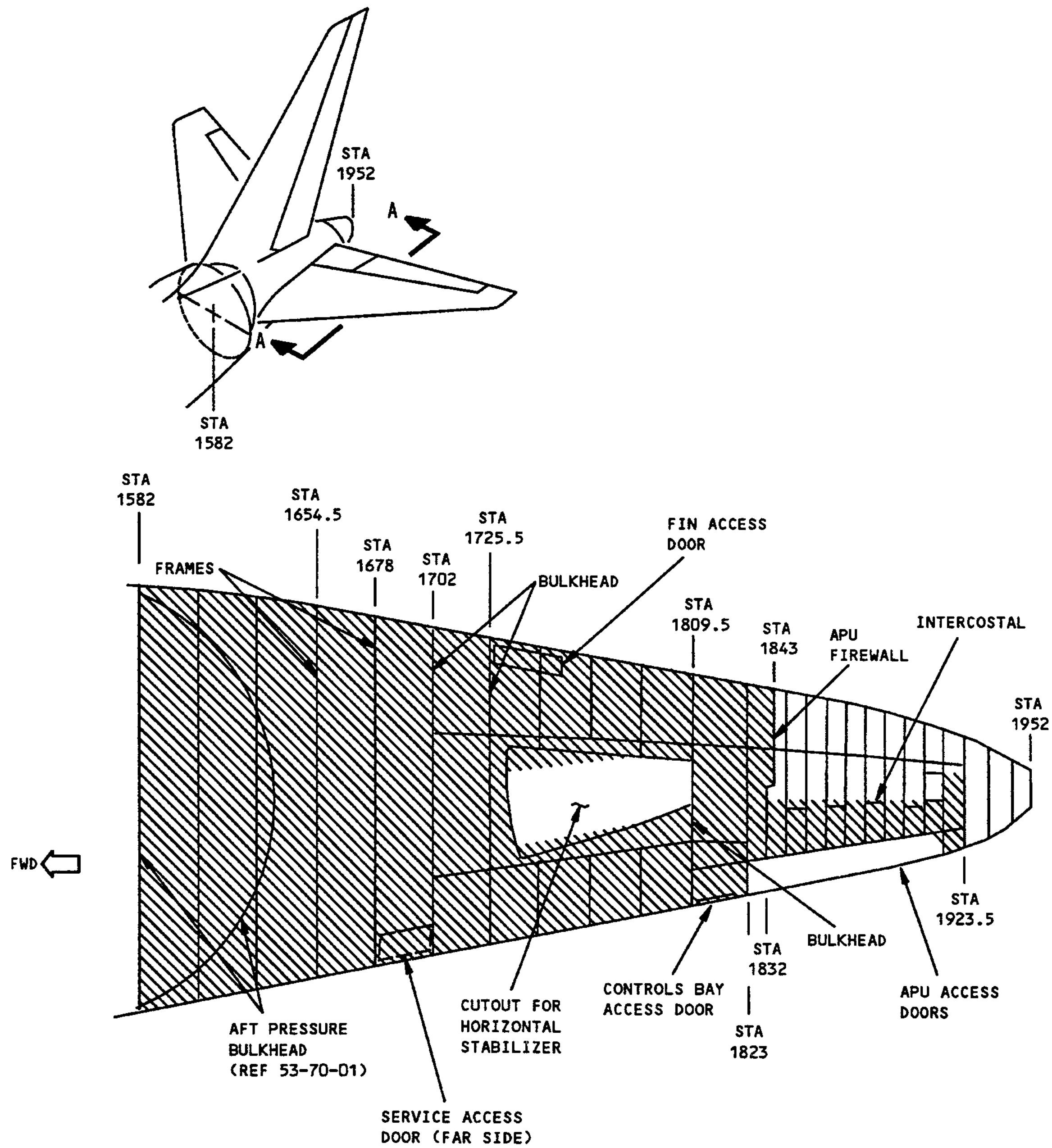

NOTE: FOR GALLEY LAVATORIES FORMERLY COVERED HERE, REFER TO 53-95-02

APPLY BMS 3-23 TYPE II CORROSION PREVENTIVE COMPOUND TO ALL STRUCTURAL SEAMS AND ACCESSIBLE SURFACES

Section 48 Corrosion Prevention
Figure 1

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1. General

A. Skin lap joints are joined by rivets and are supplemented by BMS 5-95 corrosion inhibiting adhesive primer (CIAP). The CIAP serves as an adhesive as well as a sealant to prevent contaminants from entering the splice. To further prevent the entrance of contaminants, lap splices on the airplane interior are fillet sealed with BMS 5-32, Class B sealant. Airplanes may be further protected by a weather fillet seal of BMS 5-79, class B applied to the edge of the exterior skin.

B. Corrosion can occur at the skin lap joint near stringer 26 left, forward of the bulk cargo door. Refer to 53-60-01 for more details.

2. Corrosion Prevention

A. Following cleaning of suspected areas, a thorough inspection as described in Volume 1, 20-20-00 is effective to ensure that protective finishes provided during manufacture remain intact.

B. For minor corrosion, to minimize the downtime of the airplane, the corrosion products should be cleaned off, followed by the application of a corrosion inhibiting compound into the affected area to retard the corrosion process (Ref Volume 1, 20-60-00). The finish system should be restored at the first opportunity consistent with the maintenance schedule.

C. Prevention Treatment

(1) Internal Treatment:

(a) The treatment of internal surfaces described above should be made at the first opportunity splice area is exposed. Location of the area should be noted and monitored from the outside every 3 months for visual indication of corrosion progression.

(b) Apply water displacing corrosion inhibiting compound into lap joints, rivet heads, and/or heel of stringers as noted in the methods described below.

1) Insulation blankets should be protected or removed from the immediate treatment area to prevent spattering of the blankets. Insulation inadvertently spattered should be allowed to dry before installation.

2) Loose sealants should be removed but not replaced. Broken sealants should not be replaced.

3) Apply water displacing corrosion inhibiting compound into lap joint edges, rivet heads and heel of the stringer. The use of pressure spray equipment with nozzle directed into joint is recommended.

(c) Do not apply corrosion inhibiting compounds on interior materials such as cargo liners. The compounds change the flammable quality of these materials.

(d) Do not apply corrosion inhibiting compounds on insulation blankets. The compounds reduce the water-repellent quality of the blankets.

(2) External Treatment:

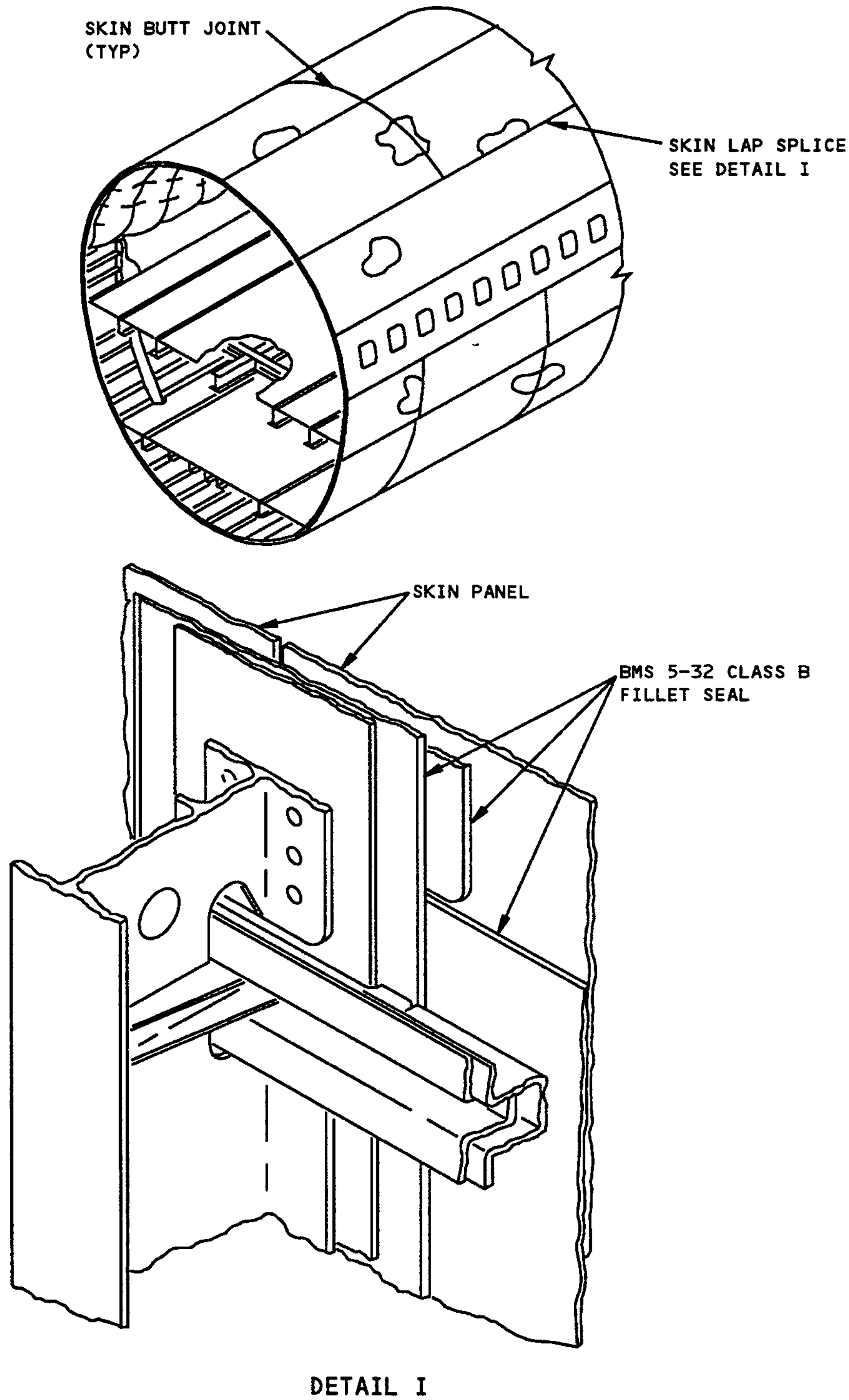
(a) For corrosion prevention, apply BMS 3-23 into lap joints and on lap joint rivet heads. On fillet sealed splices apply BMS 3-23 along the edge of panel and on lap joint rivet heads. Broken seals should not be replaced. BMS 3-23 should be left on for 30 minutes and the excess removed with a dry rag. The use of pressure spray equipment with nozzle directed into joint is recommended.

(b) Operators who wash frequently with detergent and those who operate in severe zones, should adjust their frequency of application of corrosion inhibiting compound.

D. Frequency of Application

(1) Periodic inspection is required to areas identified as susceptible to corrosion and should be consistent to the schedules specified in the Maintenance Planning Document. Operators must be aware of reported problems and areas of occurrences.

(2) Periodic application of BMS 3-23 compounds is necessary to areas identified and should be consistent to the schedule specified in the Maintenance Planning Document.



Fuselage Skin Lap Joints
Figure 1

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GALLEY AND LAVATORY AREA

1. General

A. The areas under galleys and lavatories are susceptible to corrosion because of spillage of fluids and food. Leakage from plumbing lines also contributes to corrosion. Seat tracks that are in the galley or lavatory areas are particularly susceptible because of their exposure to traffic debris and spillage which collect inside the track.

2. Corrosion Prevention

A. Following cleaning of suspected areas, a thorough inspection as described in Volume 1, 20-20-00 is effective to ensure that protective finishes provided during manufacture remain intact.

B. For minor corrosion, to minimize the downtime of the airplane, the corrosion products should be cleaned off, followed by the application of a corrosion inhibiting compound into the affected area to retard the corrosion process (Ref Volume 1, 20-60-00). The finish system should be restored at the first opportunity consistent with the maintenance schedule.

C. Prevention Treatment

(1) At first opportunity when scheduled maintenance work allows access to the structure, corrosion prevention treatment should be accomplished.

(2) Preferred access to the structure is from underneath the main deck.

(3) Remove sidewall lining and insulation blankets to expose frames, stringers, doubters and skin.

(4) Remove floor liners to gain access to bilge areas.

(5) Remove insulation blankets and liners (if any) from bulkheads in the immediate area below galleys or lavatories.

(6) Remove ceiling lining for access to main deck floor beams and intercostals.

(7) Open any plugged drains.

(8) Clear all drain paths.

(9) Replace broken or damaged finishes. Refer to Volume 1, 20-60-00 for protective finish systems. Use interior finish system with polyurethane enamel topcoat.

(10) Replace or repair broken or damaged leveling compounds used for drainage.

(11) Apply corrosion inhibiting compound to all exposed structure under galleys and lavatories except where the crew oxygen bottle is located. Exposed structure of bulkheads should also be included. Special effort should be made to apply the corrosion inhibitor to the top of the floor beams where moisture may be trapped between the floor panel and floor beam. The use of spray equipment with nozzle directed into faying surfaces is recommended. Do not apply excessively.

(12) Allow solvent in the corrosion inhibitor to evaporate before reinstalling insulation blankets.

(13) Install blankets so they are taut.

(14) Install liners and floor panels. Install the floor panel fasteners with BMS 3-24 grease.

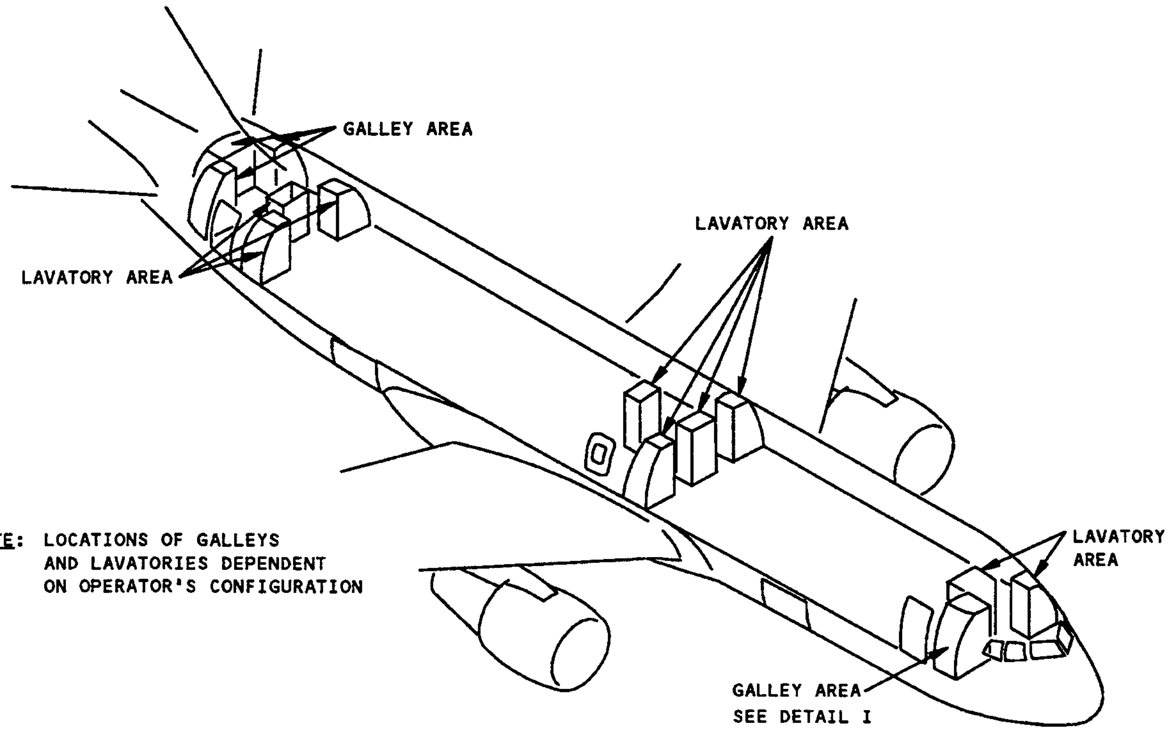
(15) Do not apply corrosion inhibiting compounds on interior materials such as liners. The compounds change the flammable quality of these materials.

