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CHAPTER 57 – WINGS

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CHAPTER 57 – WINGS

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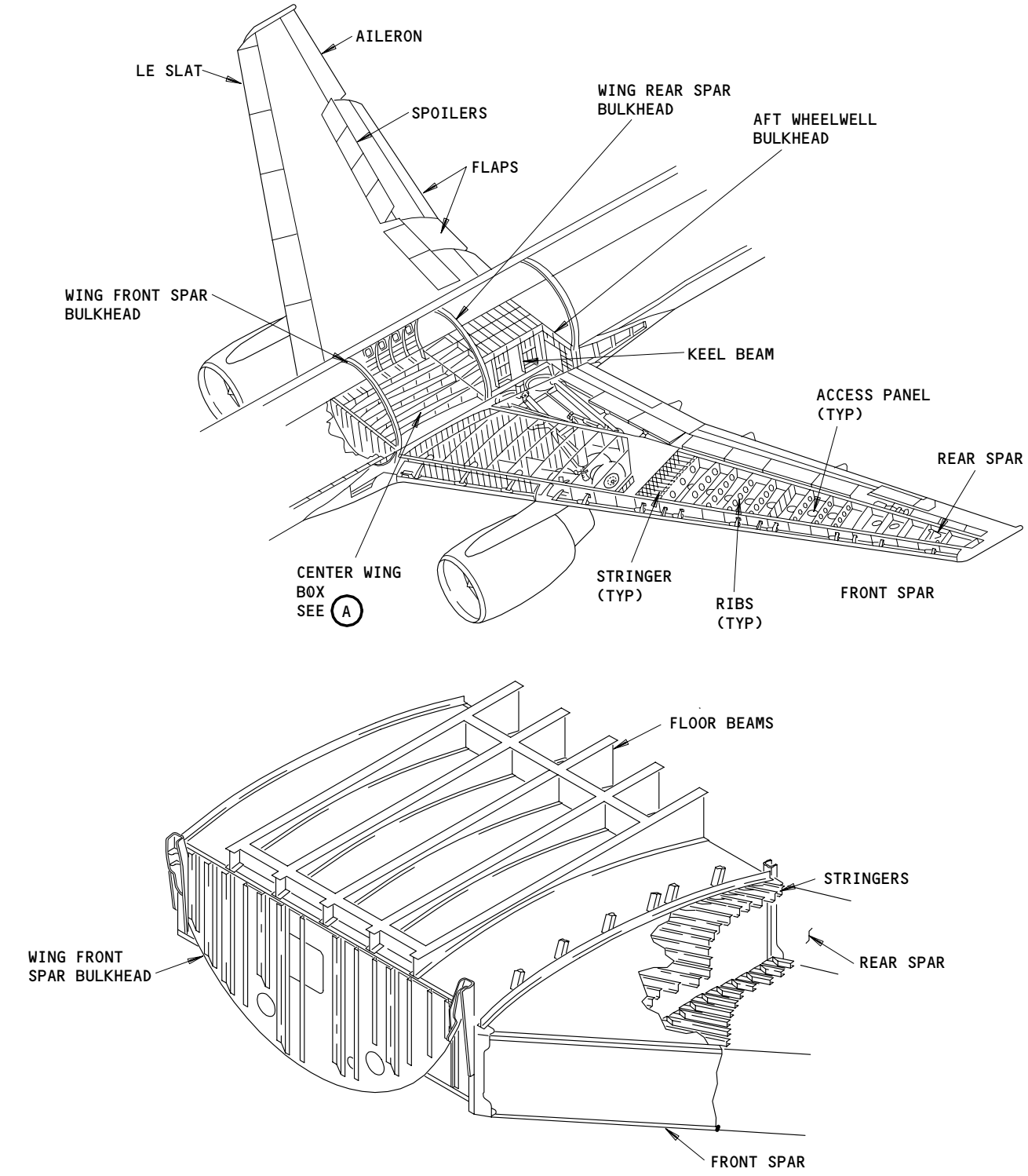
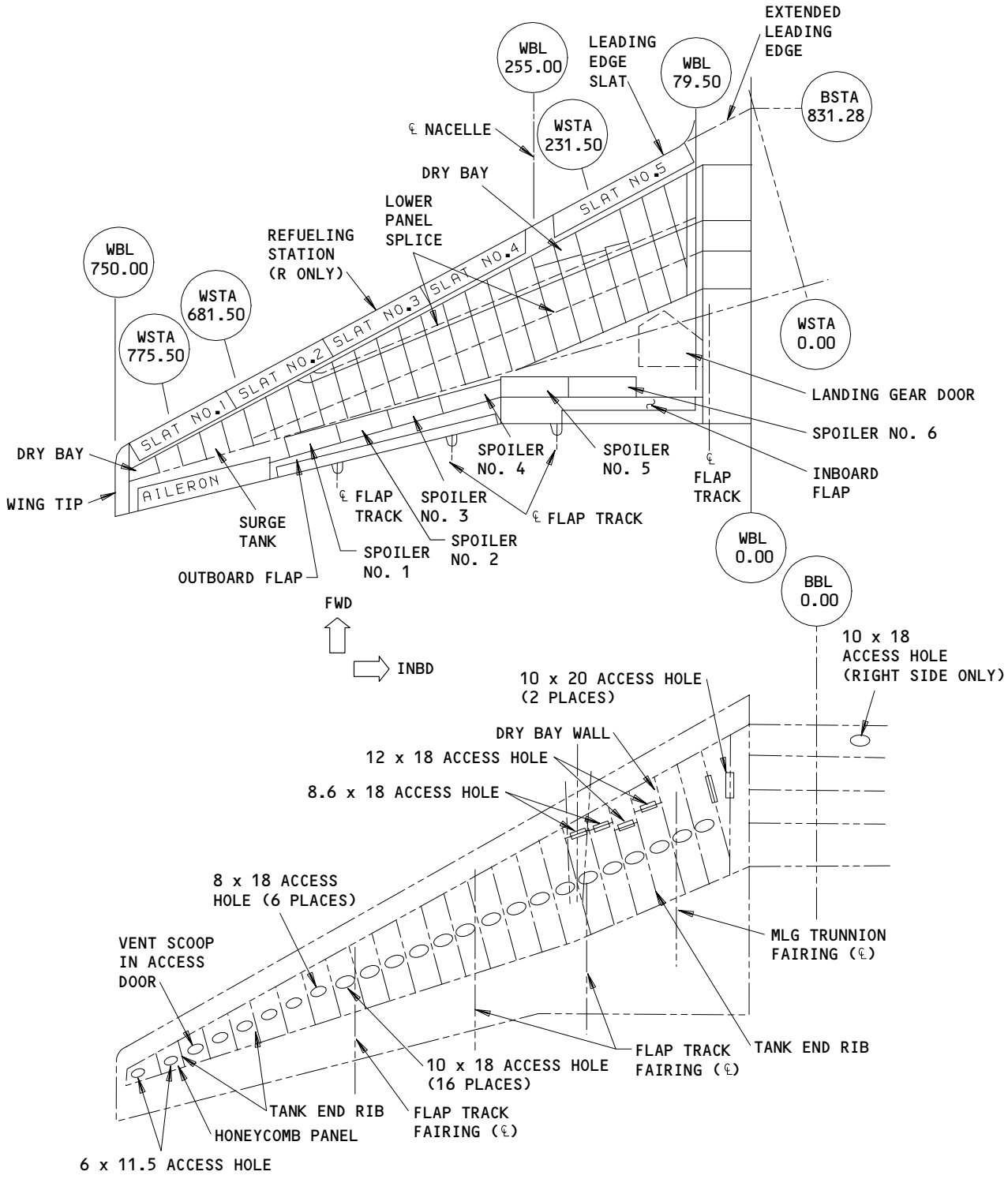
WINGS - DESCRIPTION AND OPERATION

1. General
   A. The wing surfaces develop aerodynamic forces for supporting the airplane in flight. The primary wing sections include a center section and left and right outboard sections. The center section is a structural box which supports the fuselage in flight, supports the outboard wing sections, and stores fuel. The outboard sections store fuel, support the engines, and contain spoilers, flaps, and ailerons.
2. Center Wing Box (Fig. 1)
   A. The center wing box is enclosed within the fuselage between stations 900 and 1040. The front spar is the forward face of the center wing box and the rear spar is the aft face. Three spanwise beams and reinforced stringers extend the full width. Skin panels cover the entire center wing box. Access to inside the center wing box is through an access panel located in the lower skin panel near the right, front corner. Floor beams are mounted on top of the center wing box.
3. Outer Wing
   A. Structure (Fig. 1)
      (1) The structural components of the outer wing develop the outer wing box. A front and rear spar extend from the center wing box to the wing tip. Spanwise stringers strengthen upper and lower skin panels. Ribs connect the front and rear spars to reinforce the outer wing box. Most of the ribs are sealed to enclose the outer wing box for storing fuel. The outer wing box supports the wing's flight control surfaces and engine.
      (2) The main landing gear beam extends from the rear spar to the fuselage. The rear spar and main landing gear beam are connected by the landing gear trunnion. The main landing gear pivots on the trunnion. Two doors on each each wing open to lower the landing gear.
   B. Flight Control Surfaces (Fig. 2)
      (1) Leading Edge Slats
         (a) There are five leading edge slats on each wing which are mounted on tracks. The slats are made of aluminum ribs and skin panels. In the retracted position, the slats seal against the fixed leading edge. Each slat has two main tracks and two auxiliary tracks. Main tracks drive the slats and auxiliary tracks guide the slats. The slats extend out and down to generate air loads for greater lift. For a detailed description of the slats, refer to 27-81-00, Leading Edge Slat System.



NOTE: RIGHT SIDE SPOILERS, AND FLAPS ARE SHOWN EXTENDED

Wing Structure
Figure 1



Wing Flight Control Surfaces and Access
Figure 2

(2) Spoilers
(a) There are six spoilers located in the aft section of each wing. Each spoiler is hinged to the rear spar at four places. A power control actuator (PCA) operates each spoiler. Spoilers are numbered left to right one through twelve. The spoilers are made of a graphite epoxy composition. For detailed description of spoiler operation, refer to 27-61-00, Spoiler Control Systems.
(3) Aileron
(a) There is one aileron on each outboard wing section. The aileron comprises part of the trailing edge. Five hinges on each aileron attach to support ribs connected to the rear spar. Ailerons provide lateral control of the airplane. Hydraulic power control actuators (PCA) operate the ailerons. There are two PCA's for each aileron. The PCA's on the left aileron are powered by the right or center hydraulic systems. The right aileron is powered by the left or center hydraulic systems. The center hydraulic system is a back-up system for both ailerons. Other control features include a position transmitter and PCA override mechanism. For detailed description of the aileron controls, refer to 27-11-00, Aileron and Aileron Trim Control Systems.
(b) Skin panels on the ailerons are made of graphite epoxy. The interior structure is composed of nomex honeycomb. Support ribs and hinges are aluminum.

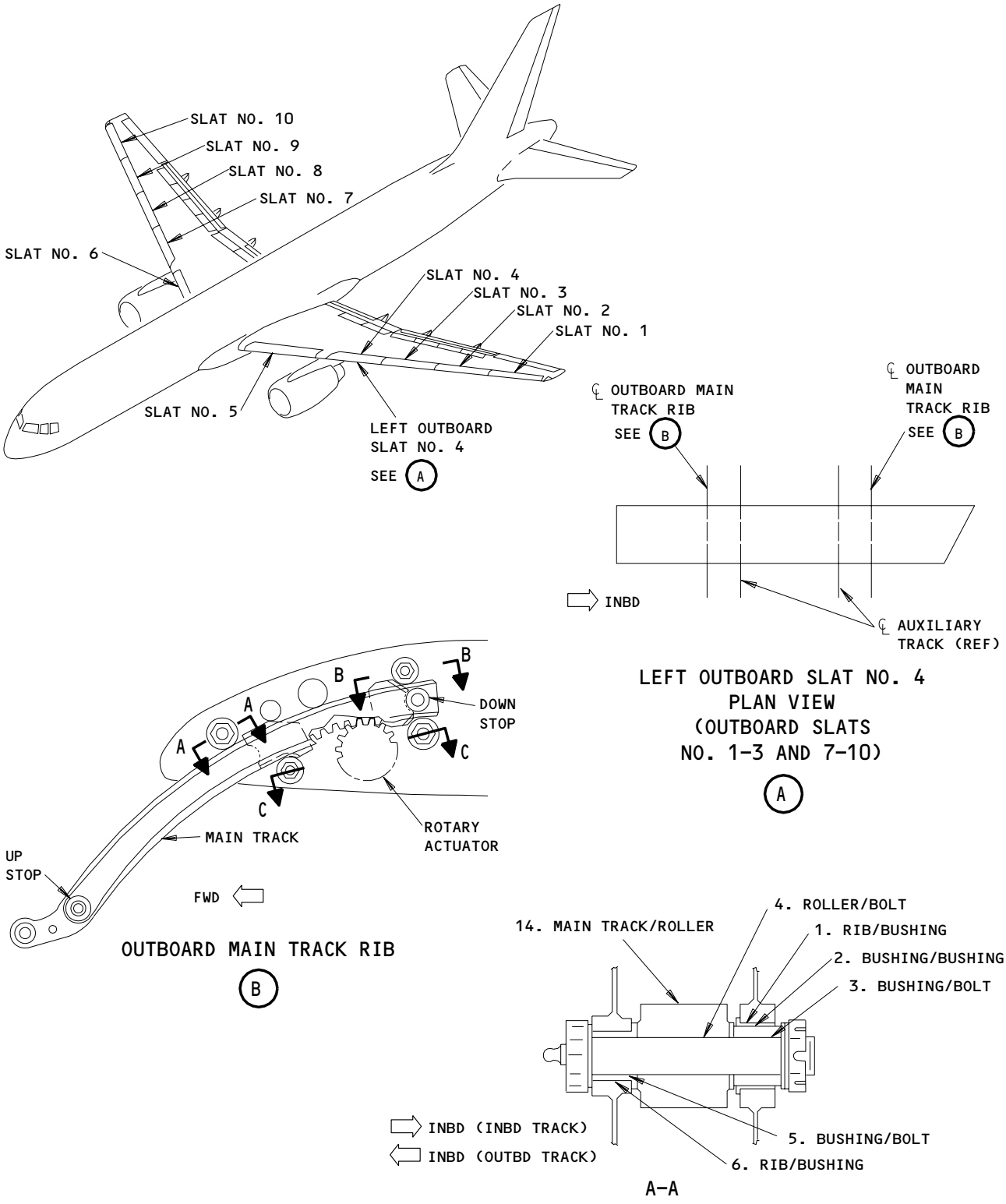
C. Wing Fairings (Fig. 2)
(1) Wing fairings include a main landing gear (MLG) trunnion fairing, three flap track fairings, and a strut fairing. All the fairings are on the lower wing surface. Fairings are aerodynamic surfaces considered as auxiliary structure.
(2) The MLG trunnion and flap track fairings are made of kevlar epoxy. The strut fairing fairs the engine to the wings and is made of a kevlar/graphite hybrid.