(16) Do not apply corrosion inhibiting compounds on insulation blankets. The compounds reduce the water-repellent quality of the blankets.

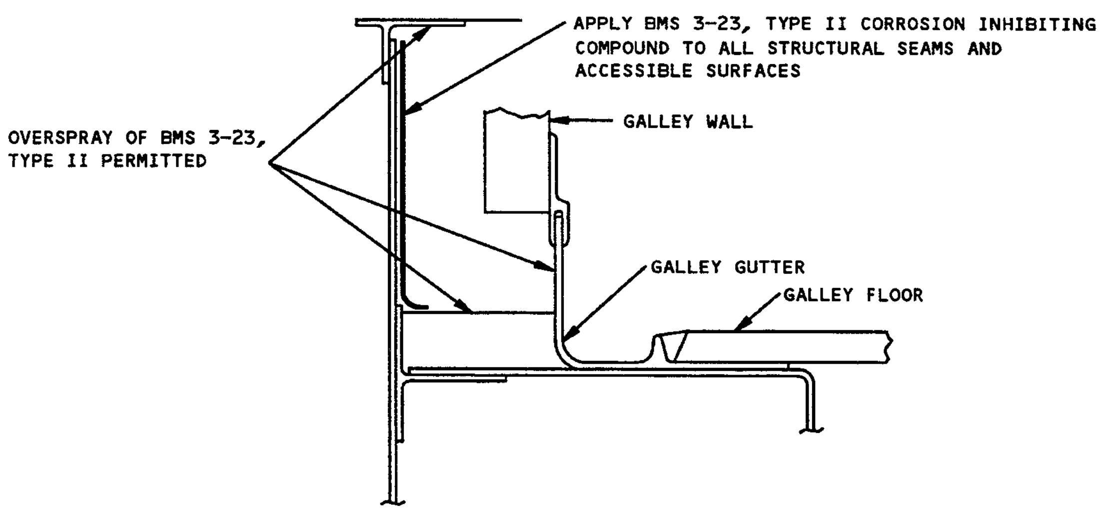
D. Frequency of Application

(1) Periodic inspection is required in areas identified as susceptible to corrosion and should be consistent to the schedules specified in the Maintenance Planning Document. Operators must be aware of reported problems and areas of occurrences.

(2) Periodic application of BMS 3-23 compound is necessary in areas identified and should be consistent to the schedule specified in the Maintenance Planning Document.



NOTE: LOCATIONS OF GALLEYS AND LAVATORIES DEPENDENT ON OPERATOR'S CONFIGURATION



GALLEY FLOOR CAVITY
BS 246 THRU BS 269,
LBL 17 THRU RBL 0

DETAIL I

Galley and Lavatory Areas
Figure 1

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CHAPTER

54

NACELLES/PYLONS

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AREA	PROBLEM	INDEX PREVENTION VOLUME 2	TERMINATING ACTION (IF ANY)
Nacelle Struts	Corrosion at fasteners in aft lower spar fitting	54-50-01	SB 54-0052
	Corrosion in the engine strut-to-wing attachment area	54-50-01	

SPECIFIC CORROSION PROBLEMS - NACELLES/PYLONS
Figure 1

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1. General

A. A.Corrosion can occur on washers under fasteners in the fitting assembly in the nacelle strut aft lower spar.

2. Corrosion Prevention

A. Make regular checks of the fitting assembly and fasteners in the nacelle strut aft lower spar. Refer to SB 54-0052 for details.

B. PRR B12695 will increase the capability of some of the existing structural components in the engine strut-to-wing attachment area to provide additional fatigue capability, damage tolerance and corrosion resistance as follows:

C. PRR B12695-2 - at airplane line number 665 - for GE engines
PRR B12695-3 - at airplane line number 664 - for P&W engines
PRR B12695-4 - at airplane line number 713 - for RR engines

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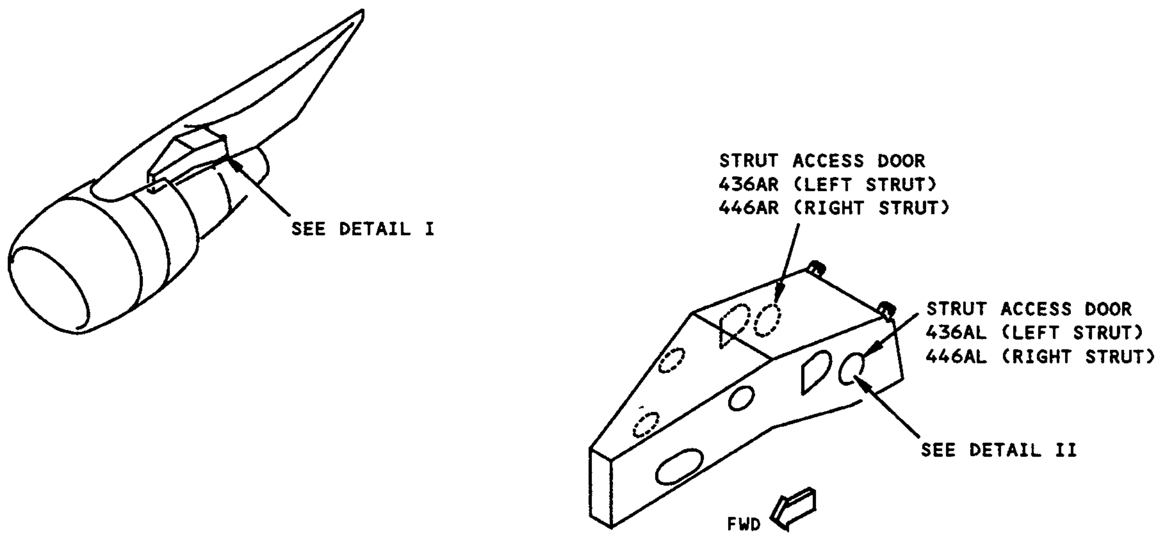
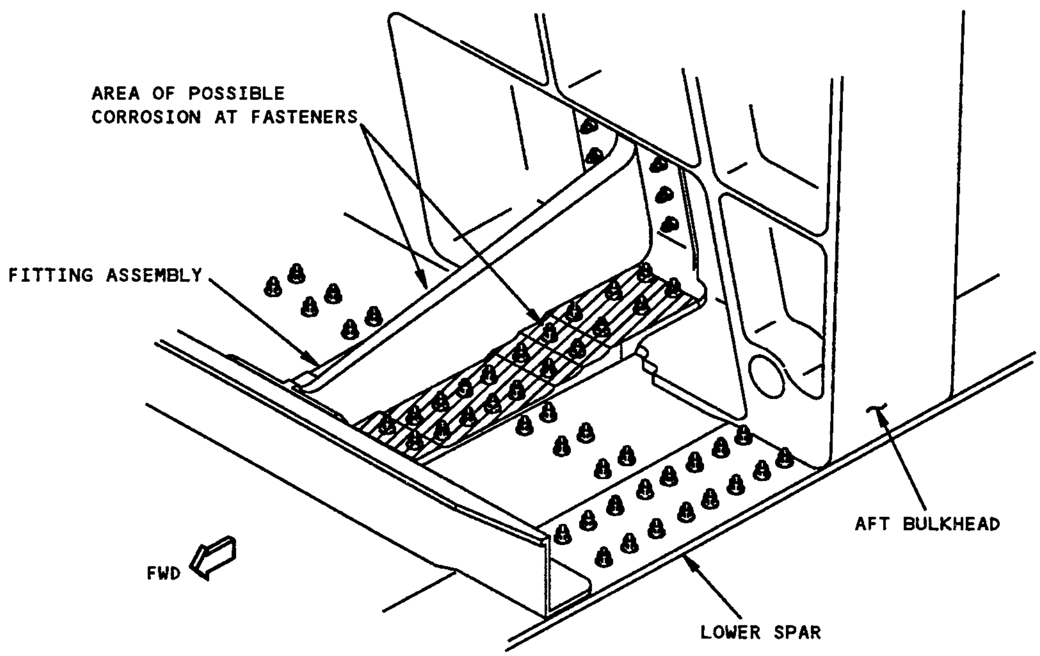


DETAIL I



DETAIL II

Lower Spar Fitting
Figure 1

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CHAPTER

55

STABILIZERS

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STABILIZERS

AREA	PROBLEM	INDEX PREVENTION VOLUME 2	TERMINATING ACTION (IF ANY)
Horizontal Stabilizer	Corrosion of the skin, spars, splice plates, trailing edge beam and center section	55-10-01	
	Water penetration into structural honeycomb components	55-10-01	
	Clogged drain holes	55-10-01	
	Corrosion of hinge support fittings in bushing holes	55-10-01	SB 53-0079
Vertical Stabilizer	Corrosion on hydraulic tubing	55-30-01	
	Water penetration into structural honeycomb components	55-30-01	

SPECIFIC CORROSION PROBLEMS - STABILIZERS
Figure 1

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STABILIZERS

1. General

A. The interior aluminum parts of the horizontal stabilizer inspar structure have a corrosion protective finish that consists of anodize surface treatment and a coat of BMS 10-11, type 1, primer on detail parts. The assembled structure, including fasteners, was given an additional coat of BMS 10-11, type 1, primer followed by a coat of BMS 3-23 corrosion inhibiting compound. BMS 3-23 was also applied to both sides of the auxiliary, front and rear spars (See 55-10-02, Fig. 1). The upper and lower fixed trailing edge Kevlar panels are protected with BMS 10-60, type 2, enamel. Beginning with line number 124, an additional coat of BMS 5-95, class F sealant is applied before the enamel top coat.

B. Areas of possible corrosion are the auxiliary, front, and rear spars, upper splice plates, trailing edge beam, and inspar skin.

C. Overboard drains are open holes in the lowest point in any given area. Drain paths through the internal structure lead to the overboard drains (Ref to 55-10-03, Fig. 1).

2. Corrosion Prevention

A. Following cleaning of suspected areas, a thorough inspection as described in Volume 1, 20-20-00 is effective to ensure that protective finishes provided during manufacture remain intact.

B. Where corrosion exists (noticeable bulges of the skin or white deposits of corrosion products at fastener heads or joint edges), refer to the index column in 55-00-01 for reference rework chapter.

C. For minor corrosion, to minimize the downtime of the airplane, the corrosion products should be cleaned off, followed by the application of a corrosion inhibiting compound into the affected area to retard the corrosion process (Ref Volume 1, 20-60-00). The finish system should be restored at the first opportunity consistent with the maintenance schedule.

D. Prevention Treatment

(1) At first opportunity consistent with scheduled maintenance activity, corrosion prevention treatment should be accomplished on the horizontal stabilizer.

(2) Upper and Lower Stabilizer Surfaces--Apply BMS 10-79, Type 3 primer followed by BMS 10-100 (Aeroflex G12E25) coating where repair or replacement of existing corrosion protection is needed (Ref SL 20-5 and 51-15). The BMS 10-100 coating is chemically compatible with Corogard, but the two coatings have slight differences in color and finish.

(3) Structural Honeycomb Components-Apply a coat of BMS 5-95, class F sprayable sealant to external surfaces of the trailing edge panels and tip fairing. Follow with BMS 10-60 enamel. This applies to airplanes prior to line number 140 per SB 51-0008.

E. Frequency of Application

(1) Periodic inspection is required in areas identified as susceptible to corrosion and should be consistent to the schedules specified in the Maintenance Planning Document. Operators must be aware of reported problems and areas of occurrences.

(2) Periodic application of BMS 3-23 compound is necessary to areas identified and should be consistent to the schedule specified in the Maintenance Planning Document.

F. Improved Corrosion Protection

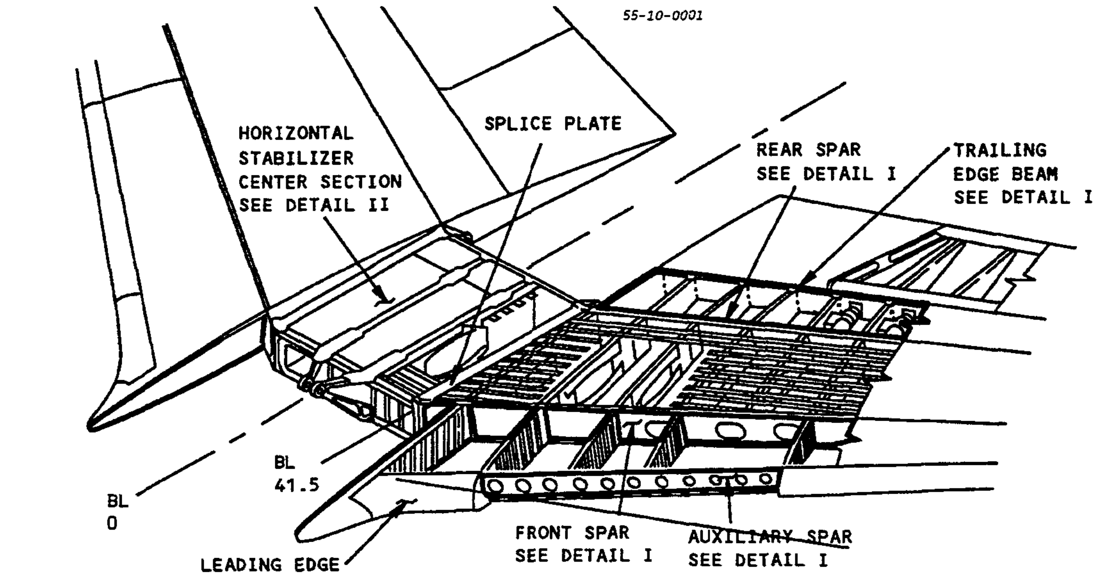
(1) Up to line number 181, a Corogard corrosion protective finish was applied to all interspar, upper stabilizer surfaces. Then, at line number 182, BMS 10-79, type 3 primer followed by BMS 10-100 (Aeroflex G12E25) corrosion protective finish is applied to these surfaces. The lower surfaces were similarly treated at line number 186, per PRR B11630. These changes can be incorporated on earlier airplanes with SL 20-5 and 51-15.

(2) At line number 140, structural honeycomb components covered with Kevlar fabric were replaced with components covered with fiberglass fabric to reduce cracking and subsequent water intrusion.

(3) At line number 253, PRR B11816 applied BMS 3-23 corrosion inhibiting compound to the upper exterior of the splice plate at BL 41.5. This change can be incorporated on other airplanes per SL 20-9 and SL 51-9.

(4) At line number 480, PRR B12388-1 applied BMS 3-23 compound to all metallic structure inside the horizontal stabilizer, the elevators, and the ailerons.

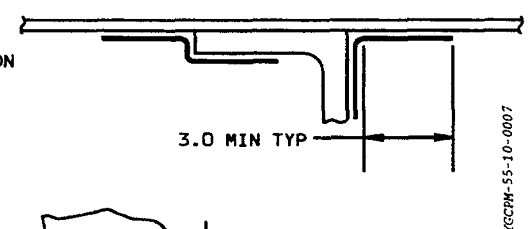
(5) Airplane line numbers 695 and on; new higher interference fit bushings in the horizontals stabilizer hinge support fittings were installed. Service Bulletin 767-53-0079 is being released to inspect for and repair corrosion or cracks on the hinge support fittings. The service bulletin also gives instructions to install new higher interferences fit bushings which will prevent corrosion and cracking of the support fittings resulting from bushing rotational migration.

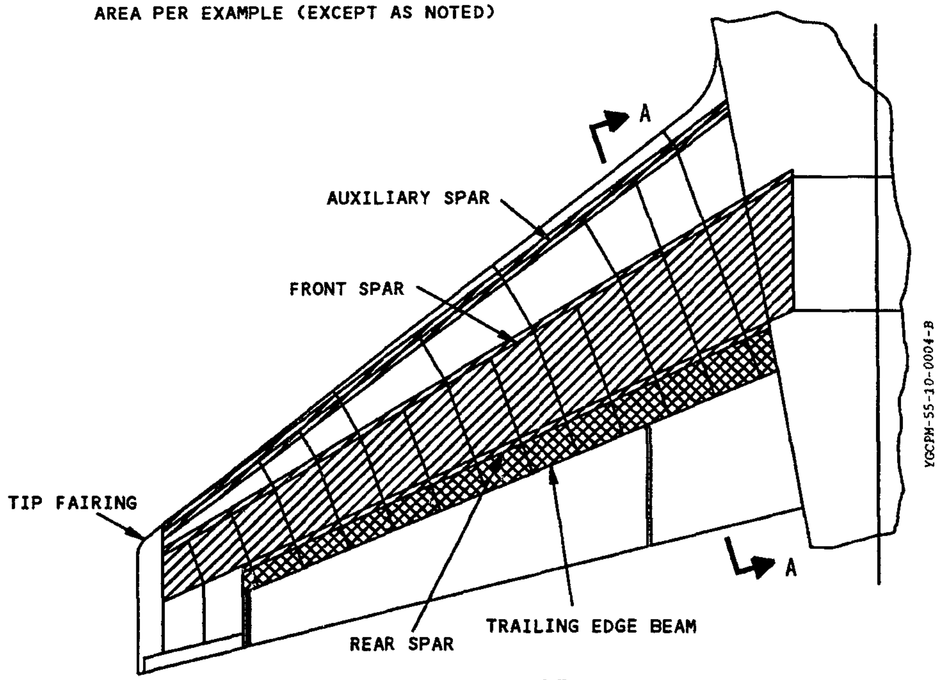


HEAVY LINE INDICATES SIDE TO BE FINISHED

APPLY BMS 3-23 TYPE II (TYPE I OPTIONAL) CORROSION INHIBITING COMPOUND TO ALL STRUCTURAL SURFACES WITHIN INDICATED AREA (EXCEPT AS NOTED)

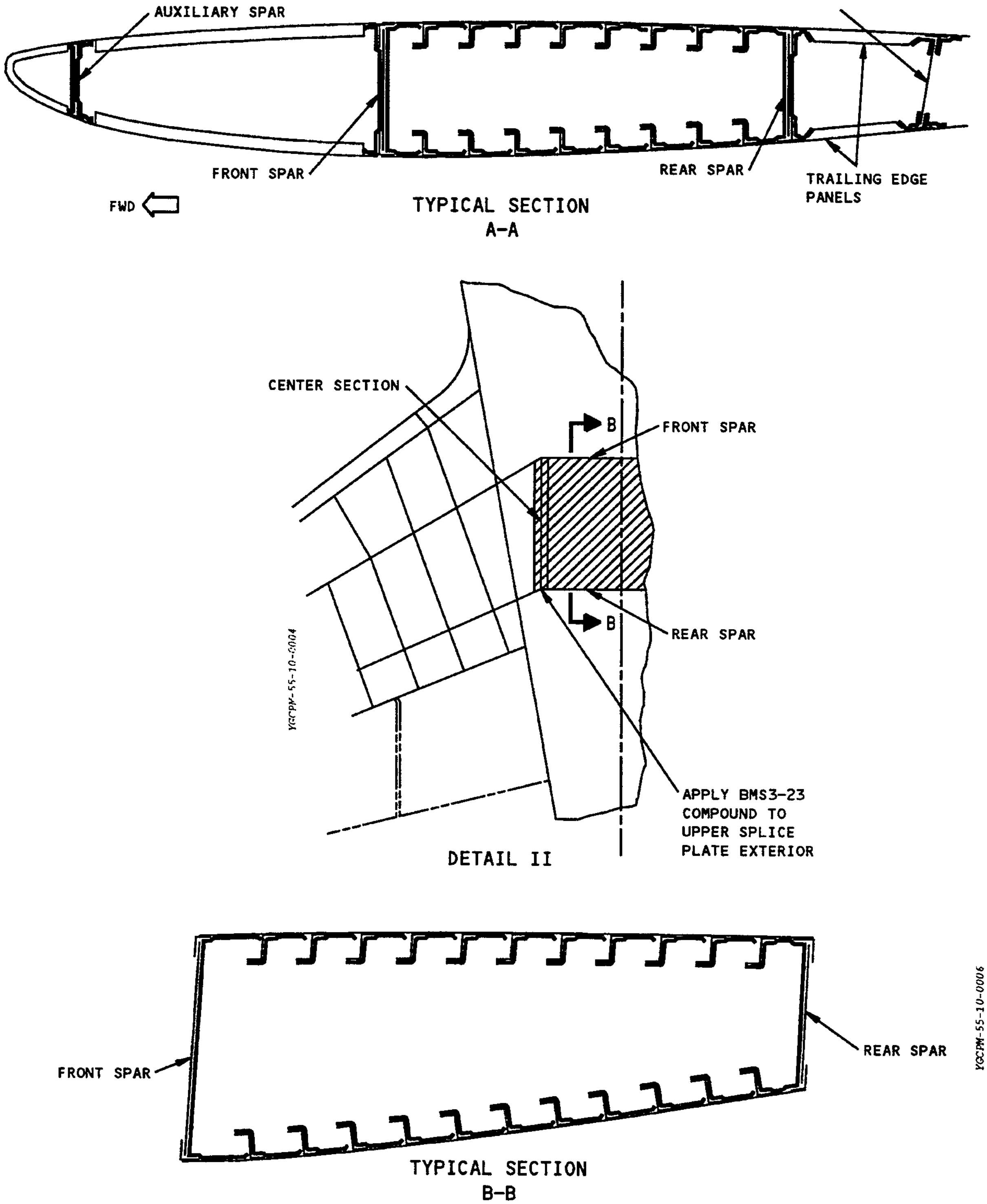
APPLY BMS 3-23 TYPE II (TYPE I OPTIONAL) CORROSION INHIBITING COMPOUND TO SEAMS OF ALL STRUCTURAL PARTS WITHIN INDICATED AREA PER EXAMPLE (EXCEPT AS NOTED)



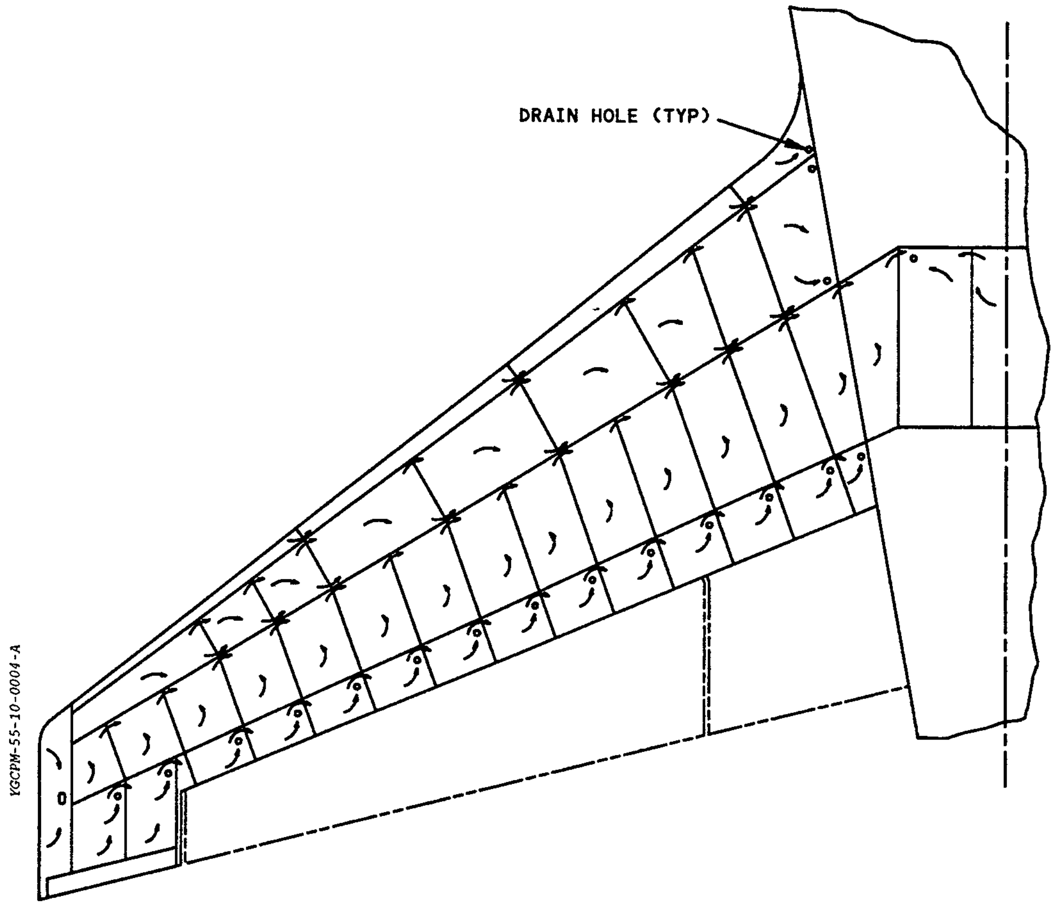


DETAIL I

Horizontal Stabilizer
Figure 1 (Sheet 1)



Horizontal Stabilizer
Figure 1 (Sheet 2)



Horizontal Stabilizer Drain Holes
Figure 1

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STABILIZERS

1. General

A. The main structural components of the vertical stabilizer or fin are the forward and aft torque boxes, fixed trailing edge, removable leading edge, dorsal fin and rudder. The forward torque box is between the auxiliary and front and rear spar. The spars are made up of aluminum. The fixed trailing edge has aluminum ribs covered with Kevlar/graphite skin panels. The removable leading edges consist of aluminum ribs covered with aluminum skin panels. BMS 3-23 water displacing inhibiting compound has been applied to all internal surfaces of the vertical fin, exterior forward surface of the vertical fin front spar assembly and fixed trailing edge cavity.

B. Corrosion can occur when the Kevlar gets cracks and lets water come in.

C. H-11 bolts can get stress-corrosion cracks. When you remove H-11 bolts, replace them with Inconel 718 bolts, which do not get stress-corrosion cracks. Refer to SL 51-8 for further information.

2. Corrosion Prevention

A. Following cleaning of suspected areas, a thorough inspection as described in Volume 1, 20-20-00 is effective to ensure that protective finishes provided during manufacture remain intact.

B. Where corrosion exists (noticeable bulges of the skin or white deposits of corrosion products at fastener heads or joint edges), refer to Structural Repair Manual, for details of corrosion removal.

C. For minor corrosion, to minimize the downtime of the airplane, the corrosion products should be cleaned off, followed by the application of a corrosion inhibiting compound into the affected area to retard the corrosion process (Ref Volume 1, 20-60-00). The finish system should be restored at the first opportunity consistent with the maintenance schedule.

D. Prevention Treatment

(1) At first opportunity consistent with scheduled maintenance activity, corrosion prevention treatment should be accomplished on the vertical stabilizer.

(2) Structural Honeycomb components

(a) Apply BMS 5-95, class F sprayable sealant to external surfaces of the trailing edge panels and tip fairing. Follow with BMS 10-60 enamel. Applicable to airplanes prior to line number 140 per SB 51-0008.

E. Frequency of Application

(1) Periodic inspection is required in areas identified as susceptible to corrosion and should be consistent to the schedules specified in the Maintenance Planning Document. Operators must be aware of reported problems and areas of occurrences.

(2) Periodic application of BMS 3-23 compound is necessary to areas identified and should be consistent to the schedule specified in the Maintenance Planning Document.

F. Improved Corrosion Protection

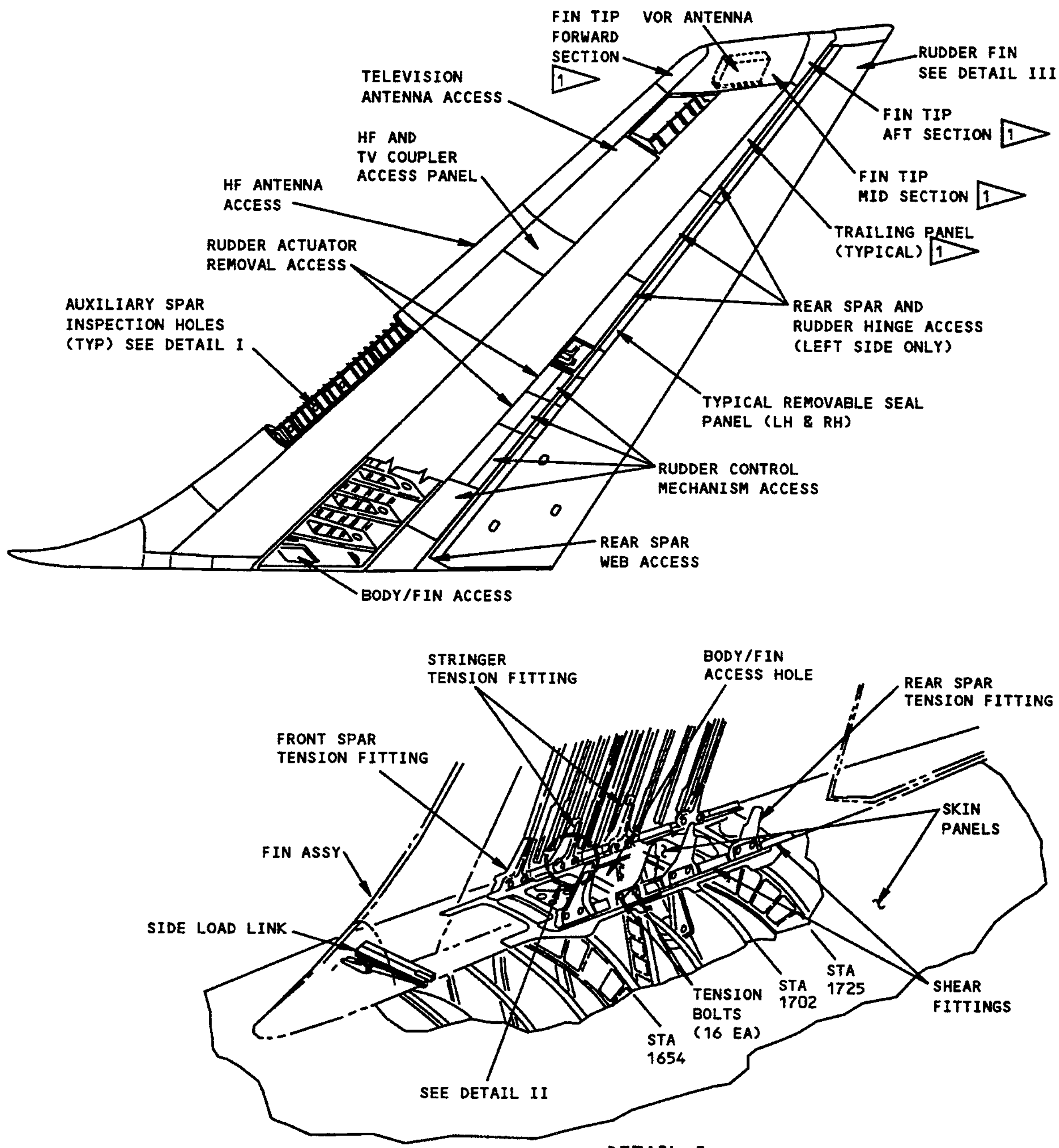
1) Some airplanes have T-9 (BMS 3-23) corrosion inhibitor on the hydraulic tubing in the vertical stabilizer and around the rudder PCA, and on the front area rudder fittings.