D. Wing Access (Fig. 2)
(1) The outer wing sections have an access panel between each rib in the wing box. The panels are on the lower wing surface and give access to the fuel tanks and dry bays. Interior access holes are between the dry bay and fuel tank. The access holes have removable cover plates. Removable access doors are on the fixed leading and trailing edges. The wing tip is removable to allow inspection of the outboard wing section and obtain access to navigational equipment.

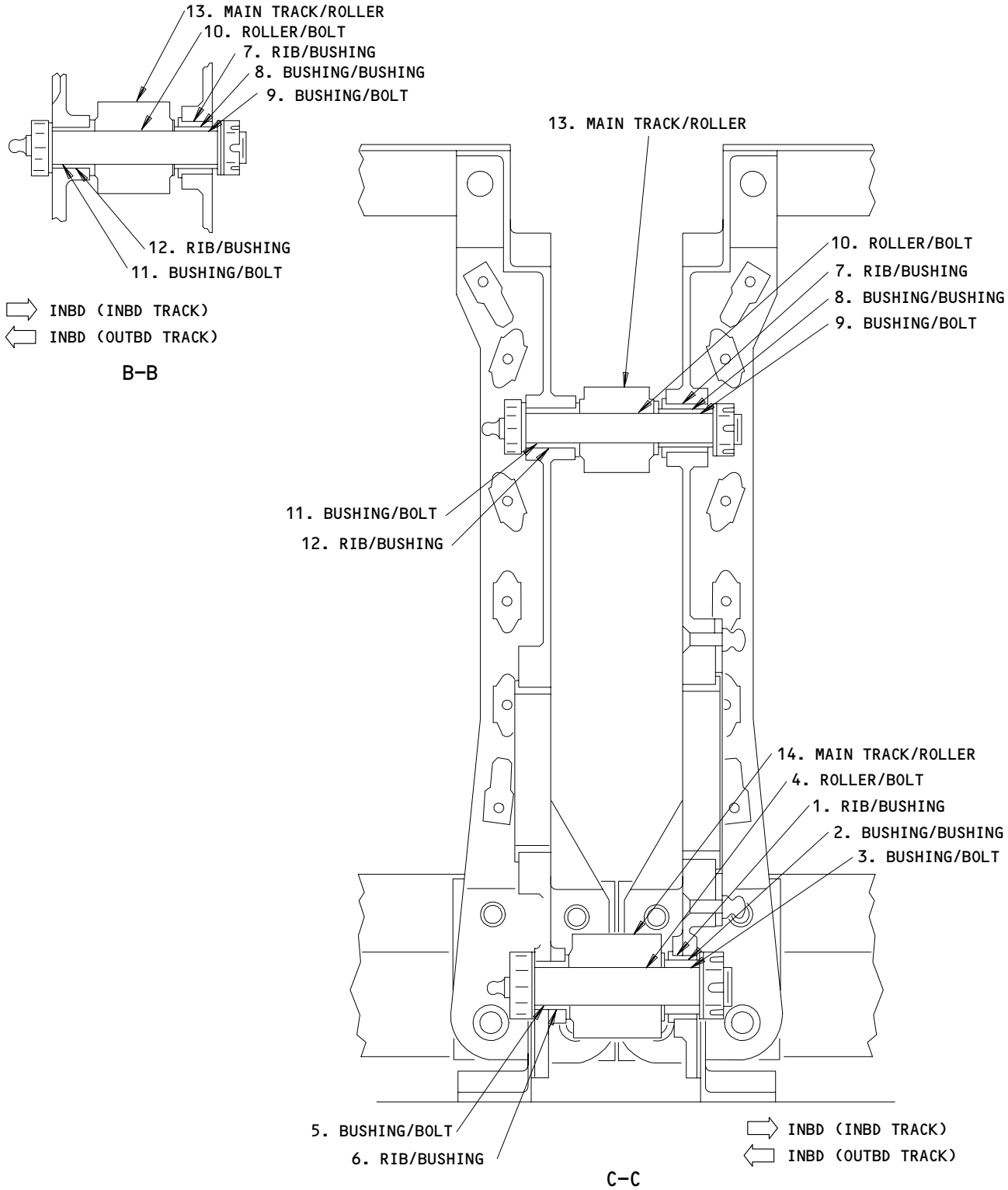
OUTBOARD LEADING EDGE SLAT MAIN TRACK SUPPORT RIB - INSPECTION/CHECK

TASK 57-22-51-206-001

1. Outboard Leading Edge Slat Main Track Support Rib Wear Limits (Fig. 601)
   A. General
      (1) This procedure only has illustrations and wear limit tables which show the data for wear limits. There are no procedures for access, removal or installation of the parts.



Outboard Leading Edge Slat Main Track Support Rib Wear Limits
Figure 601 (Sheet 1)



Outboard Leading Edge Slat Main Track Support Rib Wear Limits
Figure 601 (Sheet 2)

INDEX NO.	PART NAME	DIM.	DESIGN LIMITS		WEAR LIMITS		REPLACE WORN PART	REPAIR WORN PART	REPAIR INSTR
			DIAMETER		PER-MITTED WEAR DIM.	MAXIMUM DIA. CLEAR-ANCE			
			MIN	MAX					
1	RIB	ID	1.0000	1.0007	0.000	0.000		1 3	
	BUSHING	OD	1.0014	1.0021	---		2 4		5 6
2	BUSHING	ID	0.8745	0.8753	0.8790	0.0050			1
	BUSHING	OD	0.8735	0.8740	0.8703				
3	BUSHING	ID	0.6245	0.6250	0.6290	0.0050			1
	BOLT	OD	0.6230	0.6240	0.6200				
4	ROLLER	ID	0.6243	0.6250	0.6290	0.0050			5
	BOLT	OD	0.6230	0.6240	0.6200				
5	BUSHING	ID	0.6245	0.6252	0.6290	0.0050	7		
	BOLT	OD	0.6230	0.6240	0.6202				
6	RIB	ID	0.7500	0.7507	0.0000	0.0000		1 3	
	BUSHING	OD	0.7512	0.7519	----		4 7		5 6
7	RIB	ID	0.8125	0.8132	0.0000	0.000		1 3	
	BUSHING	OD	0.8137	0.8144	---		2 4		5 6
8	BUSHING	ID	0.6870	0.6877	0.6915	0.0050			1
	BUSHING	OD	0.6860	0.6865	0.6827				
9	BUSHING	ID	0.5000	0.5007	0.5045	0.0050			1
	BOLT	OD	0.4985	0.4995	0.4955				
10	ROLLER	ID	0.4993	0.5000	0.5045	0.0050			5
	BOLT	OD	0.4985	0.4995	0.4950				
11	BUSHING	ID	0.5000	0.5007	0.5045	0.0050	7		
	BOLT	OD	0.4985	0.4995	0.4957				
12	RIB	ID	0.6250	0.6256	0.000	0.0000		1 3	
	BUSHING	OD	0.6261	0.6267	---		4 7		5 6
13	MAIN TRACK	ID	---	---	---	0.0030			
	ROLLER	OD	1.3740	1.3760	1.3710				5
14	MAIN TRACK	ID	---	---	---	0.0030			
	ROLLER	OD	1.6240	1.6260	1.6210				5

Outboard Leading Edge Slat Main Track Wear Limits
Figure 601 (Sheet 3)

1. REAM THE HOLE TO REMOVE CORROSION. REAM THE ID TO THE DESIGN LIMITS. MAKE SURE THE HOLE STAYS CONCENTRIC.
2. REPLACE THE BUSHING WITH AN ALUM-NICKEL-BRONZE BUSHING.
3. THIS HOLE CANNOT BE LARGER THAN THE MAXIMUM DESIGN LIMIT PLUS 0.0600 INCH.
4. THE REPLACEMENT BUSHING IS TO HAVE A MIN AND MAX INTERFERENCE FIT AS SHOWN IN THE DESIGN LIMITS.
5. APPLY A LAYER OF BMS 10-11, TYPE 1, PRIMER TO THE HOLE AND BUSHING OD. ASSEMBLE WET.
6. FILLET SEAL THE BUSHING FLANGE OD WITH BMS 5-95 SEALANT.
7. REPLACE THE BUSHING WITH A 15-5PH CRES BUSHING.

Outboard Leading Edge Slat Main Track Wear Limits
Figure 601 (Sheet 4)

WING VORTEX GENERATOR - REMOVAL/INSTALLATION

1. General
   A. This procedure has three tasks. The first task is to remove the wing vortex generator. The second task is the prepare the mating surfaces. The third task is to install the wing vortex generator.

   TASK 57-25-01-004-001

2. Remove the Wing Vortex Generator (Fig. 401)
   A. Equipment
      (1) Stick - Hardwood (commercially available)
      (2) Attach Lanyard - Wing/Horizontal Stabilizer Safety Harness, B20001-5
   B. References
      (1) 20-10-27/201, Flight Controls Safety Harness Receptacle
      (2) IPC 57-25-01 Fig. 1
   C. Access
      (1) Location Zones
          500/600 Left Wing/Right Wing

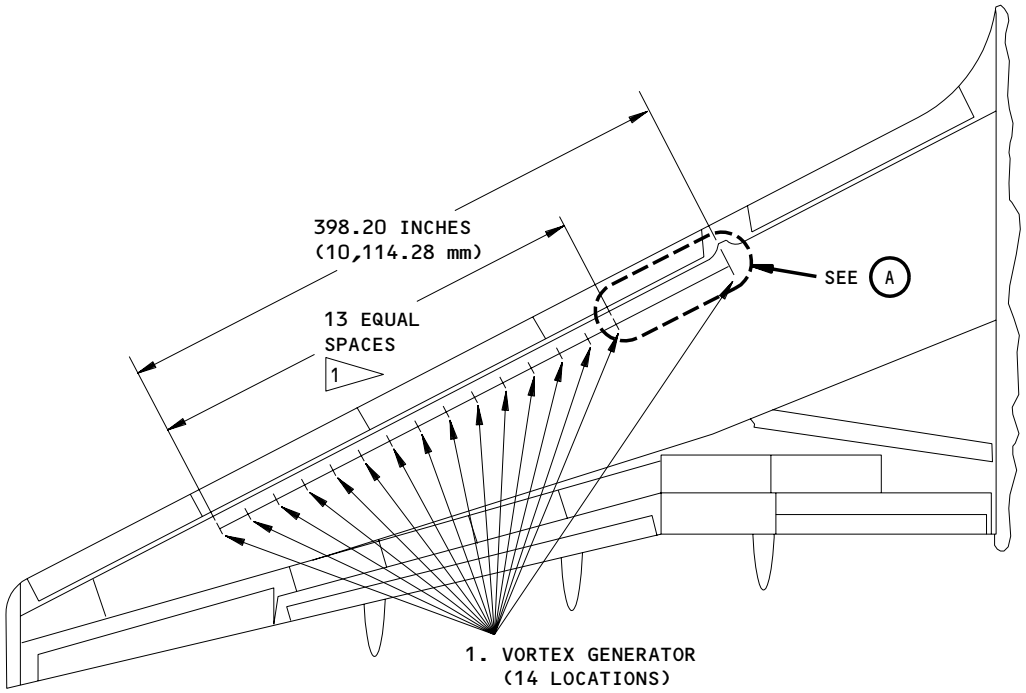
   D. Procedure - Remove the Wing Vortex Generator

      S 434-025
      (1) Attach the safety harness (Ref 20-10-27).

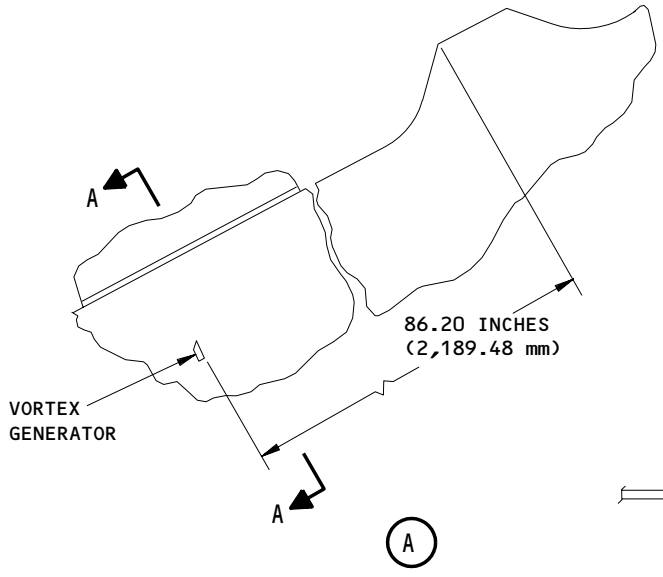
      S 024-003
      (2) Remove the vortex generator (1) with the hardwood stick.

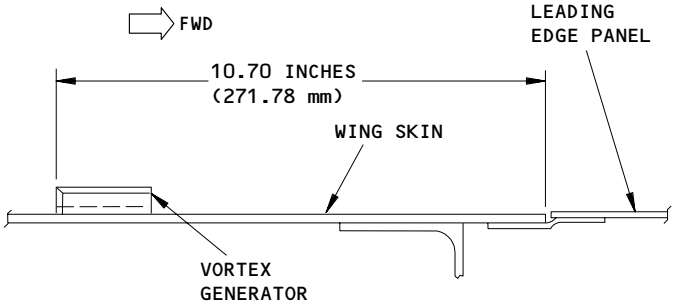
   TASK 57-25-01-104-004

3. Prepare the Mating Surfaces
   A. Equipment
      (1) Scraper, Nonmetallic (commercially available)
   B. Consumable Materials
      (1) Solvents
          (a) B00148 Methyl Ethyl Ketone (MEK), TT-M-261
          (b) B00154 Toluene (Toluol), TT-T-548 oz JAN-T-171, Grade A
          (c) Stripper Mixture - MEK/Toluene (1:1 by Volume)
      (2) G00034 Cheesecloth, lint free
   C. References
      (1) 51-21-01/701, Paint Stripping



LEFT WING (TOP VIEW SHOWN)
(RIGHT WING 15 OPPOSITE)





1 24.00 ±0.10 INCHES (609.60 ±2.54 mm)
BETWEEN EACH VORTEX GENERATOR

A-A

Wing Vortex Generator
Figure 401

D. Access
(1) Location Zones
500/600 Left Wing/Right Wing

E. Procedure - Prepare the mating surfaces

S 114-028

WARNING: DO NOT GET SOLVENTS IN YOUR MOUTH, OR YOUR EYES, OR ON YOUR SKIN. DO NOT BREATHE THE FUMES FROM SOLVENTS. SOLVENTS ARE HAZARDOUS MATERIALS. REFER TO PRODUCT MATERIAL SAFETY DATA SHEETS (MSDS) AND LOCAL REQUIREMENTS FOR PROPER HANDLING PROCEDURES.