2) At line number 168, drain holes were added to rudder leading edge ribs (Ref 55-30-02, Fig. 2, Detail III). This change can be incorporated on other airplanes per SB 51-0011.

3) At line number 140, structural honeycomb components covered with Kevlar fabric were replaced with components covered with fiberglass fabric to reduce cracking and subsequent water intrusion.

4) At line number 144, PRR B11491 replaced H-11 bolts with Inconel 718 bolts at the vertical stabilizer attachment (Ref 55-30-02, Fig. 1, Detail II). The Inconel 718 bolt is equivalent to the H-11 bolt, but is made of corrosion resistant alloy and does not get stress corrosion cracks. Bolt changes can be incorporated on other airplanes SL 51-8.

5) At line number 480, PRR B12388-1 applied BMS 3-23 compound to all metallic structure inside the fin and the rudder, and the cavity forward of the front spar.



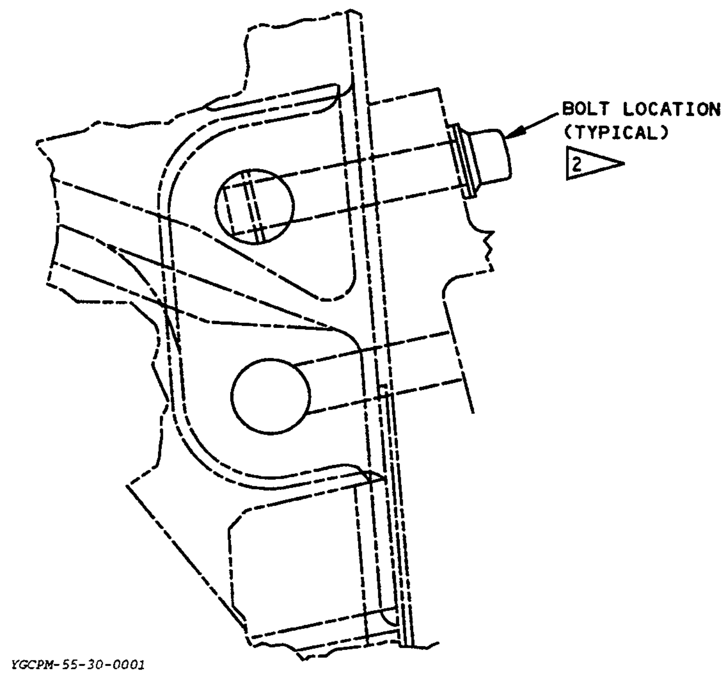
DETAIL I

1 FIBERGLASS COVERED HONEYCOMB STRUCTURE COMPONENTS

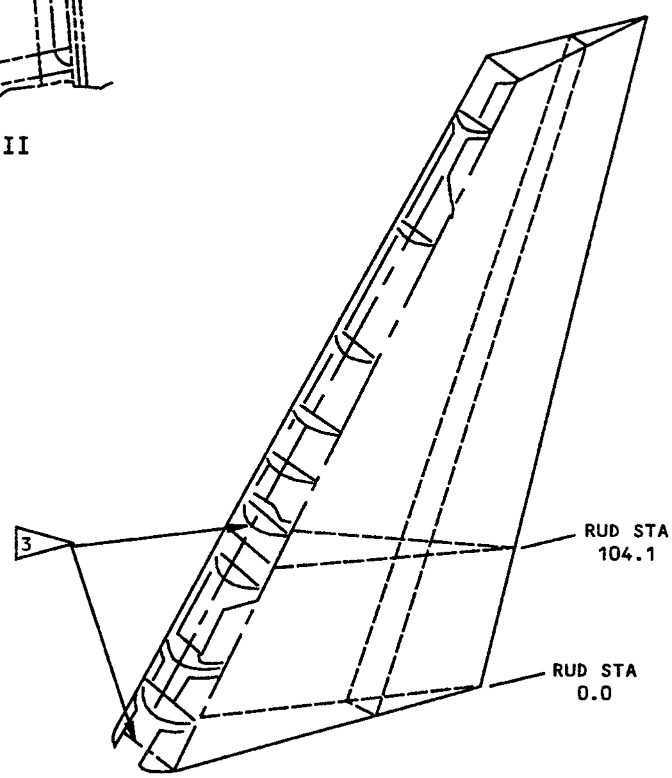
2 ON AIRPLANE LINE NO.S 155 AND ON, H-11 BOLTS HAVE BEEN REPLACED WITH INCONEL 718 BOLTS ON THIS LOCATION

3 DRAIN HOLES ADDED ON THE RUDDER LEADING EDGE RIB

Vertical Stabilizer
Figure 1 (Sheet 1)



DETAIL II



RUDDER
DETAIL III

Vertical Stabilizer
Figure 1 (Sheet 2)

CHAPTER

57

WINGS

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AREA	PROBLEM	INDEX PREVENTION VOLUME 2	TERMINATING ACTION (IF ANY)
General	Water penetration into structural honeycomb components	57-00-02	SB 51-0008
	Plugged drain holes	57-00-02	
	Corrosion in side load fitting bushings	57-00-02	SB 57-0063
Center Wing	Corrosion cracking in bolts	57-10-01	
	Corrosion of the upper skin at drain screens	57-10-01	SL 57-13
Outer Wing	Corrosion of wing spars	57-20-01	
	Corrosion of interspar upper wing surface	57-20-01	
	Corrosion of upper skin and fastener heads, under the wing-to-body fairing	57-20-01	SL 57-9
	Corrosion of fuel- tank access doors	57-20-01	SB 28A0019
	Stress-corrosion cracks on H-11 bolts	57-20-01	SL 51-8
	Corrosion of main landing gear beam, trunnion and fittings	57-20-01	
	Corrosion on upper chord of the inboard spoiler beam	57-20-01	
Trailing Edge and	Corrosion on inboard aileron support ribs	57-50-01	
Trailing Edge Devices	Corrosion under main inbd flap cove panel	57-50-01	

SPECIFIC CORROSION PROBLEMS - WINGS
Figure 1

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WINGS

1. General

A. Wings consist of center wing and outer wing structural units and associated components and members which support the aircraft in flight. Includes spars, skins, ribs, stringers, clamshells, scuppers, etc. Also includes the integral fuel tank structure, flaps, slats, ailerons or elevons (complete with tabs) and spoilers.

B. Overboard drains are the open hole type since the wing is a non pressurized area. Drains are located in the lowest point in any given area. Drain paths through the internal structure lead to the overboard drains. Refer to the schematic for drain hole location.

C. Structural honeycomb components make up upper and lower fixed trailing edge panels, flap linkage fairings, the inboard flap cove panel and outboard flap trailing edge wedge.

2. Corrosion Prevention

A. Make periodic inspections of the drain holes. Use a pipe cleaner or thin wooden dowel to remove debris and contaminants from drain holes.

B. Do not apply corrosion inhibiting compounds near engines, cowling, or other areas of high temperature, or where firewall sealant is used. The high temperatures can cause deterioration of the compounds. Corrosion inhibiting compounds can cause damage to the sealant.

C. Corrosion inhibiting compounds can be used on fiberglass fairings and ducts if the temperature of the duct is not hotter than 220°F.

D. Corrosion inhibiting compounds can be used on fuel vapor barriers.

E. Frequency of Inspection

(1) Periodic inspection is required in areas that can get corrosion and should be consistent to the schedules specified in the Maintenance Planning Document. Operators must be aware of reported problems and areas of occurrences.

(2) To minimize the risk of corrosion due to moisture accumulation, it is recommended that the overboard drains be inspected every C check or more frequently when the airplanes are operated in a harsh environment (high humidity, marine atmosphere, etc.).

F. Improved Corrosion Protection

(1) Airplane line numbers 140 and on structural honeycomb components covered with Kevlar fabric were replaced with components covered with fiberglass fabric to reduce cracking and subsequent water intrusion.

(2) On all airplanes, inspect the side load fitting bushings for migration or rotation. Bushing rotation or migration breaks the moisture barrier to the fitting bore and can cause corrosion of the side load fitting bore which can lead to cracks. Refer to Service Bulletin 767-57-0063 for further details.

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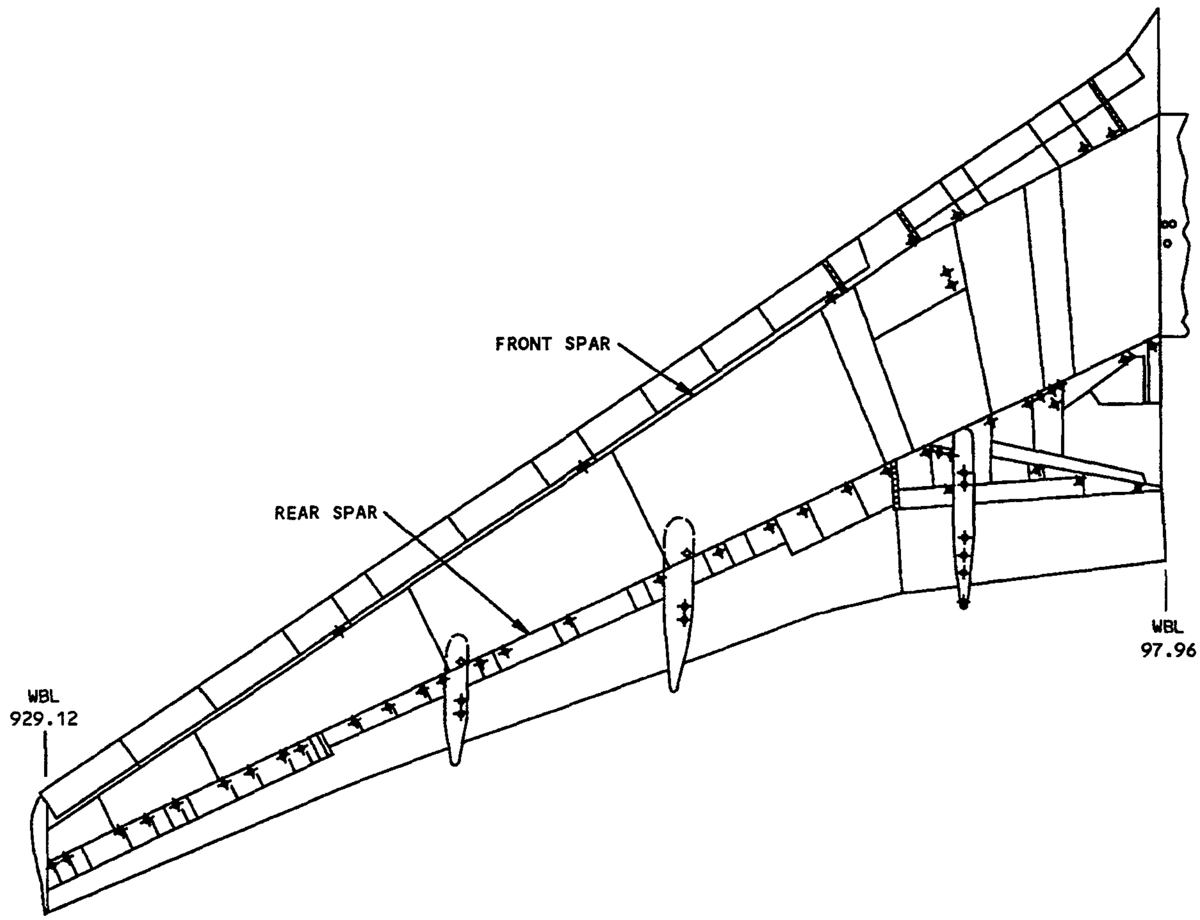

NOTES

+ 3/8 INCH DRAIN HOLE

◇ 3/8 INCH DRAIN HOLE (HIDDEN)

o DRAIN

WING DRAIN HOLES
TOP VIEW
(LEFT SIDE SHOWN, RIGHT SIDE SIMILAR)

Wing Drain Holes
Figure 1

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WINGS

1. General

A. The center wing section is enclosed within the fuselage. The center section consists of upper and lower skin panels and front and rear spars. Throughout the center wing section, the skin panels are reinforced by spanwise stringers and the spars are reinforced by vertical stiffeners.

B. Corrosion can occur on the upper skin, under the base plate of the drain screen at BBL 71. This is the area where the wing upper skin touches the slope of the pressure deck.

C. H-11 bolts can get stress-corrosion cracks. When you remove H-11 bolts, replace them with Inconel 718 bolts, which do not get stress-corrosion cracks. Refer to SL 51-8 for further information.

2. Corrosion Prevention

A. Following cleaning of suspected areas, a thorough inspection as described in Volume 1, 20-20-00 is effective to ensure that the protective finishes provided during manufacture remain intact.

B. For minor corrosion, to minimize the downtime of the airplane, the corrosion products should be cleaned off, followed by the application of a corrosion inhibiting compound into the affected area to retard the corrosion process (Ref Volume 1, 20-60-00). The finish system should be restored at the first opportunity consistent with the maintenance schedule.

C. Frequency of Application

(1) Periodic inspection is required on areas identified as susceptible to corrosion and should be consistent to the schedules specified in the Maintenance Planning Document. Operators must be aware of reported problems and areas of occurrences.

D. Improved Corrosion Protection

(1) On airplanes line number 168 and on, PRR B11491 replaced H-11 bolts with Inconel 718 bolts at the side of body rib (refer to 57-10-02, Fig. 1, Detail II). PRR B11491-1 changed other H-11 bolts at the front spar (Ref 57-10-03). The Inconel 718 bolt is made of corrosion resistant alloy and is not susceptible to stress corrosion cracking. Bolt changes can be incorporated on other airplanes per SL 51-8.

(2) On airplanes line number 253 and on, PRR B11816 added BMS 3-23 and BMS 3-26 corrosion inhibiting compounds on both sides of the longitudinal floor beams. This treatment is also on the upper surface of the upper skin panel. These changes can be incorporated on other airplanes per SL 20-9 and 51-9.

(3) Airplanes line number 246 and on have new cadmium-plated drains that also have two coats of primer. These drains are installed with BMS 5-95 sealant. This change can be incorporated on other airplanes per SL 57-13.