(1) Remove the remaining adhesive with the nonmetallic scraper and solvent.

S 154-006
(2) Remove the topcoat paint from the surface of the bond area, with a stripper mixture (Ref 51-21-01).

NOTE: Remove the minimum quantity of paint necessary to install the vortex generator.

S 114-007
(3) Clean the mating surfaces with cheesecloth that is moist with toluene.

S 164-008
(4) Remove the solvent with a clean cheesecloth before the solvent becomes fully dry.

TASK 57-25-01-404-009
4. Install the Wing Vortex Generator (Fig. 401)

NOTE: Apply the adhesive immediately after you prepare the mating surfaces. Use clean white gloves and do not touch the clean surfaces.

A. Equipment
(1) Gloves, white knit (commercially available)

(2) Attach Lanyard - Wing/Horizontal Stabilizer Safety Harness, B20001-5

B. Consumable Materials

(1) Adhesives

(a) A00247 BMS 5-95 Class B-1/2

(b) A00251 BMS 5-26 Type II, Class B-2

(c) A00708 Sealant - Fast Curing, 2-part - PR-1828

(2) C50016 Coating - Flexible Corrosion Inhibiting Topcoat

C. Parts

AMM			AIPC		
FIG	ITEM	NOMENCLATURE	SUBJECT	FIG	ITEM
401	1	Vortex Generator	57-25-01	01	1 5 10 15

D. References

(1) 20-10-27/201, Flight Controls Safety Harness Receptacle

E. Access

(1) Location Zones

500/600 Left Wing/Right Wing

F. Procedure - Install the wing vortex generator

S 494-017

WARNING: ATTACH THE SAFETY HARNESS WHEN YOU ARE ON TOP OF THE WING. INJURY CAN OCCUR IF YOU DO NOT USE A SAFETY HARNESS.

(1) Attach the safety harness (Ref 20-10-27).

S 424-011

(2) Install the vortex generator (1) as shown in Fig. 401.

NOTE: The edge of the vortex generator that has a slope must point forward.

S 424-012

(3) Bond the vortex generator to the wing surface. Apply the bonding adhesive to all of the mating surfaces. Use the adhesive to make a 0.06 inch by 0.06 inch fillet seal around the edge of the generator.
   (a) Fully mix the base compound with its activator as specified in the manufacturer's instructions.
   (b) Do not make the adhesive thin.
   (c) Apply a thin constant layer of adhesive to each mating surface.
   (d) Assemble immediately.
   (e) Apply sufficient pressure to make sure the mating surfaces touch fully.
   (f) Dry at ambient temperature below 100°F.

       NOTE: The adhesive is not fully dry until one week or longer.

   (g) The necessary dry time before you can touch the vortex generator:

1)	BMS 5-26, Class B-2	48 hours
2)	BMS 5-95, Class B-1/2	24 hours
3)	PR-1828, Class B-1/4	4 hours @ 50 degrees F 10 hours @ 35 degrees F
4)	PR-1828, Class B-1/2	4.5 hours @ 50 degrees F 10.5 hours @ 35 degrees F

   (h) Apply heat to decrease the dry time.

       NOTE: Temperatures are not to be more than 140° F. The dry time is decreased by 50 percent as the teperature increases in 20b F increments. Temperatures below 75° F will increase the dry time.

S 374-013

(4) Apply topcoat paint to the wing surface if it is necessary.

S 094-014

(5) Remove the safety harness if it is not necessary (Ref 20-10-27).

WINGTIP - REMOVAL/INSTALLATION

1. General
   A. This procedure has two tasks. The first task is to remove the wingtip. The second task is to install the wingtip.
   B. The left and right wingtips are equivalent. Each wingtip has three parts that you can remove.

TASK 57-31-01-004-001

2. Remove the Wingtip (Fig. 401)
   A. Equipment
      (1) Attach Lanyard - Wing/Horizontal Stabilizer Safety Harness, B20001-5
   B. References
      (1) 20-10-27/201, Flight Controls Safety Harness Receptacle
      (2) 29-11-00/201, Pressurize/Depressurize Main Hydraulic System
      (3) 33-43-01/201, Wing Forward Position Lights
      (4) 33-43-02/201, Wing Aft Position Lights
      (5) 33-44-01/201, Wing Anti-Collision Lights
      (6) IPC 57-31-01 Fig. 1
   C. Access
      (1) Location Zones
          500/600 Left Wing/Right Wing

   D. Procedure - Remove the Wingtip

      S 424-022

      WARNING: ATTACH THE SAFETY HARNESS WHEN YOU WORK ON THE TOP OF THE WING. INJURY CAN OCCUR IF YOU DO NOT USE THE SAFETY HARNESS.

      (1) Attach the safety harness (Ref 20-10-27).

      S 214-021

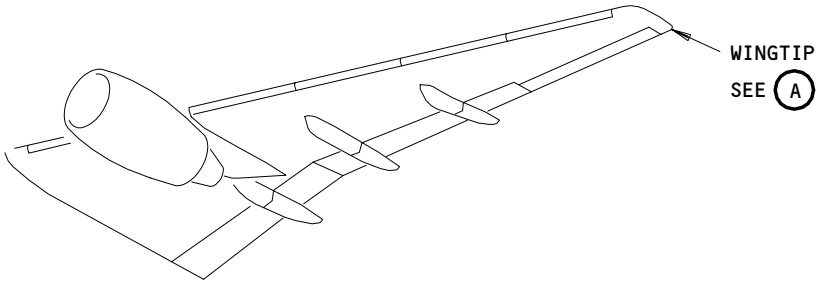
      WARNING: MAKE SURE THE LEFT, THE CENTER, AND THE RIGHT HYDRAULIC SYSTEMS ARE NOT ENERGIZED. INJURY TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR IF THE AILERON MOVES ACCIDENTALLY.

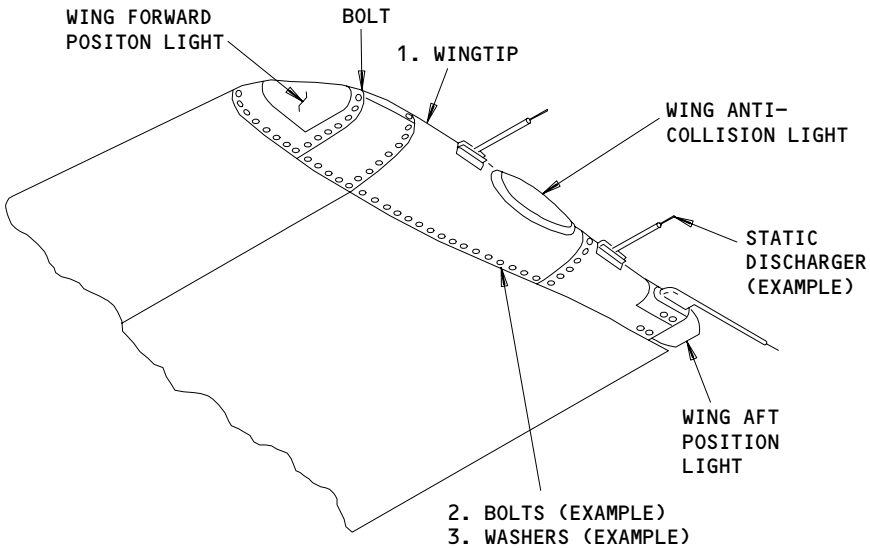
      (2) Make sure the left, the center, and the right hydraulic systems are not energized (Ref 29-11-00).

      S 034-004
      (3) Remove the wing forward position light (Ref 33-43-01).

      S 034-005
      (4) Remove the wing aft position light (Ref 33-43-02).

      S 034-006
      (5) Remove the wing anti-collision light (Ref 33-44-01).





WINGTIP
A

Wingtip
Figure 401

S 034-007
(6) Remove the wingtip attach bolts (2) and washers (3).

S 034-008
(7) Remove the wingtip (1).

TASK 57-31-01-404-009

3. Install the Wingtip (Fig. 401)
   A. Equipment
      (1) Attach Lanyard - Wing/Horizontal Stabilizer Safety Harness, B20001-5
   B. Consumable Materials
      (1) A00247 Sealant, chromate type, BMS 5-95 Class B
      (2) C00308 Corrosion Preventative Compound - MIL-C-11796, Class 1
   C. Parts

AMM			AIPC		
FIG	ITEM	NOMENCLATURE	SUBJECT	FIG	ITEM
401	1	Wing Tip	57-31-01	01	1
	2	Bolts			25 55
	3	Washers			30

   D. References
      (1) 20-10-27/201, Flight Controls Safety Harness Receptacle
      (2) 29-11-00/201, Pressurize/Depressurize Main Hydraulic System
      (3) 33-43-01/201, Wing Forward Position Lights
      (4) 33-43-02/201, Wing Aft Position Lights.
      (5) 33-44-01/201, Wing Anti-Collision Lights
      (6) 51-31-01/201, Seals and Sealing
   E. Access
      (1) Location Zones
          500/600 Left Wing / Right Wing

   F. Procedure - Install the Wingtip

S 424-023

WARNING: ATTACH THE SAFETY HARNESS WHEN YOU WORK ON THE TOP OF THE WING. INJURY CAN OCCUR IF YOU DO NOT USE THE SAFETY HARNESS.

(1) Attach the safety harness (Ref 20-10-27).

S 424-011
(2) Put the wingtip (1) into position.

S 624-012
(3) Apply the corrosion preventative compound in the bolt holes.

S 434-013
(4) Install the washers (3) and the bolts (2).

S 324-014
(5) Make the bolts smooth to 0.000 inch above and 0.002 inch below the skin surface.

S 394-015
(6) Apply sealant between the wingtip sections. Apply the sealant between the wingtip and the wing (Ref 51-31-01).

S 214-016
(7) Make sure the wingtip sections and the sealant make a continuous surface.

S 434-017
(8) Install the wing anti-collision light (Ref 33-44-01).

S 434-018
(9) Install the wing aft position light (Ref 33-43-02).

S 434-019
(10) Install the wing forward position light (Ref 33-43-01).

S 094-020
(11) Remove the safety harness if it is not needed (Ref 20-10-27).

WING LEADING EDGE LOWER PANEL - REMOVAL/INSTALLATION

1. General
   A. This procedure has two tasks:
      (1) The first task is instructions to remove the outboard lower panel on the wing leading edge.
      (2) The second task is instructions to install the outboard lower panel on the wing leading edge.

   TASK 57-41-01-004-001

2. Remove the Panels (Fig. 401)
   A. References
      (1) AIPC 57-41-51 Fig. 15
   B. Equipment
      (1) Access Panel Leverage Adapter, B20004-21
   C. Access
      (1) Location Zones
          500/600 Left Wing/Right Wing

   D. Procedure - Remove the Panels

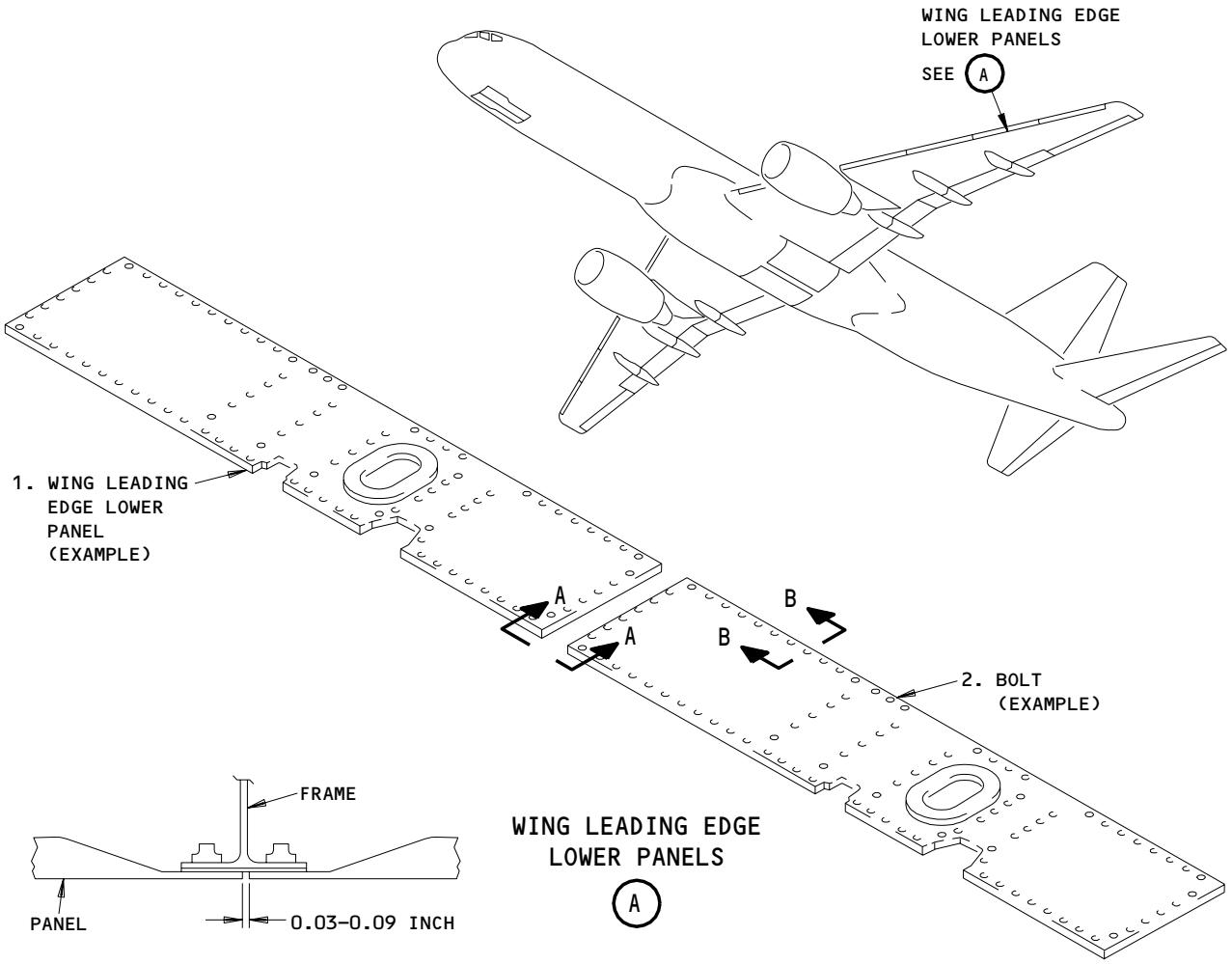
      S 024-002
      (1) Hold the panel while you remove the attachment bolts (2).