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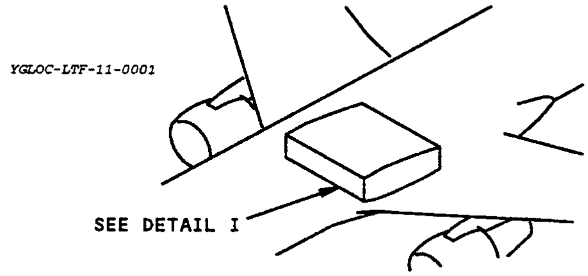
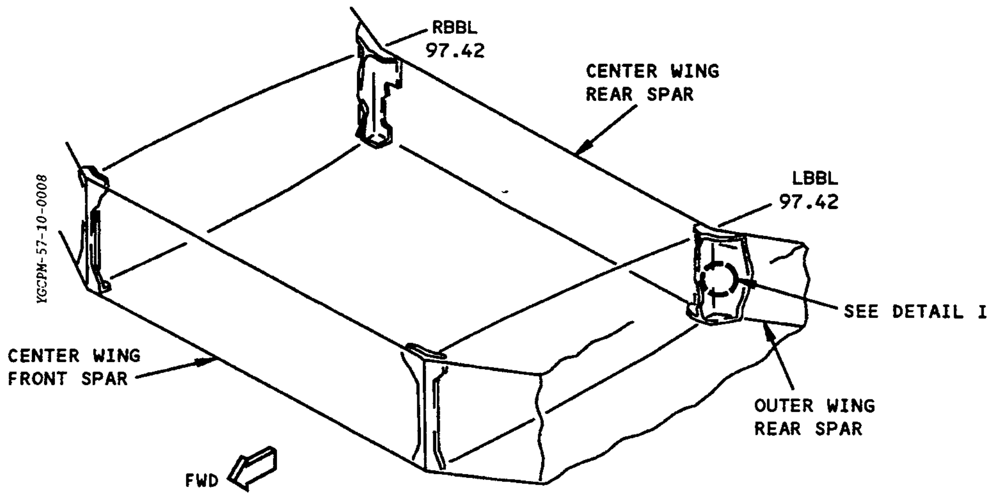
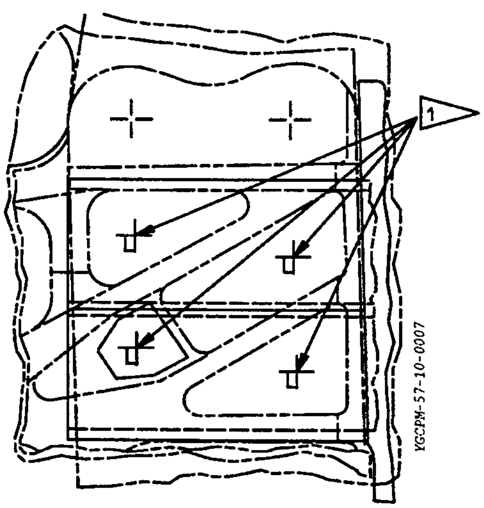




DETAIL I



DETAIL II (TYP)

1 ON AIRPLANES LINE NUMBER 163 AND ON, H-11 BOLTS ARE REPLACED WITH INCONEL 718 BOLTS AT THIS LOCATION

Center Wing Section
Figure 1

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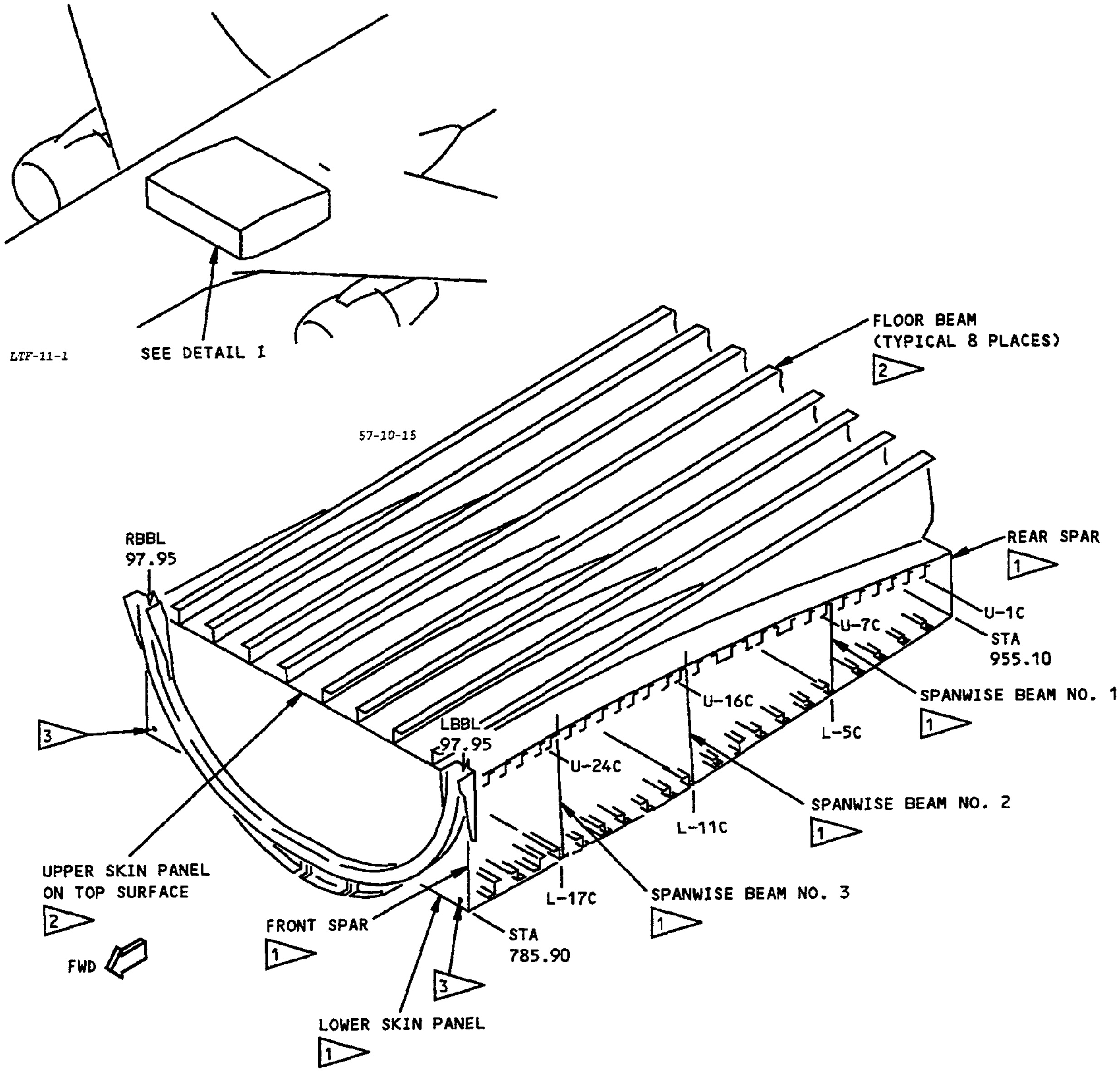

DETAIL I

1. APPLY BMS 3-23, TYPE II CORROSION INHIBITING COMPOUND
2. APPLY BMS 3-23, TYPE II CORROSION INHIBITING COMPOUND, FOLLOWED BY BMS 3-26 TYPE II CORROSION INHIBITING COMPOUND
3. H-11 BOLTS IN THIS AREA. REFER TO SL 51-8 FOR REPLACEMENT WITH INCONEL 718 BOLTS.

Center Wing Section Corrosion Protection
Figure 1

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WINGS

1. General

A. The outer wing section consists of the primary wing structure. This includes skin, integral fuel tanks, dry bays and main landing gear support structure. The MLG trunnion support structure consists of two fittings attached to the aft surface of the rear spar and the main landing gear beam which houses the bearing for the rear trunnion.

B. Corrosion can occur on the front and rear spars. The deployment of flight control surfaces exposes the spars to ground contaminants, thrust reverser soot, runway dirt and debris, and inclement weather elements, all of which contribute to corrosion.

C. Corrosion has been found on the wing skin around fastener head at RH WS 107, stringer S-1, and between fasteners along the span at RH WS614 to 620, stringers S-4, S-5 and S-6.

D. Corrosion can occur on the upper skin under the wing-to-body fairing. Corrosion can also start at rivet heads under the fairing. The fairing seal can cause wear on these surfaces.

E. Corrosion can occur on the fuel-tank access doors. The knitted-wire gaskets were dry, without serviceable anti-corrosion grease.

F. The spar chords can get corrosion at fasteners between the chord and web.

G. H-11 bolts can get stress-corrosion cracks. When you remove H-11 bolts, replace them with Inconel 718 bolts, which do not get stress-corrosion cracks. Refer to SL 51-8 for further information.

H. Corrosion can occur on the splice plates at the lower surface of the fixed leading edge. The corrosion starts on the upper aft surface and can go completely through the splice plates.

I. Corrosion can occur on the upper chord of the inboard spoiler beam. Corrosion was found in three locations between WBL 165 and WBL 215.

2. Corrosion Prevention

A. Following cleaning of suspected areas, a thorough inspection as described in Volume 1, 20-20-00 is effective to ensure that protective finishes provided during manufacture remain intact.

B. Where corrosion exists (noticeable bulges of the skin or white deposits of corrosion products at fastener heads or joint edges), refer to the index column in 57-00-01 for reference rework chapter.

C. For minor corrosion, to minimize the downtime of the airplane, the corrosion products should be cleaned off, followed by the application of a corrosion inhibiting compound into the affected area to retard the corrosion process (Ref Volume 1, 20-60-00). The finish system should be restored at the first opportunity consistent with the maintenance schedule.

D. Prevention Treatment

(1) At first opportunity consistent with scheduled maintenance activity, corrosion prevention treatment should be accomplished on the primary structure and skin of the outer wing.

(2) Primary Wing Structure and Skins

(a) Apply BMS 10-79 type 3 primer followed by BMS 10-100 (Aeroflex G12E25) coating where repair or replacement is required on existing finish (Ref SL 20-5 and 51-15). The BMS 10-100 coating is chemically compatible with the Corogard coating, but the two coatings have slight differences in color and finish.

(b) Apply BMS 5-95, class F sprayable sealant, followed by BMS 10-60 enamel, to external surfaces. This applies to airplanes before line number 140 per SB 51-0008.

(c) Apply BMS 3-23 Type 2 corrosion inhibiting compound on the front spar, rear spar and dry bay area.

(3) Do not apply corrosion inhibiting compounds near engines, cowling, or other areas of high temperature, or where firewall sealant is used. The high temperatures can cause deterioration of the compounds. Corrosion inhibiting compounds can cause damage to the sealant.

(4) Corrosion inhibiting compounds can be used on fiberglass fairings and ducts if the temperature of the duct is not hotter than 220°F.

(5) Corrosion inhibiting compounds can be used on fuel vapor barriers.

E. Frequency of Application

(1) Periodic inspection is required in areas identified as susceptible to corrosion and should be consistent to the schedules specified in the Maintenance Planning Document. Operators must be aware of reported problems and areas of occurrences.

(2) Periodic application of BMS 3-23 compound is necessary to areas identified and should be consistent to the schedule specified in the Maintenance Planning Document.

F. Improved Corrosion Protection

(1) Up to line number 181, a Corogard corrosion protective finish was applied to all interspar, upper wing surfaces. Then, at line number 182, BMS 10-79, type 3 primer followed by BMS 10-100 (Aeroflex G12E25) corrosion protective finish is applied to these surfaces. The lower surfaces were similarly treated at line number 186, per PRR B11630. These changes can be incorporated on earlier airplanes with SL 20-5 and 51-15.

(2) At line number 163, PRR B11491 replaced H-11 bolts with Inconel 718 bolts at the inspar rib No. 1 and 8, and strut support fitting (Ref 57-20-02, Fig. 1). H-11 bolts were also replaced at the MLG beam outboard support fitting (Ref 57-20-03, Fig. 1). The Inconel 718 bolt is made of corrosion resistant alloy and is not susceptible to stress corrosion cracking. Bolt changes can be incorporated on other airplanes per SL 51-8.

(3) At line number 253, PRR B11816 applied BMS 3-23 corrosion inhibiting compound to the interior surfaces of the boost pump cavities, and to the supports for the landing gear trunnion. These supports are on the rear spar and the landing gear support beam. These changes can be incorporated on other airplanes per SL 20-9 and SL 51-9.

(4) At line number 200, BMS 5-95 sealant was sprayed under the Teflon strip and under the walkway area. This gives the wing skin and fastener heads more protection from wear by the fairing seal. This change can be incorporated on other airplanes per SL 57-9.

(5) PRR B11675 and SB 28A0019 changed some of the fuel-tank access doors to give more protection from engine debris or objects thrown by the landing gear tires. This change also included new gaskets, which hold grease better. These gaskets can be used at all of the fuel-tank access door locations.

(6) At line number 480, PRR B12388-1 applied BMS 3-23 compound to all metallic structure in the leading edge forward of the front spar, the exterior nacelle support fittings, and all surfaces

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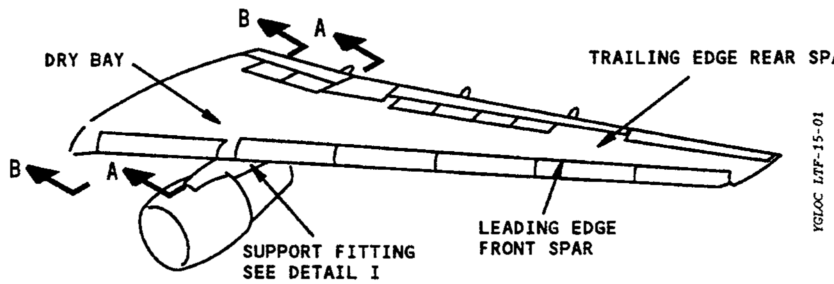
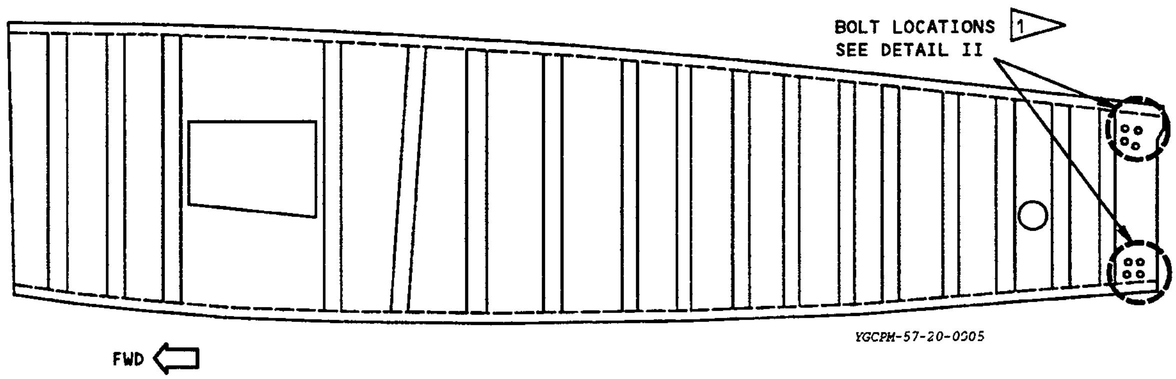
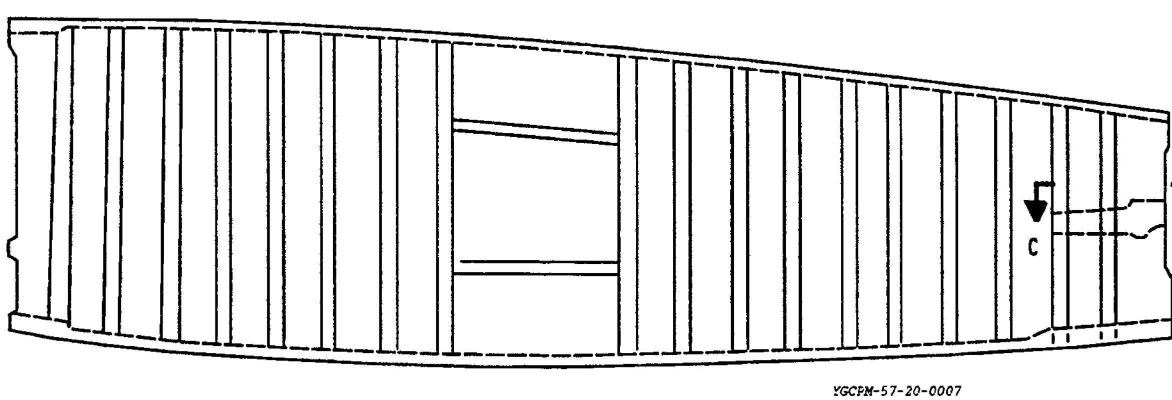


NOTE: FOR CORROSION PROTECTION DETAILS FORMERLY COVERED HERE, SEE FIG. 2.