      CAUTION: WHEN REMOVING PANEL FASTENERS, MAKE SURE THAT THE DRIVER BIT IS IN LINE WITH A FASTENER. THIS WILL PREVENT DRIVER BIT WOBBLE WHICH CAN C AUSE DAMAGE TO THE FASTENER RECESSES AND THREADS.

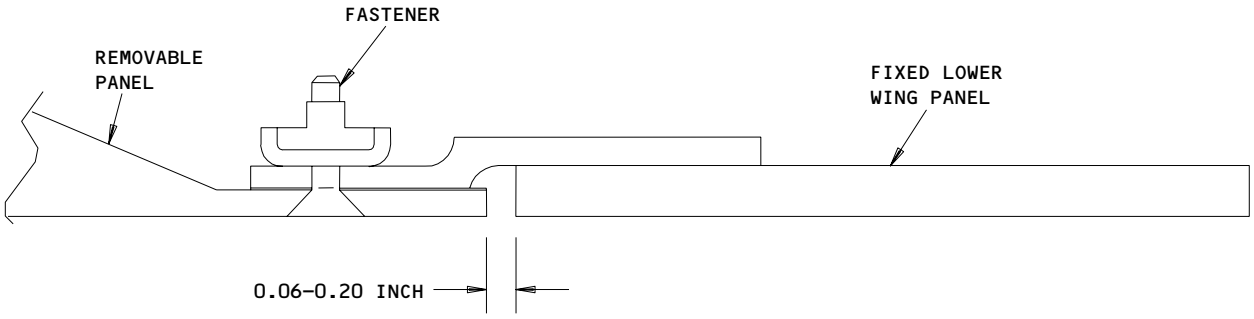
      (a) The following can help remove the bolts from the leading edge panels:
          1) A leverage adapter, B20004-21,
          2) A removal anti cam-out ribbed (ACR) bit,

          NOTE: The bit should have a hardness of 56-58 RC.

          NOTE: A combination removal/installation ACR bit is not recommended.



PANEL INSTALLATION
(EXAMPLE)
A-A



PANEL INSTALLATION
(EXAMPLE)
B-B

Wing Leading Edge Lower Panel
Figure 401

CAUTION: ONLY APPLY FASTENER REMOVAL COMPOUND TO THE BIT IF NEEDED. CLEAN THE BIT AFTER EACH USE. DO NOT APPLY FASTENER REMOVAL COMPOUND TO THE FASTENER RECESSES, HOLES, OR THREADS. THIS CAN CAUSE DAMAGE TO THE FASTENERS.

3) Apply a fastener removal compound on the driver bit if a fastener is difficult to remove.

S 024-009

(2) Remove the panels (1).

S 214-015

WARNING: DO NOT LET OBJECTS GET IN THE HOUSING ASSEMBLY OF THE SLAT TRACK. THIS WILL HELP PREVENT A PUNCTURE OF THE HOUSING ASSEMBLY THAT COULD CAUSE A FUEL LEAK. THE FUEL LEAK COULD CAUSE A FIRE AND POSSIBLE DEATH OR INJURY TO PERSONNEL.

(3) Remove all unwanted objects from the slat track housing assembly.

TASK 57-41-01-404-003

3. Install the Panels (Fig. 401)

A. References
(1) AMM 20-11-00/201 Standard Torques

B. Equipment
(1) Access Panel Leverage Adapter, B20004-21

C. Consumable Materials
(1) C00308 Compound - Corrosion Preventive MIL-C-11796
(2) A00247 Sealant - Chromate Type BMS 5-95

D. Parts

AMM			AIPC		
FIG	ITEM	NOMENCLATURE	SUBJECT	FIG	ITEM
401	1	Panel Assembly (Panel)(LH) Panel Assembly (Panel)(RH)	57-41-51	15	10 15
401	1	Panel Assembly (Panel)(LH) Panel Assembly (Panel)(RH)			60 65
401	1	Panel Assembly (Panel)(LH) Panel Assembly (Panel)(RH)			110 155
401	1	Panel Assembly (Panel)(LH) Panel Assembly (Panel)(RH)			210 325
401	1	Panel Assembly (Panel)(LH) Panel Assembly (Panel)(RH)			215 220
401	1	Panel Assembly (Panel)(LH) Panel Assembly (Panel)(RH)			225 230
401	1	Panel Assembly (Panel)(LH) Panel Assembly (Panel)(RH)			275 280
401	1	Panel Assembly (Panel)(LH) Panel Assembly (Panel)(RH)			370 375
401	1	Panel Assembly (Panel)(LH) Panel Assembly (Panel)(RH)			425 430

AMM			AIPC		
FIG	ITEM	NOMENCLATURE	SUBJECT	FIG	ITEM
401	2	Bolts	57-41-51	15	20 22 23 70 72 73 115 117 118 160 162 163 235 237 238 330 332 333 285 287 288 380 385 387 388 435 437 438

E. Access
(1) Location Zones
500/600 Left Wing/Right Wing

F. Procedure - Install the Panels

S 214-016

WARNING: DO NOT LET OBJECTS GET IN THE HOUSING ASSEMBLY OF THE SLAT TRACK. THIS WILL HELP PREVENT A PUNCTURE OF THE HOUSING ASSEMBLY THAT COULD CAUSE A FUEL LEAK. THE FUEL LEAK COULD CAUSE A FIRE AND POSSIBLE DEATH OR INJURY TO PERSONNEL.

(1) Remove all loose objects from the housing assembly.

S 394-004
(2) Apply sealant to the aft edge of the panels.

S 434-005
(3) Hold the panels (1) in position.

S 394-006
(4) Apply corrosion preventive compound to the fastener holes.

S 434-007
(5) Install the bolts (2) immediately.

NOTE: You can install as much as 10 percent of the fasteners with Tinnerman (dimpled countersunk) washers to repair the loose fastener holes.

CAUTION: WHEN INSTALLING FASTENERS, MAKE SURE THAT THE DRIVER BIT IS IN LINE WITH A FASTENER. THIS WILL PREVENT DRIVER BIT WOBBLE WHICH CAN CAUSE DAMAGE TO THE FASTENER RECESSES AND THREADS.

(a) The following can help install the bolts:

NOTE: These suggestions are to make sure that the bolts can be removed freely later and are not damaged when you install them.

1) Use an access panel leverage adapter, B20004-21 to install the bolts.
2) Make sure that the fasteners have correct grip length, undamaged threads, and undamaged recesses.

NOTE: If any fasteners need to be replaced, it is recommended that K-coated titanium bolts with cadmium plated Cres nut-plates be installed where applicable.

3) Remove any excess paint or debris on fastener recesses.
4) Lubricate the threads of the fastener with corrosion preventive compound.

5) Install bolts with a fastener tool and an installation anti cam-out (ACR) driver bit.

NOTE: Use decreased lubricated fastener torques, (AMM 20-11-00/201).

NOTE: A combination removal/installation ACR bit is not recommended. The bit should have a hardness of 56-58 RC.

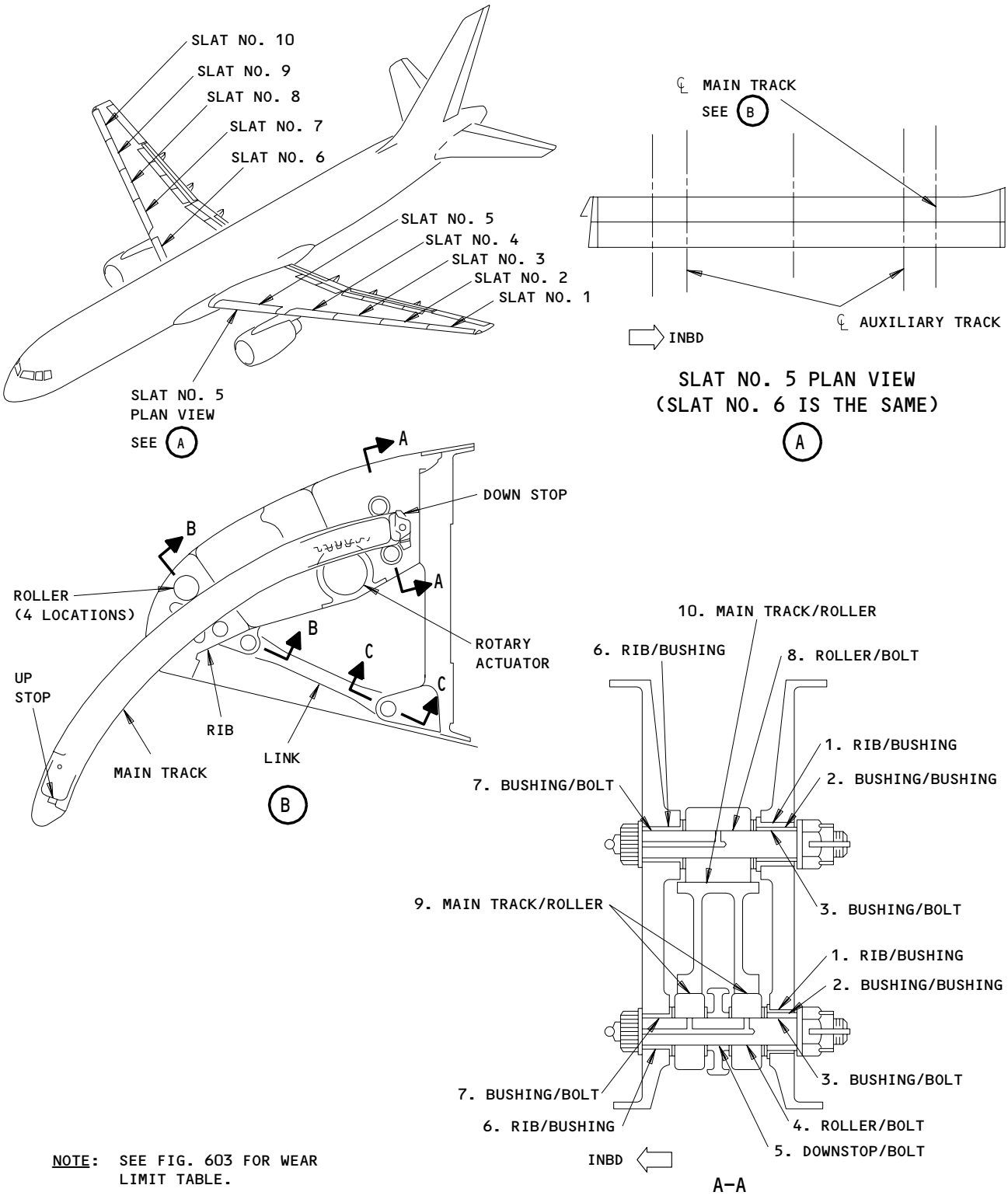
S 224-008

(6) Make sure the clearance between the panels is correct (Fig. 401).

INBOARD LEADING EDGE SLAT MAIN TRACK SUPPORT RIB - INSPECTION/CHECK

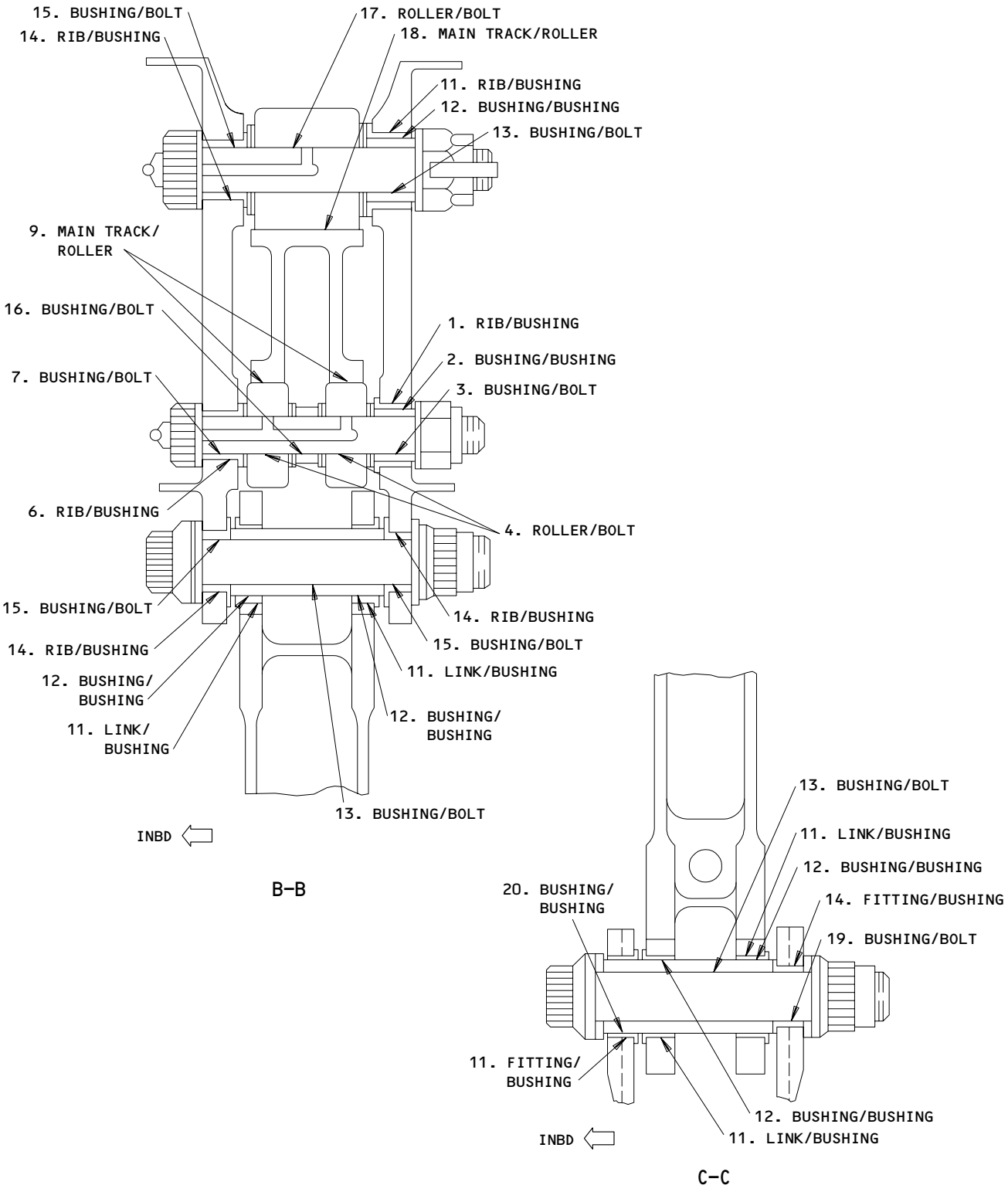
TASK 57-41-51-206-001

1. Inboard Leading Edge Slat Main Track Support Rib Wear Limits
   A. General
      (1) This data has illustrations and wear limit charts. There is no procedure given to get access to the component, to remove it, or to replace it after the inspection for wear.

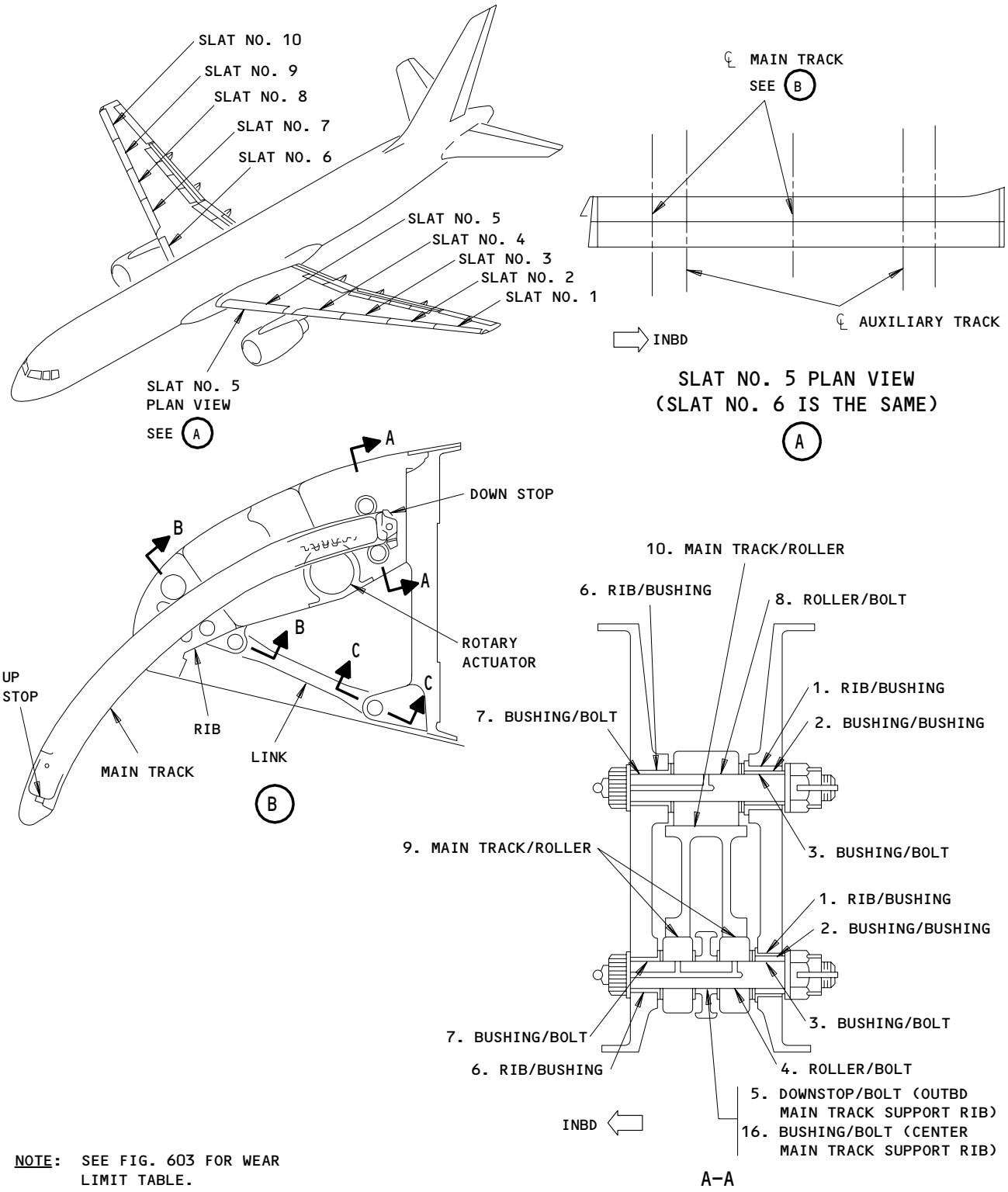


NOTE: SEE FIG. 603 FOR WEAR LIMIT TABLE.

Inboard Leading Edge Slat Inboard Main Track Support Rib Wear Limits
Figure 601 (Sheet 1)

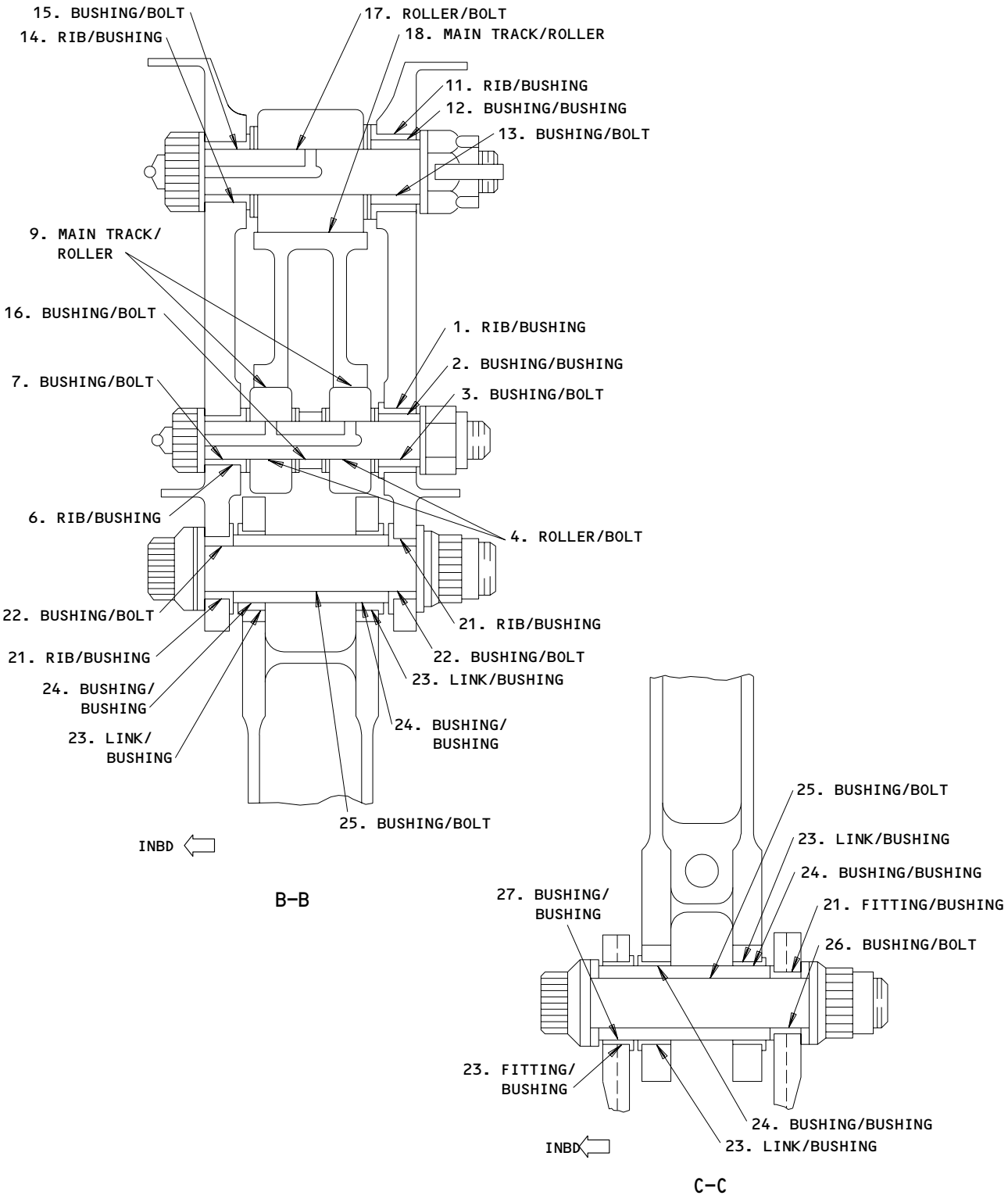


Inboard Leading Edge Slat Inboard Main Track Support Rib Wear Limits
Figure 601 (Sheet 2)



NOTE: SEE FIG. 603 FOR WEAR LIMIT TABLE.

Inboard Leading Edge Slat Center and Outboard Main Track Support Rib Wear Limits
Figure 602 (Sheet 1)



Inboard Leading Edge Slat Center and Outboard Main Track Support Rib Wear Limits
Figure 602 (Sheet 2)

INDEX NO.	PART NAME	DIM.	DESIGN LIMITS DIAMETER MIN	DESIGN LIMITS DIAMETER MAX	WEAR LIMITS MAX WEAR DIM.	WEAR LIMITS MAX DIAM CLEARANCE	REPLACE WORN PART	REPAIR WORN PART	REPAIR INSTR.
1	RIB	ID	0.8125	0.8132	0.0000	0.0000		1	
	BUSHING	OD	0.8137	0.8144	---		2 3		5 7
2	BUSHING	ID	0.6870	0.6877	0.6915	0.0050	2 4		6
	BUSHING	OD	0.6860	0.6865	0.6827		2		
3	BUSHING	ID	0.5000	0.5005	0.5045	0.0050	8 4		
	BOLT	OD	0.4985	0.4995	0.4955		9		
4	ROLLER	ID	0.4993	0.5000	0.5045	0.0050	10		12
	BOLT	OD	0.4985	0.4995	0.4950		9		
5	DOWNSTOP	ID	0.4995	0.5005	0.5045	0.0050	11		
	BOLT	OD	0.4985	0.4995	0.4955		9		
6	RIB	ID	0.6250	0.6256	0.0000	0.0000		1	
	BUSHING	OD	0.6261	0.6267	---		8 3		5 7
7	BUSHING	ID	0.5000	0.5007	0.5045	0.0050	8 4		6
	BOLT	OD	0.4985	0.4995	0.4955		9		
8	ROLLER	ID	0.4993	0.5000	0.5045	0.0050	10		12
	BOLT	OD	0.4985	0.4995	0.4950		9		
9	MAIN TRACK	ID	---	---	---	0.0030	---		
	ROLLER	OD	1.3115	1.3125	1.3085		10		12
10	MAIN TRACK	ID	---	---	---	0.0030	---		
	ROLLER	OD	1.3740	1.3760	1.3710		10		12
11	RIB,LINK OR FITTING	ID	1.0000	1.0007	0.0000	0.0000		1	
	BUSHING	OD	1.0014	1.0021	---		2 3		5 7
12	BUSHING	ID	0.8745	0.8753	0.8790	0.0050	2 4		6
	BUSHING	OD	0.8735	0.8740	0.8703		8		
13	BUSHING	ID	0.6245	0.6250	0.6290	0.0050	8 4		
	BOLT	OD	0.6230	0.6240	0.6200		9		

NOTE: SEE FIG. 601 AND 602 FOR ILLUSTRATION DETAILS

Inboard Leading Edge Slat Main Track
Support Rib Wear Limit Table
Figure 603 (Sheet 1)

INDEX NO.	PART NAME	DIM.	DESIGN LIMITS DIAMETER MIN	DESIGN LIMITS DIAMETER MAX	WEAR LIMITS MAX WEAR DIM.	WEAR LIMITS MAX DIAM CLEARANCE	REPLACE WORN PART	REPAIR WORN PART	REPAIR INSTR.
14	RIB OR FITTING	ID	0.7500	0.7507	0.0000	0.0000		1	
	BUSHING	OD	0.7512	0.7519	---		8 3		5 7
15	BUSHING	ID	0.6245	0.6252	0.6290	0.0050	8 4		6
	BOLT	OD	0.6230	0.6240	0.6202		9		
16	BUSHING	ID	0.5000	0.5005	0.5045	0.0050	8 4		
	BOLT	OD	0.4985	0.4995	0.4955		9		
17	ROLLER	ID	0.6243	0.6250	0.6290	0.0050	10		12
	BOLT	OD	0.6230	0.6240	0.6200		9		
18	MAIN TRACK	ID	---	---	---	0.0030	---		
	ROLLER	OD	1.6240	1.6260	1.6210		10		12
19	BUSHING	ID	0.6245	0.6255	0.6290	0.0050	8 4		5 7
	BOLT	OD	0.6230	0.6240	0.6202		9		
20	BUSHING	ID	0.8745	0.8755	0.8790	0.0050	8 4		5 7
	BUSHING	OD	0.8735	0.8740	0.8703		8		
21	RIB OR FITTING	ID	0.6875	0.6882	0.0000	0.0000		1	
	BUSHING	OD	0.6887	0.6893	---		8 3		5 7
22	BUSHING	ID	0.5620	0.5672	0.5665	0.0050	8 4		6
	BOLT	OD	0.5605	0.5615	0.5577		9		
23	LINK OR FITTING	ID	0.9375	0.9382	0.0000	0.0000		1	
	BUSHING	OD	0.9389	0.9396	---		2 3		5 7
24	BUSHING	ID	0.8120	0.8128	0.8165	0.0050	2 4		5 7
	BUSHING	OD	0.8110	0.8115	0.8070		8		
25	BUSHING	ID	0.5620	0.5625	0.5665	0.0050	8 4		
	BOLT	OD	0.5605	0.5615	0.5575		9		

Inboard Leading Edge Slat Main Track
Support Rib Wear Limit Table
Figure 603 (Sheet 2)

INDEX NO.	PART NAME	DIM.	DESIGN LIMITS DIAMETER MIN	DESIGN LIMITS DIAMETER MAX	WEAR LIMITS PERMITTED WEAR DIM.	WEAR LIMITS MAX DIAM CLEARANCE	REPLACE WORN PART	REPAIR WORN PART	REPAIR INSTR.
26	BUSHING	ID	0.5620	0.5630	0.5665	0.0000	8 4		
	BOLT	OD	0.5605	0.5615	0.5575		9		
27	BUSHING	ID	0.8120	0.8130	0.8165	0.0000	2 4		5 7
	BUSHING	OD	0.8110	0.8115	0.8078		8		

ALL DIMENSIONS ARE IN INCHES

1 REAM THE HOLE TO REMOVE CORROSION. CHROMIC ACID ANODIZE PER MIL-A-8625, TYPE 1. THIS HOLE CAN NOT BE LARGER THAN THE MAX DESIGN LIMIT PLUS 0.0600. REPLACE THE PART AS NECESSARY.