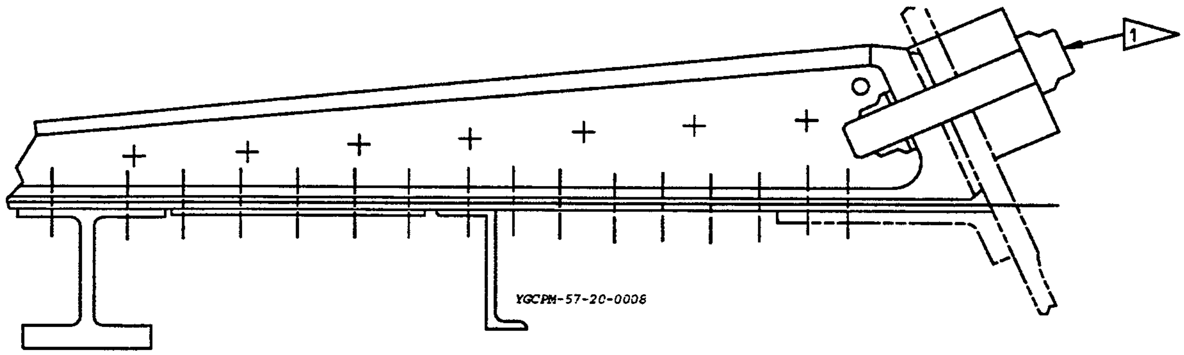


WING RIB 8, WS 394.2
A-A

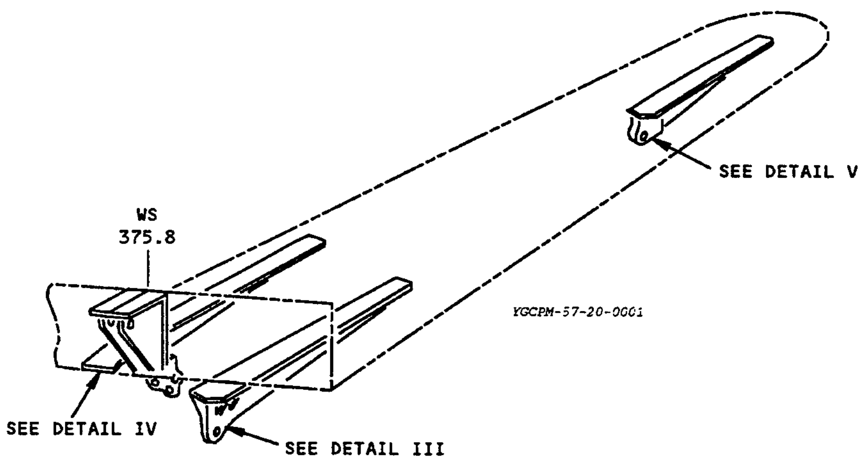


WING RIB 1, WBL 121
B-B

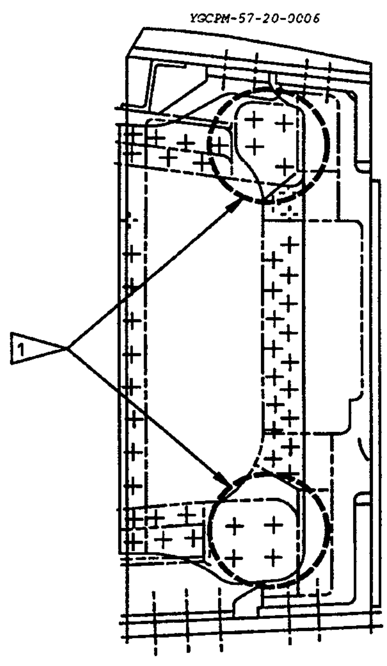
Outer Wing Structure
Figure 1 (Sheet 1)



C-C

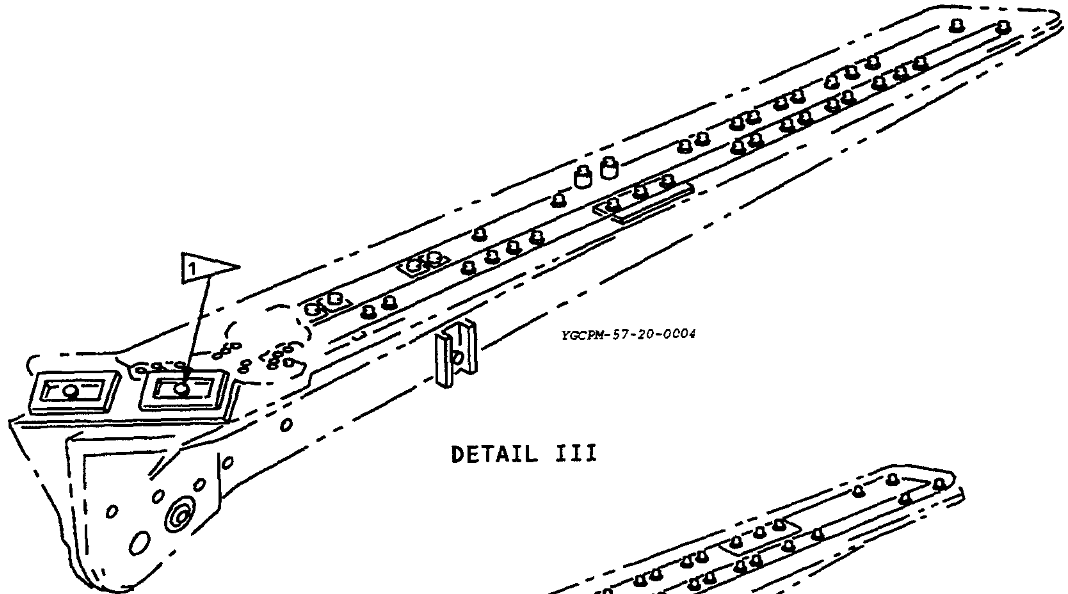


DETAIL I

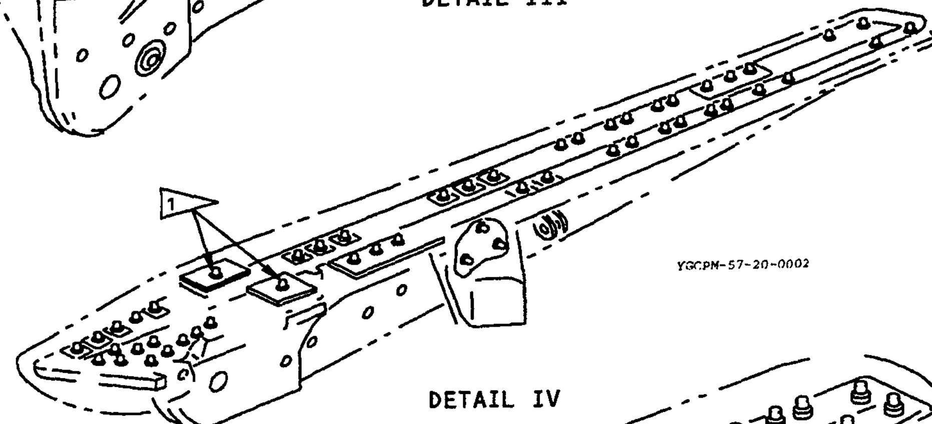


DETAIL II

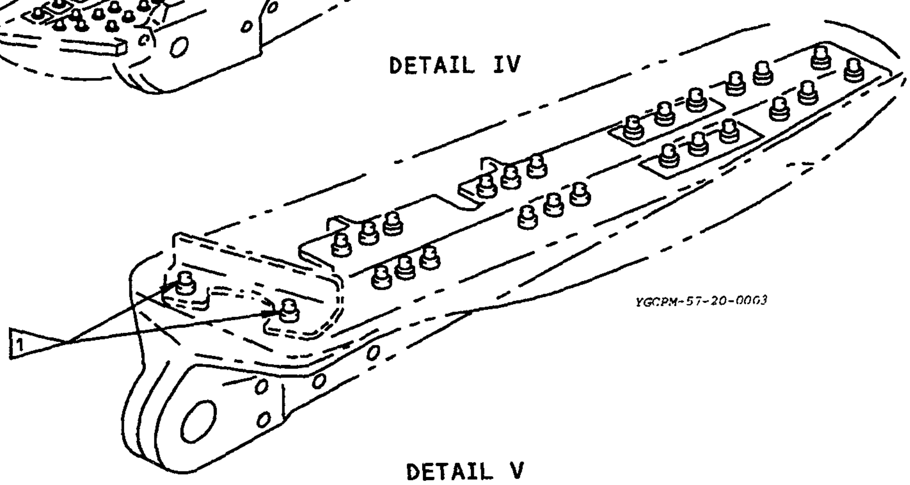
Outer Wing Structure
Figure 1 (Sheet 2)



DETAIL III



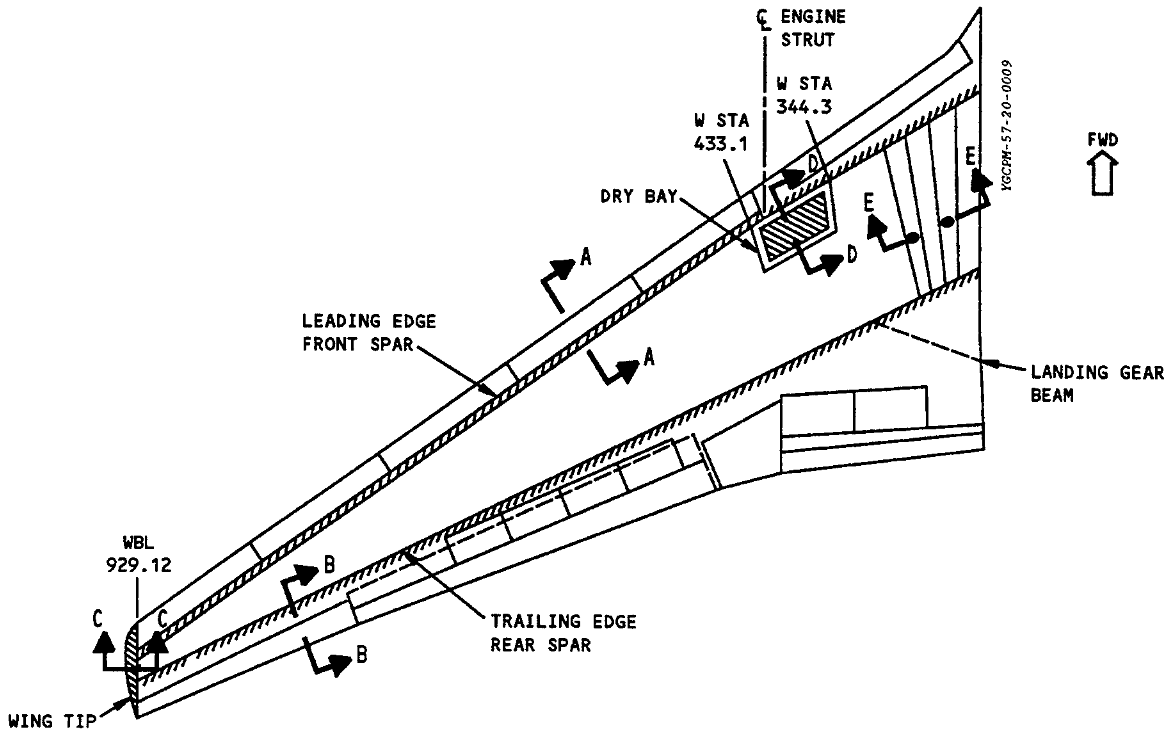
DETAIL IV

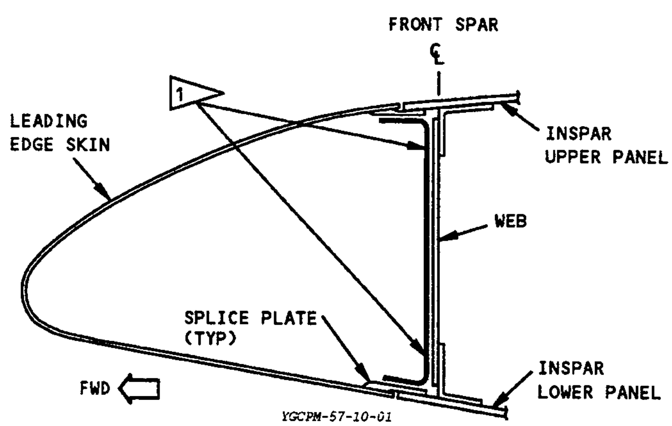


DETAIL V

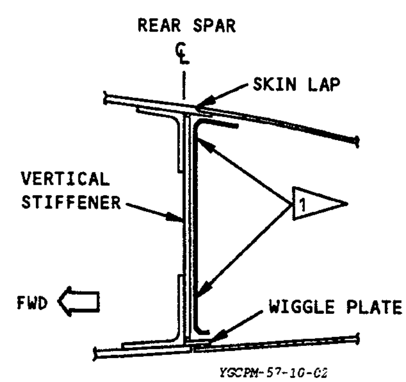
1 ON AIRPLANE LINE NUMBERS 163 AND ON, H-11 BOLTS ARE REPLACED WITH INCONEL 718 BOLTS AT THIS LOCATION

Outer Wing Structure
Figure 1 (Sheet 3)





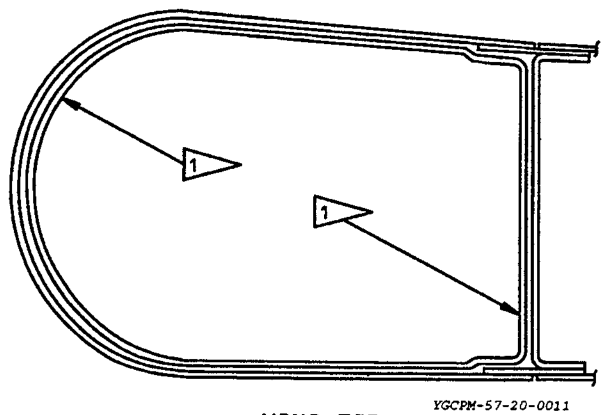
LEADING EDGE FRONT SPAR
A-A



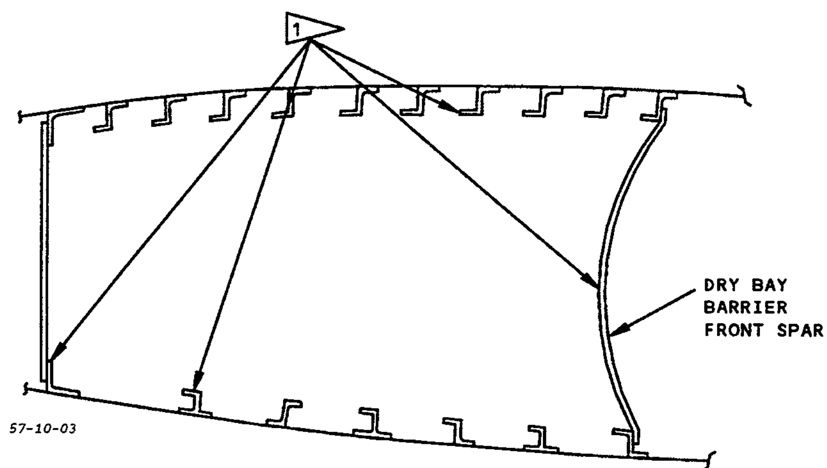
TRAILING EDGE REAR SPAR
B-B

NOTE: FOR MAIN GEAR TRUNNION SUPPORT STRUCTURE FORMERLY COVERED HERE, SEE 57-20-03, FIG. 1.