2 REPLACE THE BUSHING WITH ALUM-NICKEL-BRONZE BUSHING.

3 THE REPLACEMENT BUSHING IS TO HAVE A MIN AND MAX INTERFERENCE FIT AS SHOWN IN THE DESIGN LIMITS.

4 REAM THE ID TO THE DESIGN LIMITS. MAKE SURE THE HOLE STAYS CONCENTRIC.

5 APPLY A LAYER OF BMS 10-11, TYPE 1, PRIMER TO THE HOLE AND THE BUSHING AND ASSEMBLE WHILE WET.

6 AFTER YOU REAM THE HOLE, CHAMFER BOTH ENDS OF THE BUSHING TO 0.005-0.015 X 45 DEGREES.

7 FILLET SEAL THE BUSHING FLANGE OD WITH BMS 5-95 SEALANT.

8 REPLACE THE BUSHING WITH A 15-5 PH CRES BUSHING.

9 REPLACE THE BOLT.

10 REPLACE THE BEARING. THE MAX INTERFERENCE IS 0.0002.

11 REPLACE THE DOWNSTOP.

12 APPLY ONE LAYER OF BMS 10-11, TYPE 1, PRIMER.

Inboard Leading Edge Slat Main Track
Support Rib Wear Limit Table
Figure 603 (Sheet 3)

LANDING LIGHT LENS ASSEMBLY - REMOVAL/INSTALLATION

1. General
   A. This procedure has two tasks:
      (1) The first task is instructions to remove the lens assembly to the landing light.
      (2) The second task is instructions to install the lens assembly to the landing light.
   B. There is a landing light on the leading edge of each wing near the wing-to-body fairing. A lens assembly prevents damage to the landing light.

TASK 57-41-52-004-001

2. Remove the Lens Assembly (Fig. 401)
   A. Consumable Materials
      (1) B00148 Methyl Ethyl Ketone (MEK), TT-M-261
      or
      B00184 Cleaning Solvent, Presealing, BMS 11-7
      or
      B00115 1,1,1 - Trichloroethane, O-T-620
   B. References
      (1) IPC 57-41-52 Fig. 1
   C. Access
      (1) Location Zones
      500/600 Left Wing/Right Wing

   D. Procedure - Remove the Lense Assembly

      S 044-020

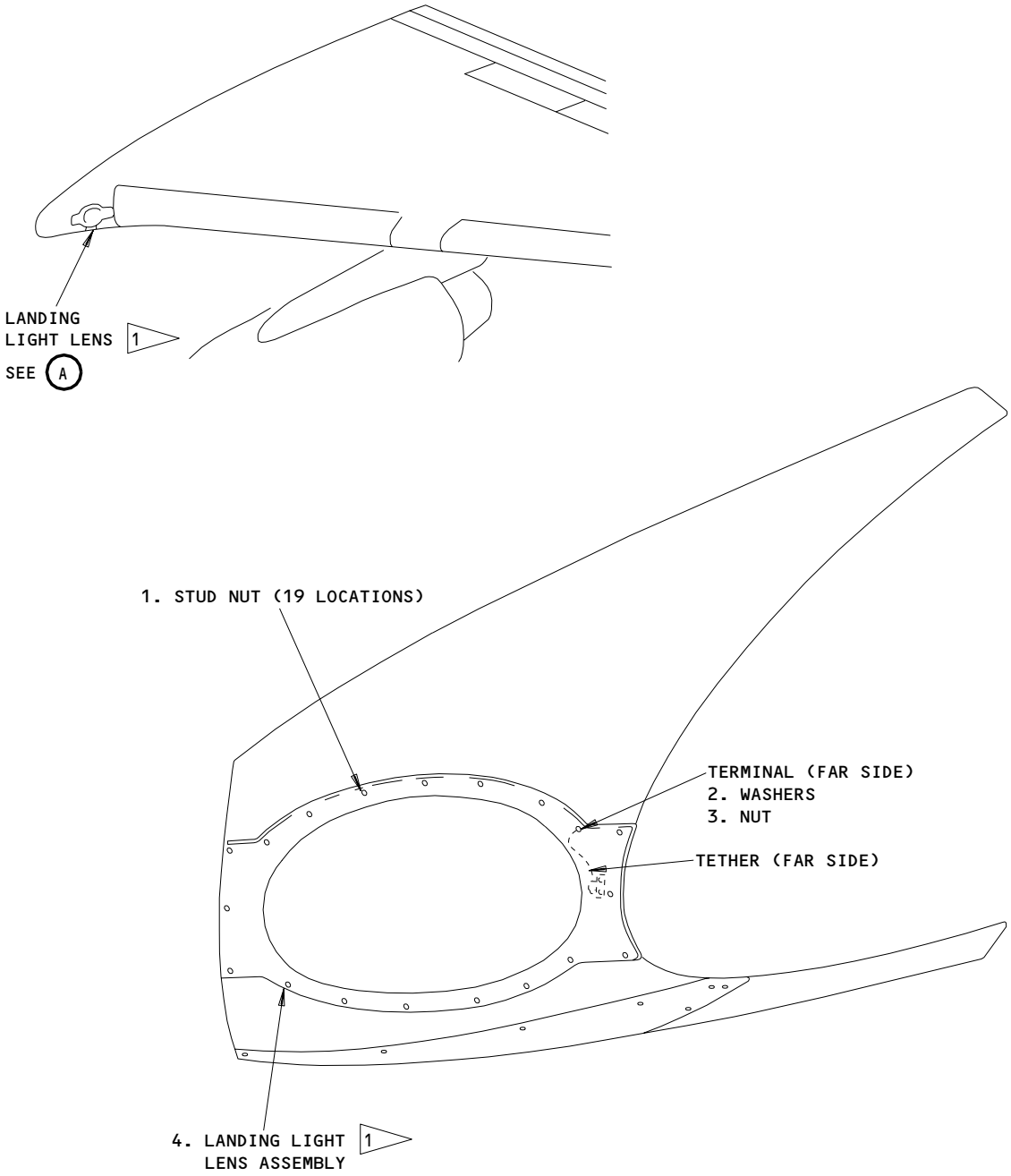
      WARNING: DO THE DEACTIVATION PROCEDURE FOR THE LEADING EDGE SLATS. THE SLATS CAN RETRACT QUICKLY AND CAUSE INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT.

      (1) Do this task: "Deactivation of the LE Slats" (Ref 27-81-00/201).

      S 034-002
      (2) Remove the stud nuts (1) that are along the outer edge of the lens assembly.

      S 034-003
      (3) Move the lens assembly (4) away from the wing leading edge sufficiently to get access to the tether.

      NOTE: The tether is on the outboard side of the lens assembly.



LANDING LIGHT LENS

A

1 THE LEFT SIDE INSTALLATION IS SHOWN;
THE RIGHT SIDE INSTALLATION OPPOSITE

Landing Light Lens
Figure 401

S 034-004
(4) Remove the nut (3) and washers (2) to disconnect the tether at the terminal end.

S 024-005
(5) Remove the lens assembly (4).

NOTE: Do not remove the landing light lens from the lens assembly.

S 214-006
(6) Examine the seal on the surface of the wing leading edge.

S 114-017

WARNING: DO NOT GET SOLVENTS IN YOUR MOUTH, OR YOUR EYES, OR ON YOUR SKIN. DO NOT BREATHE THE FUMES FROM SOLVENTS. SOLVENTS ARE HAZARDOUS MATERIALS. REFER TO PRODUCT MATERIAL SAFETY DATA SHEETS (MSDS) AND LOCAL REQUIREMENTS FOR PROPER HANDLING PROCEDURES.

(7) If the seal is damaged, remove it with solvent, Series 92 (AMM 20-30-92/201) .

TASK 57-41-52-404-008
3. Install the Lens Assembly (Fig. 401)
A. Consumable Materials
(1) Sealant, Silicone - Dow Corning 93-006
B. Parts

AMM			AIPC		
FIG	ITEM	NOMENCLATURE	SUBJECT	FIG	ITEM
401	1	Stud (Stud Nuts)	57-41-02	01	60
	2	Washers			120
	3	Nut			125
	4	Landing Light Lens Assembly (LH)			10
	4	Landing Light Lens Assembly (RH)			15

C. References
(1) 51-31-01/201, Seals and Sealing
D. Access
(1) Location Zones
500/600 Left Wing/Right Wing

E. Procedure - Install the Lens Assembly.

S 394-010
(1) If you removed the seal from the wing leading edge, clean the surface and apply sealant to make a new seal (Ref 51-31-01).

S 434-009
(2) Hold the lens assembly (4) near the opening in the wing leading edge.

S 434-011
(3) Install the tether with washers (2) and nut (3).

S 434-014
(4) Tighten the nut (3) on the tether terminal.

S 434-012
(5) Set the lens assembly (4) against the seal on the wing leading edge.

S 434-013
(6) Install and tighten the 19 stud nuts (1) that are along the outer edge of the lens assembly (4).

MLG TRUNNION FAIRING - REMOVAL/INSTALLATION

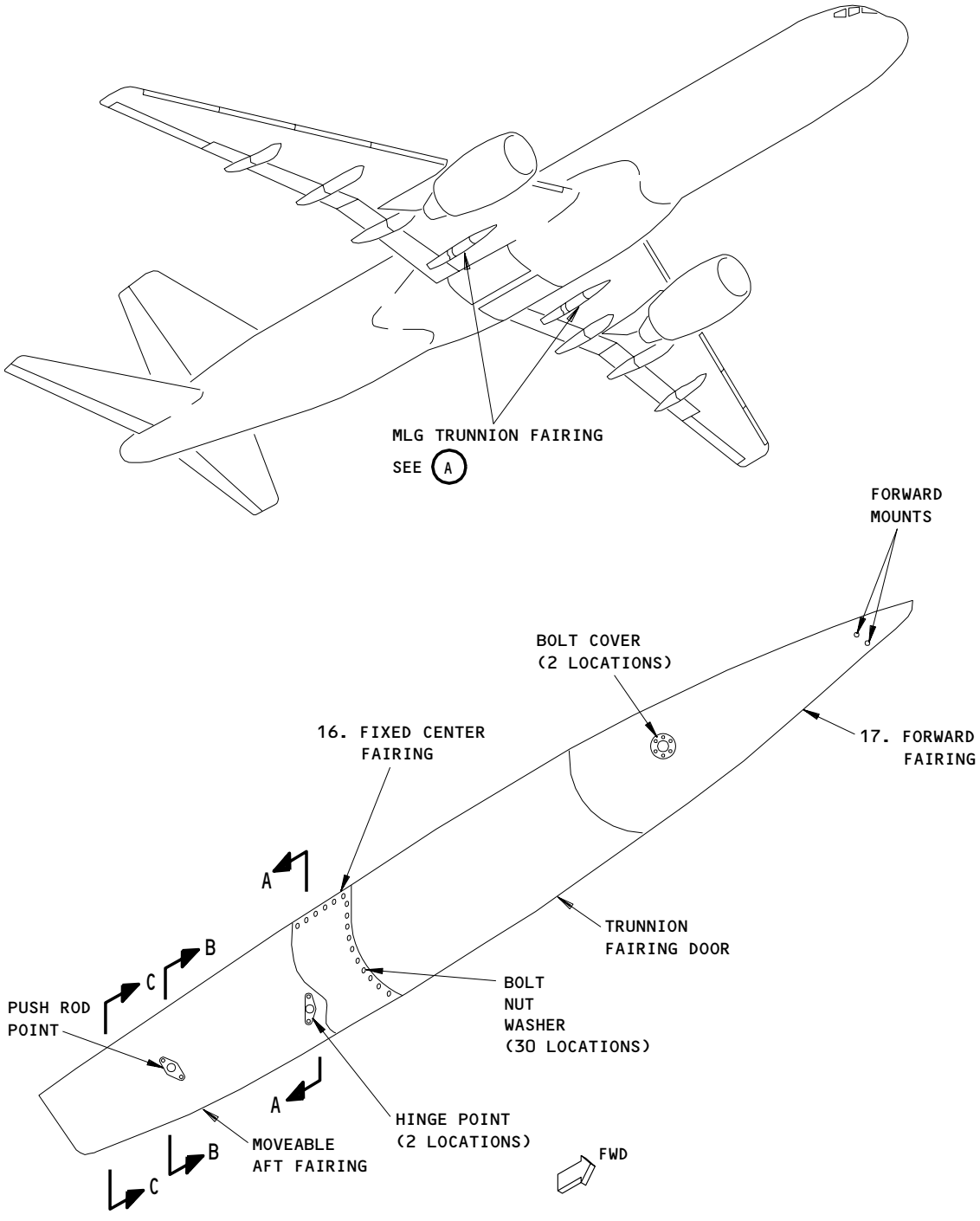
1. General
   A. The MLG trunnion fairing has four removable sections; aft movable fairing, fixed center fairing, trunnion fairing door, and forward fairing.
   B. This procedure contains seven tasks:
      (1) The first task is instructions for the removal of the aft movable fairing on the MLG trunnion fairing.
      (2) The second task is the instructions for the installation of the aft movable fairing on the MLG trunnion fairing.
      (3) The third task is instructions for the removal of the fixed center fairing on the MLG trunnion fairing.
      (4) The fourth task is instructions for the installation of the fixed center fairing on the MLG trunnion fairing.
      (5) The fifth task is instructions for the removal/installation of the trunnion fairing door on the MLG trunnion fairing.
      (6) The sixth task is instructions for the removal of the forward fairing on the MLG trunnion fairing.
      (7) The seventh task is instructions for the installation of the forward fairing on the MLG trunnion fairing.

TASK 57-51-10-004-005

2. Remove the Aft Movable Fairing (Fig. 401)
   A. References
      (1) AIPC 32-12-10, Fig. 1
   B. Access
      (1) Location Zones
          571/671 MLG Trunnion Fairing

   C. Procedure - Remove the Aft Movable Fairing

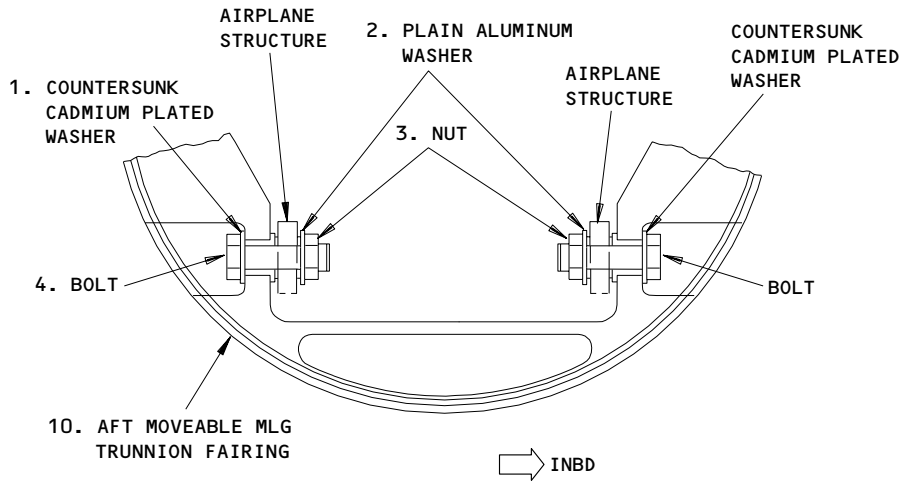
      S 014-006
      (1) Remove the covers to get access to the hinge points and the aft push rod point.