Outer Wing Corrosion Protection
Figure 2 (Sheet 1)



WING TIP
C-C



DRY BAY
D-D

BOOST PUMP CAVITY
E-E

1 APPLY BMS 3-23 TYPE 2 CORROSION INHIBITING COMPOUND TO ALL STRUCTURAL SURFACES. OVERSPRAY IS PERMITTED WHERE THE ACCESS IS NOT EASY

Outer Wing Corrosion Protection
Figure 2 (Sheet 2)

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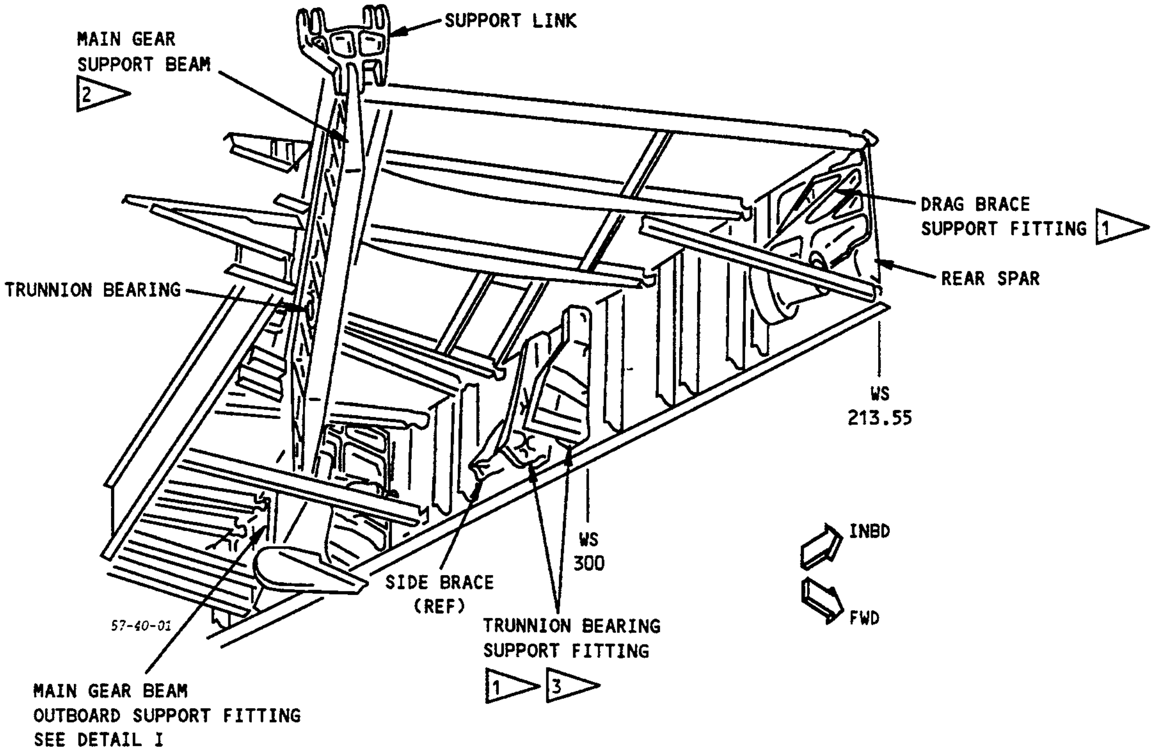


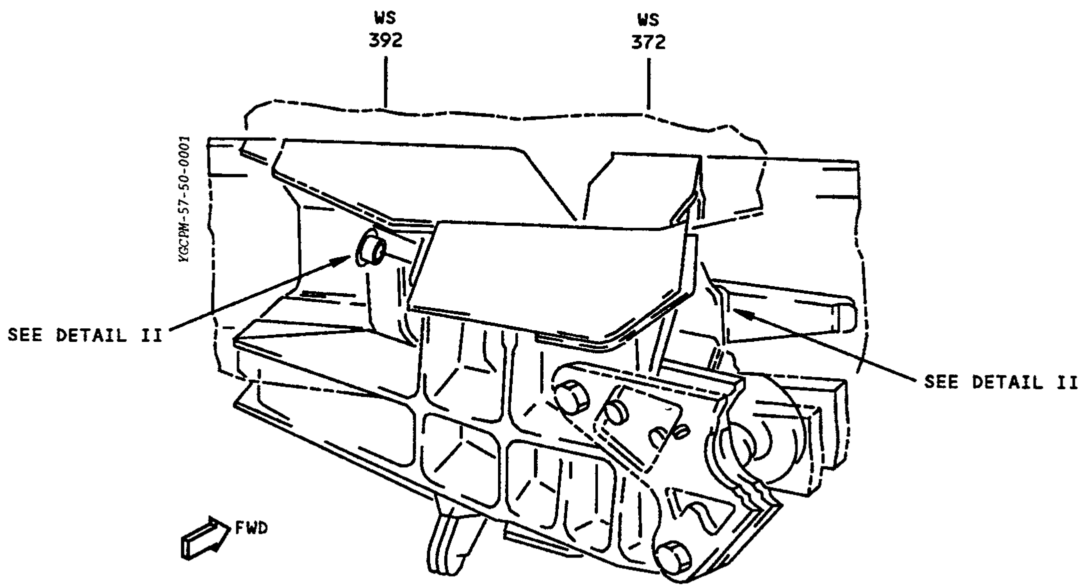
CAUTION: DO NOT LET THE CORROSION INHIBITING COMPOUND GO INTO BEARINGS OR BUSHINGS.

1 APPLY BMS 3-23 CORROSION INHIBITING COMPOUND. BE SURE TO INCLUDE FASTENERS AND FAYING SURFACES. APPLY LIBERALLY TO PERMIT PENETRATION BETWEEN FITTING AND REAR SPAR

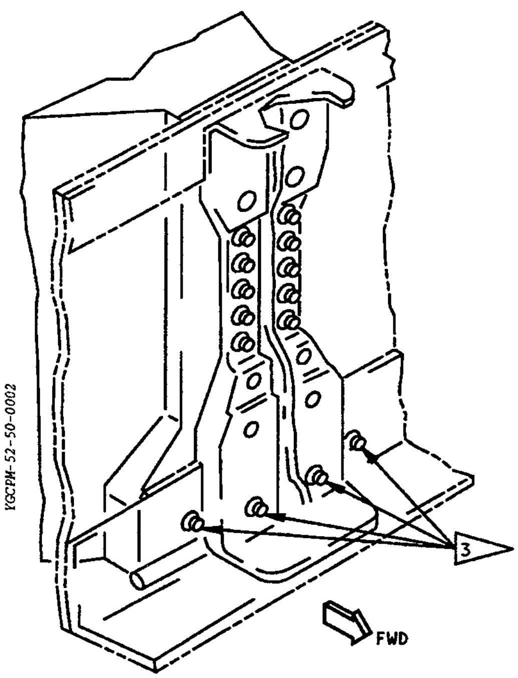
2 APPLY BMS 3-23 CORROSION INHIBITING COMPOUND TO ALL SURFACES. BE SURE TO INCLUDE CONNECTION POINTS

3 ON AIRPLANE LINE NUMBERS 163 AND ON, H-11 BOLTS ARE REPLACED WITH INCONEL 718 BOLTS

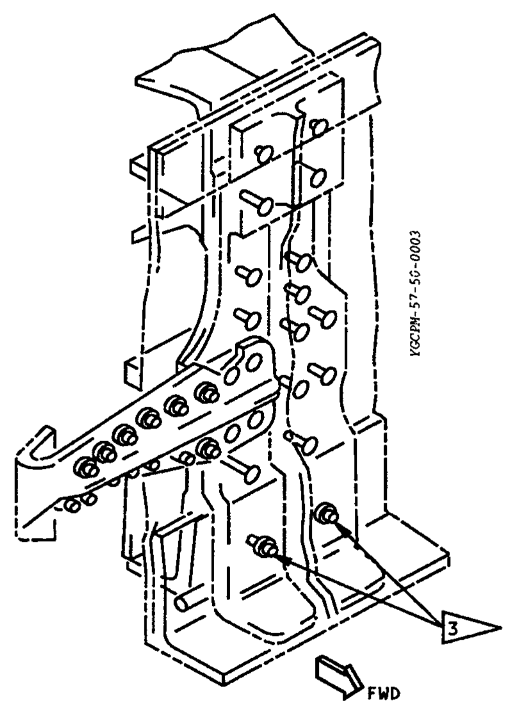
Main Landing Gear Trunnion Support Structure
Figure 1 (Sheet 1)



DETAIL I



DETAIL II



DETAIL III

Main Landing Gear Trunnion Support Structure
Figure 1 (Sheet 2)

WINGS

1. General

A. The wing trailing edge is made up of the skins, structure and devices of the wing trailing edge. Trailing edge devices consist of removable airfoils such as flaps, slats, ailerons and spoilers. The deployment of flight control surfaces exposes the rear spar and related structures to ground contaminants, thrust reverser soot, runway dirt and inclement weather, all of which contribute to corrosion.

B. Severe corrosion can occur around nutplates and rib chords of inboard aileron support ribs (Ref 57-50-02, Fig. 1).

C. Corrosion can occur under the cove panel of the inboard flaps.

D. Minor surface corrosion can occur on the right and left wing inboard trailing edge flap rear spar upper chord (Ref 57-50-02, Fig. 1, Detail III).

E. Corrosion can occur on the balance arms of the outboard ailerons where the balance weights are attached.

F. Surface corrosion can occur on the upper chord of the inboard-trailing-edge flap rear spar. This corrosion causes bulges in the cove panel lap joint at the rear spar. Corrosion can also occur on the lower chord. Corrosion can be caused by moisture which comes in when removable fasteners are not installed with sealant.

G. H-11 bolts can get stress-corrosion cracks. When you remove H-11 bolts, replace them with Inconel 718 bolts, which do not get stress-corrosion cracks. Refer to SL 51-8 for further information.

2. Corrosion Prevention

A. Following cleaning of suspected areas, a thorough inspection as described in Volume 1, 20-20-00 is effective to ensure that the protective finishes provided during manufacture remain intact.

B. For minor corrosion, to minimize the downtime of the airplane, the corrosion products should be cleaned off, followed by the application of a corrosion inhibiting compound into the affected area to retard the corrosion process (Ref Volume 1, 20-60-00). The finish system should be restored at the first opportunity consistent with the maintenance schedule.

C. Prevention Treatment

(1) At first opportunity consistent with scheduled maintenance activity, do corrosion prevention treatment on the skins, structure and devices of the wing trailing edge.

(2) Inboard Trailing Edge Main Flap -- Install removable fasteners used at sling bracket locations with sealant to prevent water intrusion and subsequent entrapment within the main flap (Ref 57-50-02, Fig. 1, Detail II).

(3) Do not apply corrosion inhibiting compounds on grease joints or sealed bearings. These compounds dissolve grease and other lubricants. They are penetrating compounds and can get around the seals and into the bearings.

D. Frequency of Application

(1) Regular inspection is required in areas that can get corrosion. Use the schedules in the Maintenance Planning Document. Operators must know of reported problems and areas.

(2) Regular application of BMS 3-23 compound is necessary in areas identified. Use the schedules in the Maintenance Planning Document.

E. Improved Corrosion Protection

(1) At line number 140, structural honeycomb components covered with Kevlar fabric were replaced with components covered with fiberglass fabric to reduce cracking and subsequent water intrusion.

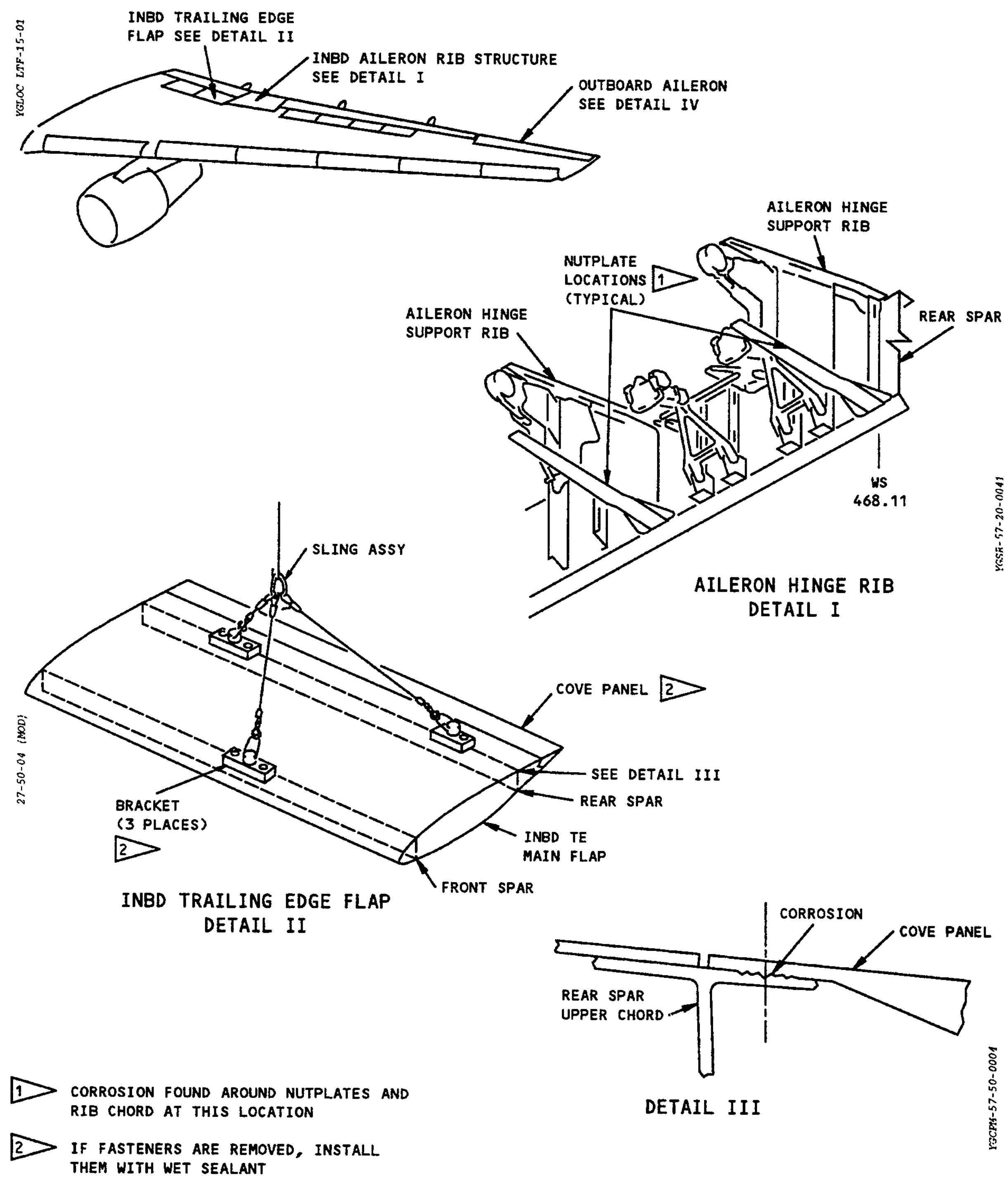
(2) At line number 257, PRR B11816 installed the inboard flap cove panel and fasteners are installed with BMS 5-95 sealant. This change can be incorporated on other airplanes per SL 51-9.