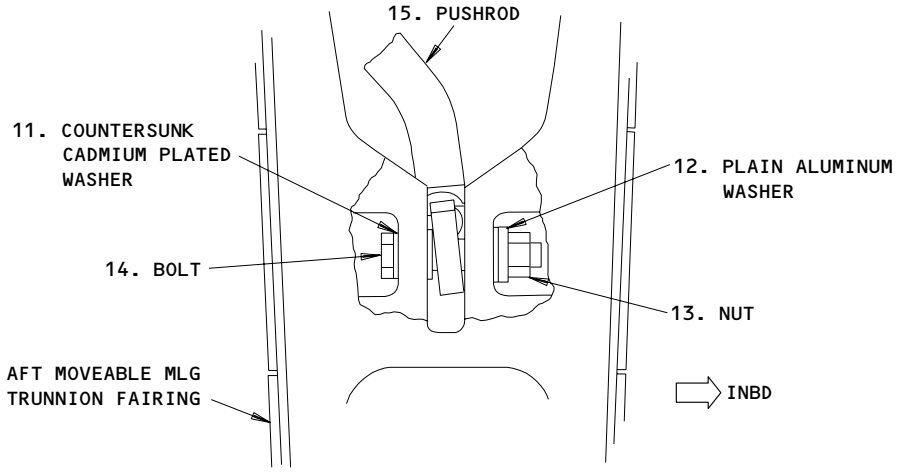
MLG TRUNNION FAIRING

A

MLG Trunnion Fairing
Figure 401 (Sheet 1)

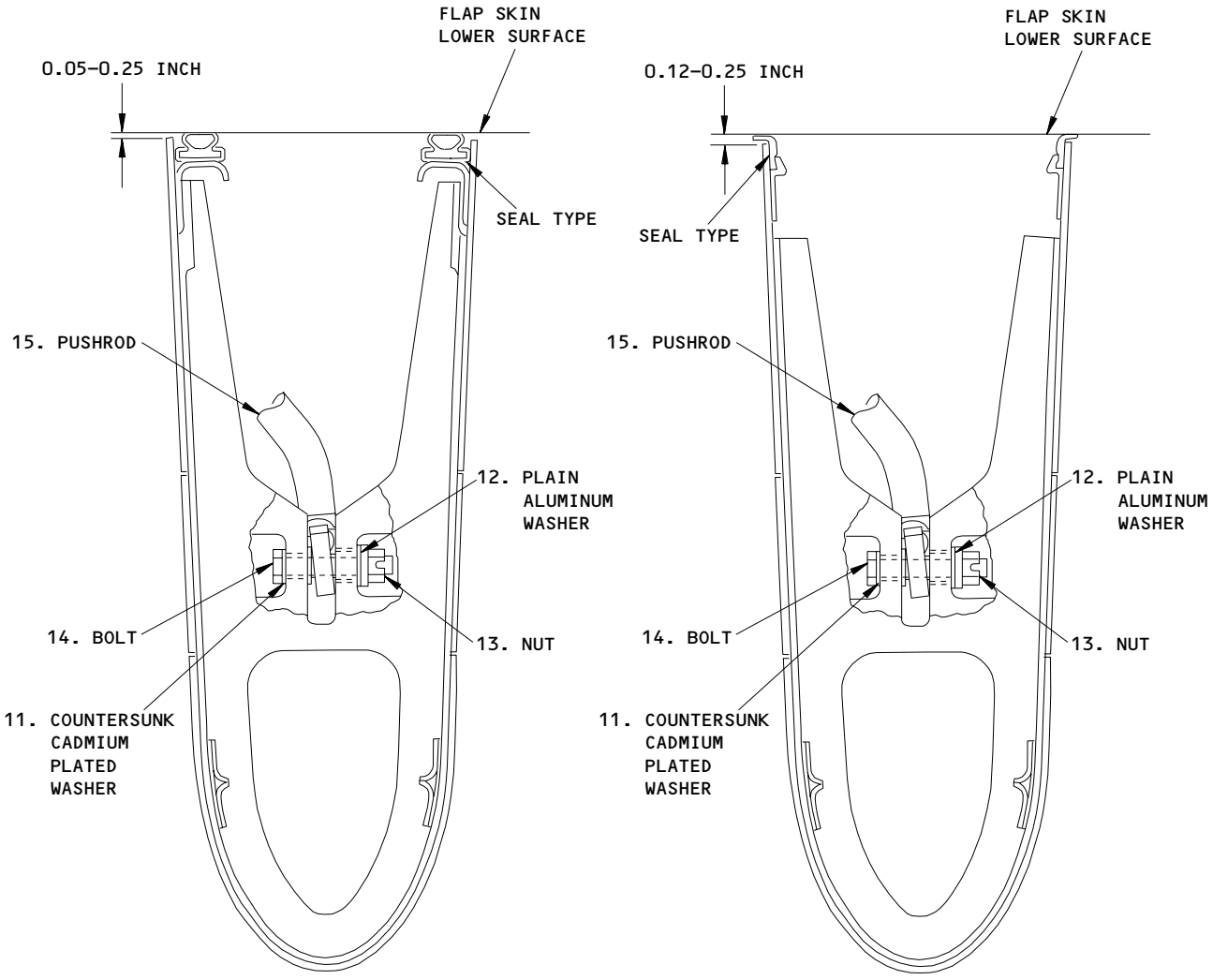


(EXAMPLE)
A-A



(EXAMPLE)
B-B

MLG Trunnion Fairing
Figure 401 (Sheet 2)



(EXAMPLES)
C-C

MLG Trunnion Fairing
Figure 401 (Sheet 3)

S 034-022

(2) Remove the nut (8), washers (5 and 7), bolt (9) and spacer (6), at the hinge point.

S 034-064

(3) Remove the nut (13), with an aluminum washer (12) under the nut, on the bolt at the push rod point.

S 034-065

(4) Remove the bolt (14), with a washer (11) that is countersunk and cadmium plated. Remove the washer below the bolthead, at the push rod point.

S 024-024

(5) Remove the fairing (10).

TASK 57-51-10-404-001

3. Install the Aft Movable Fairing

A. Parts

AMM		NOMENCLATURE	AIPC		
FIG	ITEM		SUBJECT	FIG	ITEM
401	5	Washer (countersunk cadmium palted washer)	32-12-10	01	524
	6	Spacer			536
	7	Washer (plain aluminum washer)			529
	8	Nut			534
	9	Bolt			519
	10	Fairing Assembly (RH) Aft moveable MLG Trunnion Fairing)			544 545
		Fairing Assembly (LH) Aft moveable MLG Trunnion Fairing)			540 541
	11	Washer (countersunk cadmium plated washer)			455
	12	Washer (plain aluminum washer)			450
	13	Nut			456
	14	Bolt			442
	15	Push Rod			470

B. Access

(1) Location Zones

571/671 MLG Trunnion Fairing

C. Procedure - Install the Aft Movable Fairing

S 424-025

(1) Hold the fairing (10) in its position.

S 424-041
(2) Do these steps at the hinge point:
(a) Install the spacer (6) and bolt (9), and washer (5) that is countersunk and cadmium plated.

NOTE: Install the washer below the bolthead, at the hinge point.

CAUTION: MAKE SURE THE SPACER IS INSTALLED ON THE BOLT AT THE HINGE POINT. FAILURE TO INSTALL THE SPACER CAN CAUSE DAMAGE TO THE FAIRING AND THE AIRPLANE STRUCTURE WHEN THE NUT IS TIGHTENED.

(b) Install the nut (8), with an aluminum washer (7) under the nut, on the bolt at the hinge point.
(c) Tighten the nut to 400-700 pound-inches as shown (Fig. 401).

S 434-043
(3) Install the bolt (14), with a washer (11) that is countersunk and cadmium plated. Install the washer below the bolthead, at the push rod point.

S 434-044
(4) Install the nut (13), with an aluminum washer (12) under the nut, on the bolt at the push rod point.

S 844-091
(5) Make sure that the inboard trailing edge flap aft flap is adjusted correctly before aligning the aft fairing (AMM 27-51-12/501).

S 824-086
(6) If the Aft Fairing does not fit and needs to be aligned, do the following steps:
(a) Extend the flaps.
(b) Adjust the push rod length to 17.25 inches, between attach bolt centerlines, to begin the adjustment.
(c) Stow the flaps.
(d) Record and verify the gap at 6 equally spaced locations along each side of the aft fairing, between the upper trim of the fairing, and the wing/main flap (aft flap) lower surface.
(e) Repeat the above steps, stowing, measuring, deploying, and adjusting the push rod until the differences are within .10 inch or the pushrod dimension exceeds 17.40 inches.
(f) When the adjustment is complete, the distance from the top of the aft fairing to the bottom of the aft flap should be as shown in Fig. 401.

S 424-062
(7) Tighten the nut (13) to 400-700 pound-inches.

S 434-045
(8) On the push rod point bolt, install the safety wire through the cotter pin hole. Connect them with a minimum of three turns.

S 414-046
(9) Install the access covers for the push rod and the hinge points .

S 414-089
(10) Adjust the Aft Movable Fairing to get a gap between the Aft Movable Fairing and the flap lower surface. See Fig. 401 for gap dimension.

TASK 57-51-10-004-047

4. Remove the Fixed Center Fairing (Fig. 401)
   A. References
      (1) AIPC 32-12-10, Fig. 1
   B. Access
      (1) Location Zones
          571/671 MLG Trunnion Fairing
   C. Procedure - Remove the Fixed Center Fairing

S 014-069
(1) Remove aft movable fairing to gain access to fixed fairing fasteners (Ref Remove the Aft Movable Fairing, this procedure).

S 024-070
(2) Remove bolts that attach the fixed fairing to the wing structure and forward fairing.

S 024-049
(3) Remove the center fairing (15).

TASK 57-51-10-404-002

5. Install the Fixed Center Fairing
   A. Consumable Materials
      (1) A00247 Sealant BMS 5-95, Class B
   B. References
      (1) AMM 51-31-01/201 Seals and Sealing
   C. Parts

AMM			AIPC		
FIG	ITEM	NOMENCLATURE	SUBJECT	FIG	ITEM
401	16	Fairing Assembly (Fixed Center Fairing)	32-12-10	01	1, 5

D. Access
(1) Location Zones
571/671 MLG Trunnion Fairing

E. Procedure

S 394-050
(1) Apply sealant to the bolt holes and mating surfaces around the bolt hole (AMM 51-31-01/201).

S 434-072
(2) Install bolts that attach the fixed fairing to the wing structure and forward fairing.

S 414-088
(3) Adjust the Fixed Center Fairing to get a gap (0.15 to 0.35 inch) between the Fixed Center Fairing and the Trunnion Fairing Door.

S 424-074
(4) Install the aft movable fairing (Ref Install the Aft Movable Fairing, this procedure).

TASK 57-51-10-904-052
6. Removal/Installation of the Trunnion Fairing Door
A. Procedure

S 904-053
(1) Refer to AMM 32-12-10/401 for the removal/installation procedure of the trunnion fairing door.

TASK 57-51-10-004-054
7. Remove the Forward Fairing (Fig. 401)
A. References
(1) AIPC 32-12-10, Fig. 1
B. Access
(1) Location Zones
571/671 MLG Trunnion Fairing

C. Procedure - Remove the Forward Fairing

S 014-055
(1) Remove the covers to get access to the aft mount bolts.

S 024-063
(2) Remove the bolts.

S 024-057
(3) Remove the fairing (16).

TASK 57-51-10-404-003

8. Install the Forward Fairing

A. Consumable Materials

(1) A00247 Sealant BMS 5-95, Class B

B. References

(1) AMM 51-31-01/201 Seals and Sealing

C. Parts

AMM			AIPC		
FIG	ITEM	NOMENCLATURE	SUBJECT	FIG	ITEM
401	17	Fairing Assembly (Forward Fairing)	32-12-10	01	20

D. Access

(1) Location Zones

571/671 MLG Trunnion Fairing

E. Procedure - Install the Forward Fairing

S 424-058

(1) Hold the fairing (16) in its position.

S 394-004

(2) Apply the sealant to the bolts (AMM 51-31-01/201).

S 434-059

(3) Install the bolts.

S 414-087

(4) Adjust the Forward Fairing to get a gap (0.15 to 0.35 inch) between the Forward Fairing and the Trunnion Fairing Door.

S 394-060

(5) Apply sealant over the bolt heads (AMM 51-31-01/201).

S 414-061

(6) Install the access covers.

LANDING GEAR SUPPORT BEAM - REMOVAL/INSTALLATION

1. General
   A. There are two tasks in this procedure. There is one task for the removal and one task for the installation of a landing gear support beam.
      (1) The removal procedure has these parts:
         (a) The removal of the fuel from the airplane
         (b) An extension of the trailing edge flaps
         (c) The removal of one main landing gear
         (d) The removal of the flap track fairing
         (e) The removal of a landing gear support beam.
      (2) The installation procedure has these parts:
         (a) The installation of a landing gear support beam
         (b) The installation of the flap track fairing
         (c) The installation of one main landing gear
         (d) The retraction of the trailing edge flaps
      (3) The landing gear support beam will be referred to as the support beam.

TASK 57-54-01-004-001

2. Landing Gear Support Beam Removal
   A. Equipment
      (1) Equipment stands
   B. References
      (1) AMM 07-11-01/201, Jacking Airplane.
      (2) AMM 27-51-06/401, Inboard TE Flap Transmission
      (3) AMM 27-51-25/201, TE Flap Torque Tubes
      (4) AMM 27-51-30/201, Inboard TE Flap Track Fairings
      (5) AMM 27-61-01/401, Spoiler
      (6) AMM 27-61-02/201, Spoiler Power Control Actuator (PCA)
      (7) AMM 28-26-00/201, Defueling
      (8) AMM 32-11-01/401, Main Landing Gear
      (9) AMM 57-54-03/401, MLG Beam Stabilizer Links
   C. Access
      (1) Location Zone
         710 Left Main Landing Gear
         720 Right Main Landing Gear

   D. Prepare to Remove the Support Beam

      S 864-002
      (1) Defuel the wing fuel tanks (AMM 28-26-00/201).

      S 584-040
      (2) Jack the airplane so that it is supported with the main gear above the ground (AMM 07-11-01/210).

S 864-003
(3) Lower the trailing edge flaps.

S 034-004
(4) Remove the applicable main landing gear (AMM 32-11-01/401).

S 014-006
(5) Remove the fairing for the inboard flap track (AMM 27-51-30/201).

S 014-007
(6) Open the ground spoilers if more access is necessary.

E. Procedure

S 034-008
(1) Remove the inboard and outboard stabilizer links, (AMM 57-54-03/401).

S 014-045
(2) Remove the applicable inboard ground spoiler, (AMM 27-61-01/401).

S 034-010
(3) Remove the ground spoiler actuators from the aft side of the support beam, (AMM 27-61-02/201).

S 014-047
(4) If you will not re-install the existing support beam, remove the spoiler braces that support the inboard ground spoiler actuators.