(3) At line number 359, per PRR B12014, the Number 3 balance arm has a larger fillet seal of sealant between the weight and the bracket. The weight and its fasteners are installed with wet BMS 5-95 sealant. The same sealant application is added to the Number 5 balance arm.

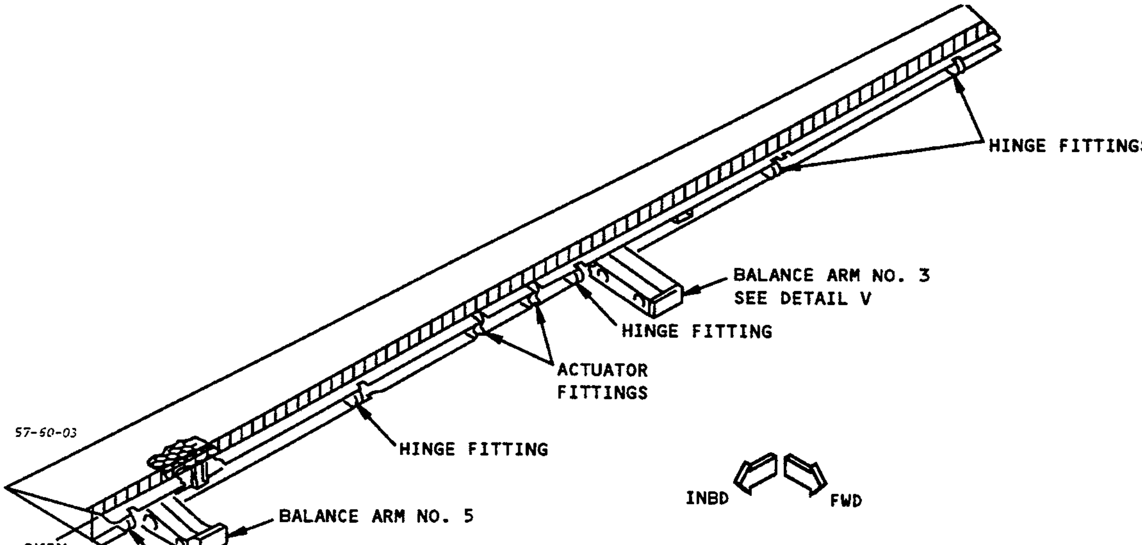
(4) Some airplanes line number 327 and on have more BMS 3-23 corrosion preventive compound on the fittings of the spoilers, ailerons, and elevators.

(5) At line number 480, PRR B12388-1 applied BMS 3-23 compound to all metallic structure aft of the rear spar, the ailerons, the flaps and the spoilers.

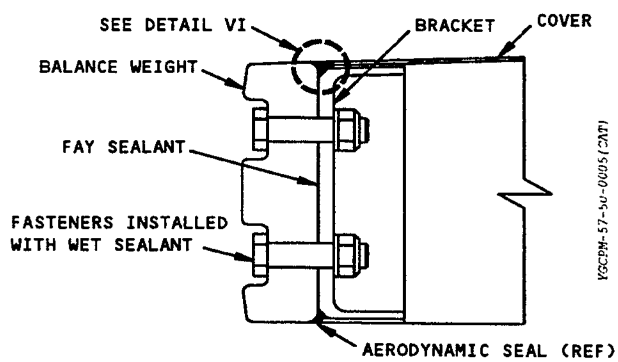
(6) At line number 677, RR B41019-023 applied BMS 3-27 (MASTINOX) to the inboard trailing edge flap internal splines, internal surface of collar fitting and torque tube nuts. This change from MIL-G-23827 grease will be applied to all model 767-300 airplanes.



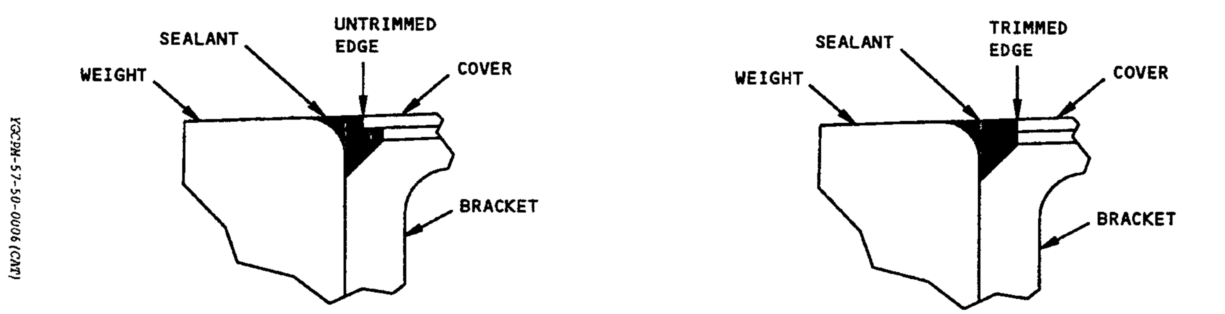
Wing Trailing Edge
Figure 1 (Sheet 1)



OUTBOARD AILERON
DETAIL IV



NO. 3 BALANCE ARM DETAILS
DETAIL V



CONFIGURATION BEFORE THE CHANGE (REF)

CONFIGURATION AFTER THE CHANGE

DETAIL VI

Wing Trailing Edge
Figure 1 (Sheet 2)

CHAPTER

71

POWER PLANT

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AREA	PROBLEM	INDEX PREVENTION VOLUME 2	TERMINATING ACTION (IF ANY)
Cowling	Corrosion in the engine inlet cowl Acoustic panels	71-10-01	

SPECIFIC CORROSION PROBLEMS - POWERPLANT
Figure 1

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1. General

A. The engine cowling components protect the engine and its components in flight and provide a smooth aerodynamic airstream around the engine. The cowling is composed of the inlet cowl, fan cowl panels, and core cowl panels. The inlet cowl provides a passage for entry of the airstream to the engine with minimum drag. The inlet cowl is an aluminum structure with honeycomb core acoustical lining, and Kevlar-graphite external panels. The fan cowl panels are a composite structure of Nomex honeycomb and kevlar-graphite panels with an aluminum frame. The core cowl panels are made from aluminum.

B. Corrosion has been reported found on the left engine inlet cowl cover aft bulkhead chord horizontal flange during C-check. Corroded area was along the top forward side of the humped area of the "tee" angle and extended for a distance of 6 inches with corroded area centered at NBL 0.

C. Corrosion can occur on the lower backskins of the acoustic panels on CF6-80C2 inlet cowls. This can be galvanic corrosion because of different metals in the panels. Corrosion can also be caused by moisture caught in the skins.

2. Corrosion Prevention

A. Following cleaning of suspected areas, a thorough inspection as described in Volume 1, 20-20-00 is effective to ensure that the protective finishes provided during manufacture remain intact.

B. For minor corrosion, to minimize the downtime of the airplane, the corrosion products should be cleaned off, followed by the application of a corrosion inhibiting compound into the affected area to retard the corrosion process (Ref Volume I, 20-60-00). The finish system should be restored at the first opportunity consistent with the maintenance schedule.

C. Do not apply corrosion inhibiting compounds near engines, cowling, or other areas of high temperature, or where firewall sealant is used. The high temperatures can cause deterioration of the compounds. Corrosion inhibiting compounds can cause damage to the sealant.

D. Corrosion inhibiting compounds can be used on fiberglass fairings and ducts if the temperature of the duct is not hotter than 220°F.

E. Corrosion inhibiting compounds can be used on fuel vapor barriers.

F. Frequency of Application

(1) Periodic inspection is required to areas identified as susceptible to corrosion and should be consistent to the schedules specified in the Maintenance Planning Document. Operators must be aware of reported problems and areas of occurrences.

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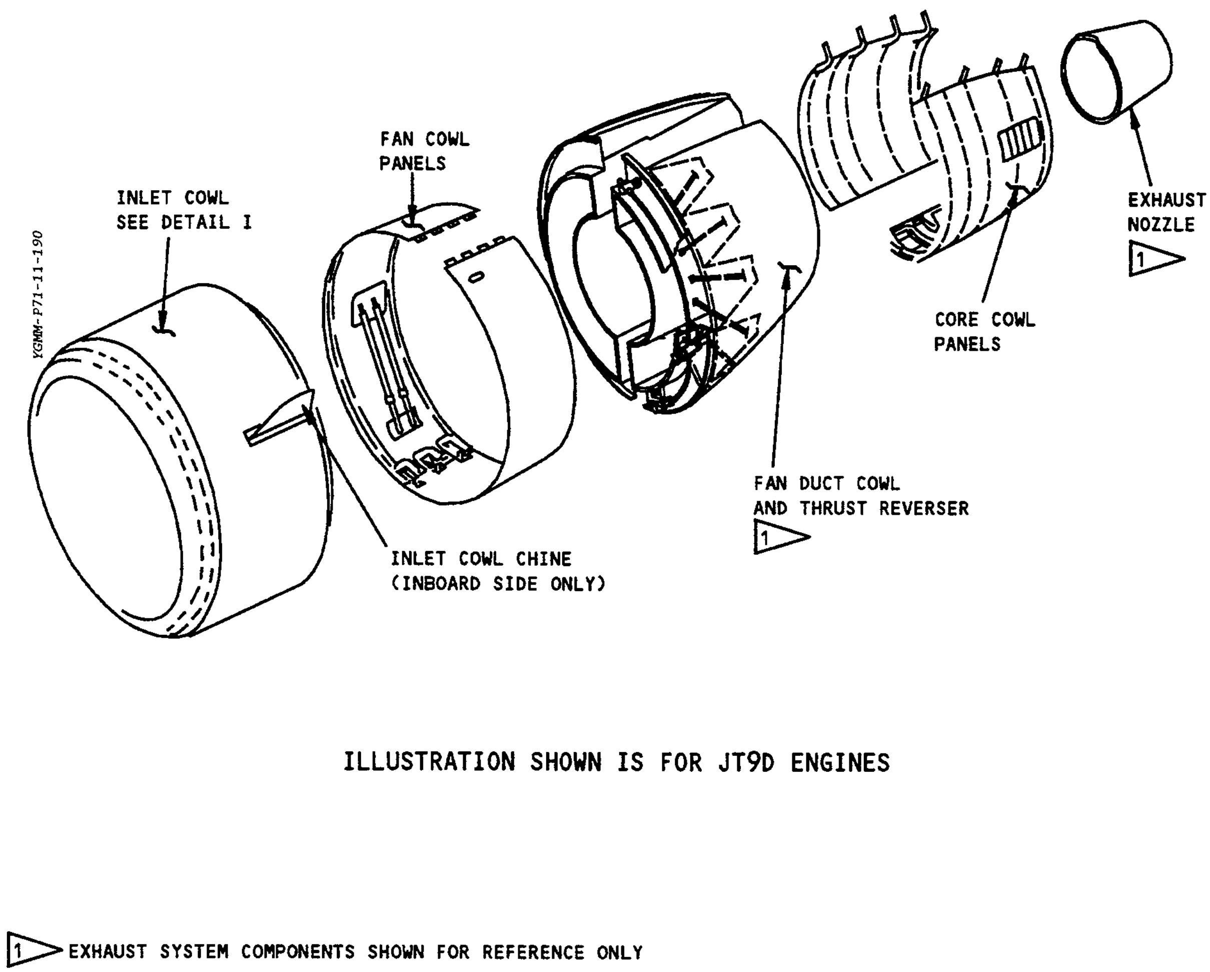
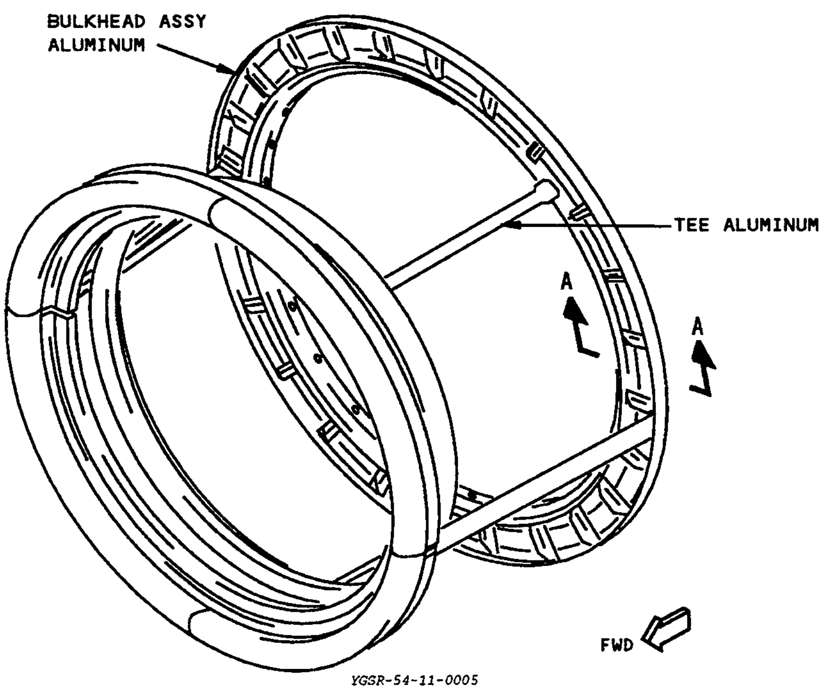
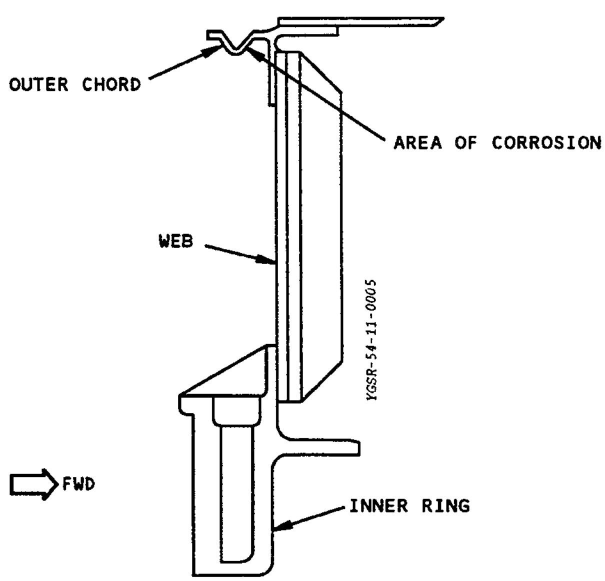


Engine Cowling
Figure 1 (Sheet 1)



DETAIL I



SECTION A-A

Engine Cowling
Figure 1 (Sheet 2)