S 024-042
(5) Remove the actuator yoke assembly (Ref 57-54-04/401).

S 034-011
(6) Disconnect the necessary hydraulic tubes from the support beam.

S 974-012
(7) Make a note of the locations of the tubes.

S 034-013
(8) Disconnect the necessary electrical wires from the support beam.

S 974-014
(9) Make a note of the location of the wires.

S 034-015
(10) Remove the flap transmission (AMM 27-51-06/401).

S 014-017
(11) Remove the inboard torque tube (AMM 27-51-25/201).

S 024-018
(12) Remove the support beam.

WARNING: USE EQUIPMENT STANDS TO SUPPORT THE BEAM DURING THE REMOVAL PROCEDURE. FAILURE TO SUPPORT THE BEAM CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(a) Install equipment stands under the support beam.
(b) Hold the support beam in its position.
(c) Hold inboard track of the inboard flap with a strap or a rope.
(d) Disconnect the inboard track of the inboard flap from the support fitting.
1) Remove the bolts, nuts, and washers (6 locations) that connect the inboard track support fitting to the inboard end of the support beam.
(e) At the inboard end of the support beam (1), disconnect the support beam (1) from the inboard support link (2), (Fig. 401).
1) Remove the bolt (5), two special washers (10), special pin (9), nut (3), two bolts (6), two collars (7), and special nut (11).
(f) Remove the inboard support link (2) from the airplane, (Fig. 401).
1) Remove the bolt (4), two special washers (10), special pin (8), nut (3), two bolts (6), two collars (7), and special nut (11).

2) Remove the bolt (12), washer (15), nut (13), and cotter pin (14).

(g) Hold the aft end of the outboard track of the inboard flap with a jack.
1) Put a rubber pad between the jack and the track.

(h) Remove the track support strut.

NOTE: This must be done to provide clearance to remove the outboard attach pin.

(i) Remove the lockbolts from the outboard attach pin.

(j) Remove the attach pin from the outboard support beam fitting.

(k) Carefully remove the support beam.
1) Move the support beam inboard until it is clear of the outboard support beam fitting and the hydraulic tubes.
2) Lower the outboard end of the beam and move the beam outboard.
3) Remove the support beam from the airplane.

TASK 57-54-01-404-019

3. Landing Gear Support Beam Installation

A. Equipment
(1) Equipment stands

B. Consumable Materials
(1) C00259 Primer - BMS 10-11
(2) C00308 Corrosion Preventive Compound - MIL-C-11796 - Class B
(3) C00913 Corrosion Inhibiting Compound - BMS 3-27 (Preferred)
(4) C50056 Compound - Non-drying Corrosion Inhibiting Resin Mix, BMS 3-38 (Alternate)
(5) G50136 Paste - Corrosion Inhibiting Non-drying, BMS 3-38 (Alternate)
(6) G50237 Compound - Corrosion Inhibiting Non-drying Cor-Ban 27L, BMS 3-38 (Alternate)

C. References
(1) AMM 12-21-33/301, Landing Gear Support Beam Lubrication
(2) AMM 27-51-06/401, Inboard TE Flap Transmission
(3) AMM 27-51-25/201, TE Flap Torque Tubes
(4) AMM 27-51-30/201, Inboard TE Flap Track Fairings
(5) AMM 27-61-01/401, Spoiler
(6) AMM 27-61-02/201, Spoiler Power Control Actuator (PCA)
(7) AMM 32-11-01/401, Main Landing Gear
(8) AMM 57-54-03/401, MLG Beam Stabilizer Links

D. Access
(1) Location Zone
710 Left Main Landing Gear
720 Right Main Landing Gear

E. Procedure

S 424-020
(1) Install the support beam (Fig. 401).

WARNING: USE EQUIPMENT STANDS TO SUPPORT THE BEAM DURING THE INSTALLATION PROCEDURE. FAILURE TO SUPPORT THE BEAM CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(a) Install equipment stands under the support beam.
(b) Put the support beam into its position.
1) Lift the inboard end of the support beam and move it inboard until it is above the flap track.
2) Lift the outboard end of the support beam.
3) Put the outboard end of the support beam in the outboard support beam fitting.
4) Hold the support beam in its position.
(c) Attach the support beam to the outboard support beam fitting.
1) Apply a thin layer of BMS 3-27 (preferred) or BMS 3-38 (alternate) to the outer diameter of the outboard attach pin.
2) Install the outboard attach pin through the support fitting and the outboard end of the beam.
3) Install the two lockbolts, two washers, and two nuts.
4) Tighten the nuts on the lockbolts to 450-550 pound-inches.
5) Examine the clearance between the bushing faces in the support beam and the support fitting.
6) Apply a layer of the corrosion inhibiting compound to the hole in the pin and the empty space behind the pin.
(d) Install the actuator yoke assembly between the support beam and the rear spar.
(e) Install the inboard support link (2):
1) Install the bolt (4), two special washers (10), special pin (8), nut (3), two bolts (6), two collars (7), and special nut (11).
a) Tighten the special nut (11) to 1000-2000 pound-inches.
b) Tighten the nut (3) to 1000-1200 pound-inches.
2) Install the bolt (12), washer (15), nut (13), and cotter pin (14).
3) Tighten nut (13) to 15 pound-inches maximum.

(f) Connect the inboard end of the support beam to the inboard support link:
1) Install the bolt (5), two special washers (10), special pin (9), nut (3), two bolts (6), two collars (7), and special nut (11).
a) Tighten the special nut (11) to 1000-2000 pound-inches.
b) Tighten the nut (3) to 1000-1200 pound-inches.
(g) Attach the inboard track support fitting to the support beam.
1) Apply BMS 5-95 between the inboard flap track support fitting and the support beam.
2) Install the bolts and washers.
3) Install nuts (6 locations) with BMS 5-95.
4) Tighten nuts to 90-125 pound-inches.
(h) Attach the inboard flap track to the support fitting.
(i) Install the support strut for the outboard track of the inboard flap.

S 414-025
(2) Install the flap transmission (AMM 27-51-06/401).

S 414-027
(3) Install the flap torque tubes (AMM 27-51-25/201).

S 864-028
(4) Remove the supports from the support beam.

S 434-029
(5) Install the ground spoiler actuator (AMM 27-61-02/201).

S 414-048
(6) Install the applicable ground spoiler, (AMM 27-61-01/401).

S 414-049
(7) To install the inboard and outboard stabilizer links:
(a) Install the inboard and outboard stabilizer links, (AMM 57-54-03/401).
(b) Attach all hydraulic tubes to the support beam.
(c) Attach all of the electrical wires to the support beam.

(d) Install the applicable panels surrounding the MLG support beam, (AMM 57-54-03/401).

F. Put the Airplane Back to Its Usual Condition

S 434-035

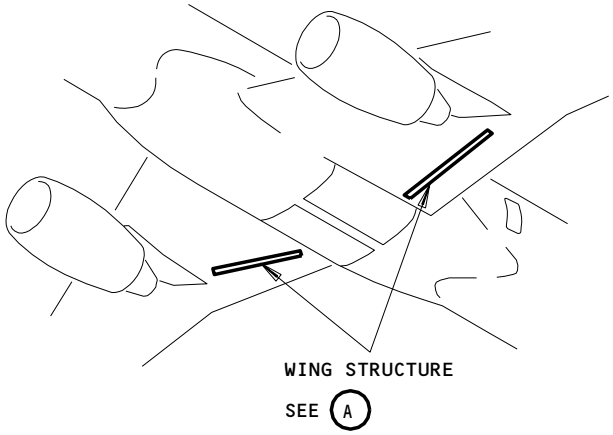
(1) Install the main landing gear (AMM 32-11-01/401).

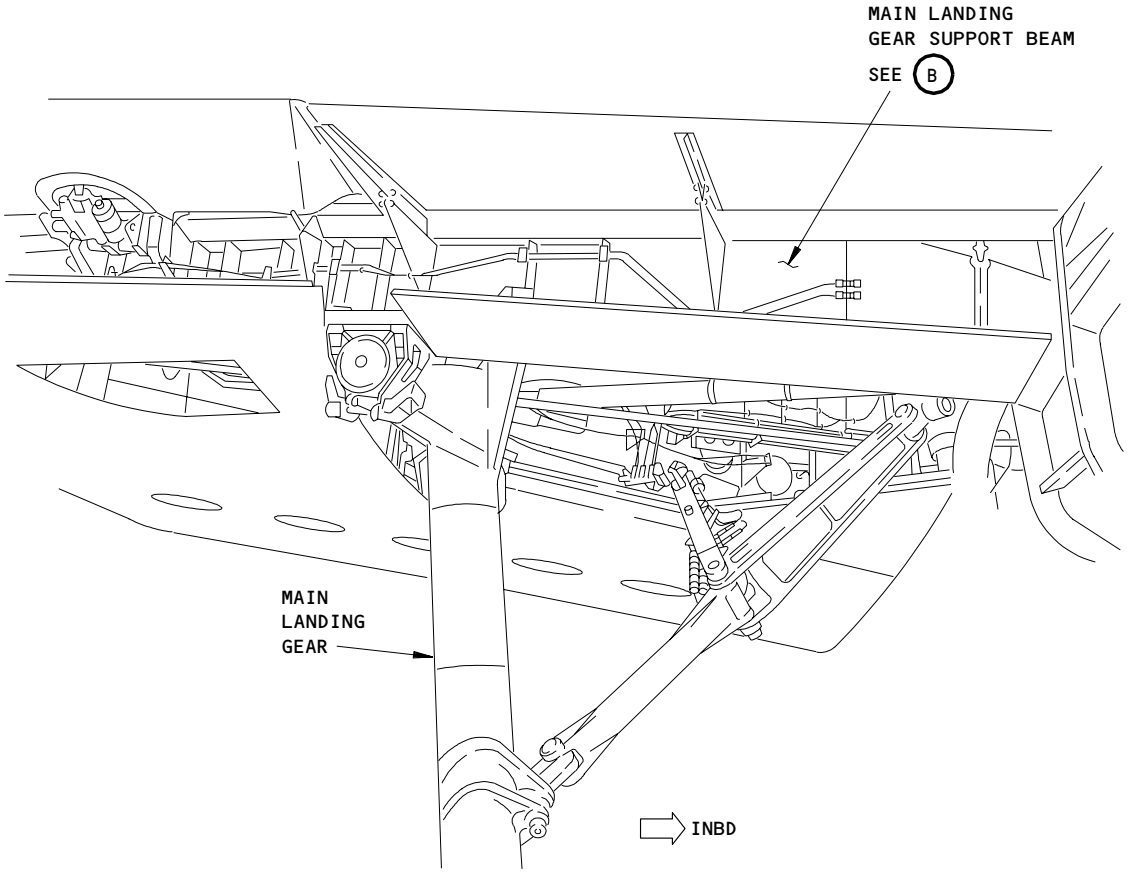
S 414-037

(2) Install the fairings for the inboard flap track (AMM 27-51-30/201).

S 644-038

(3) Lubricate the support beam (AMM 12-21-33/301).

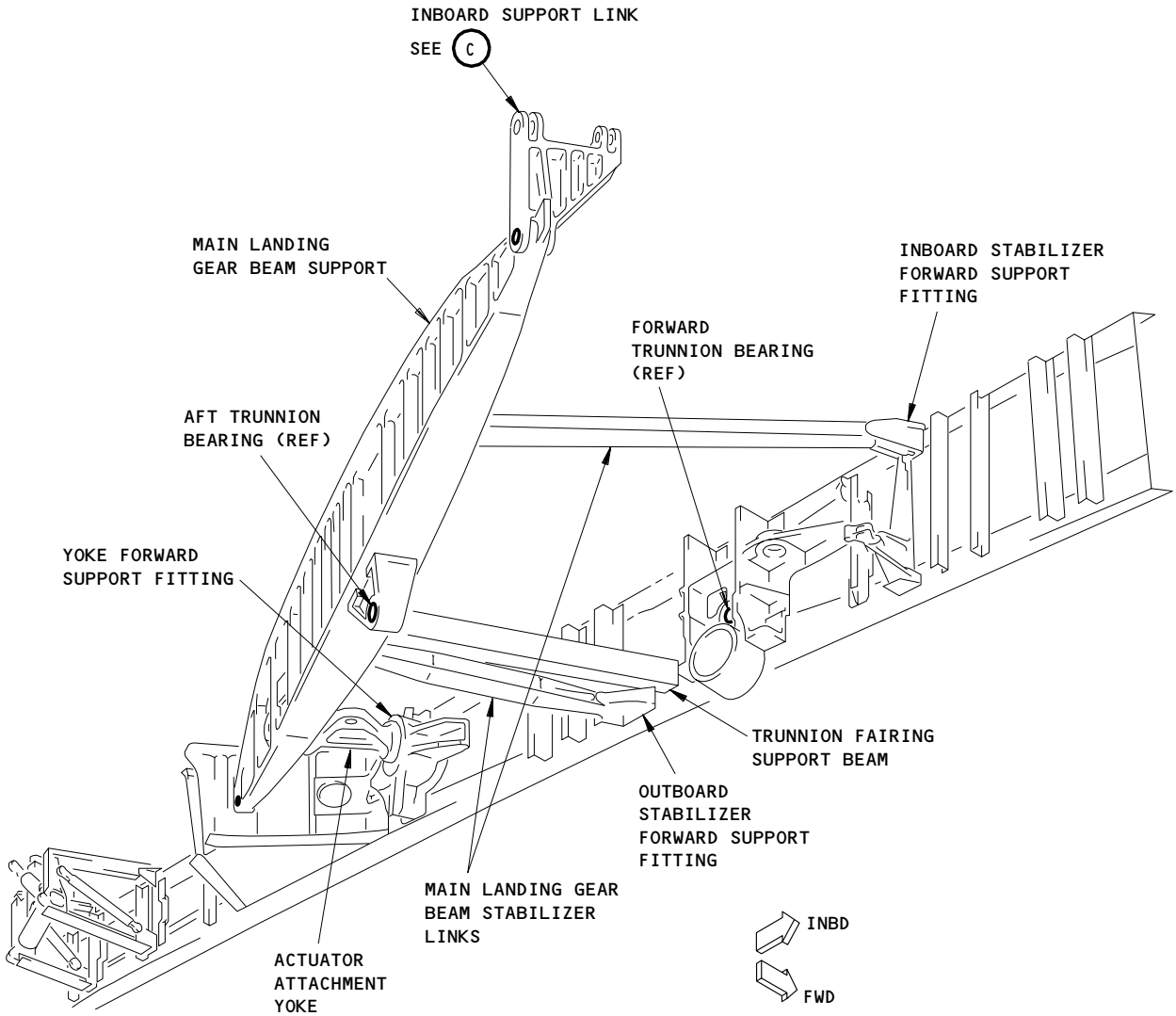




WING STRUCTURE

A

Main Landing Gear Support Beam Installation
Figure 401 (Sheet 1)

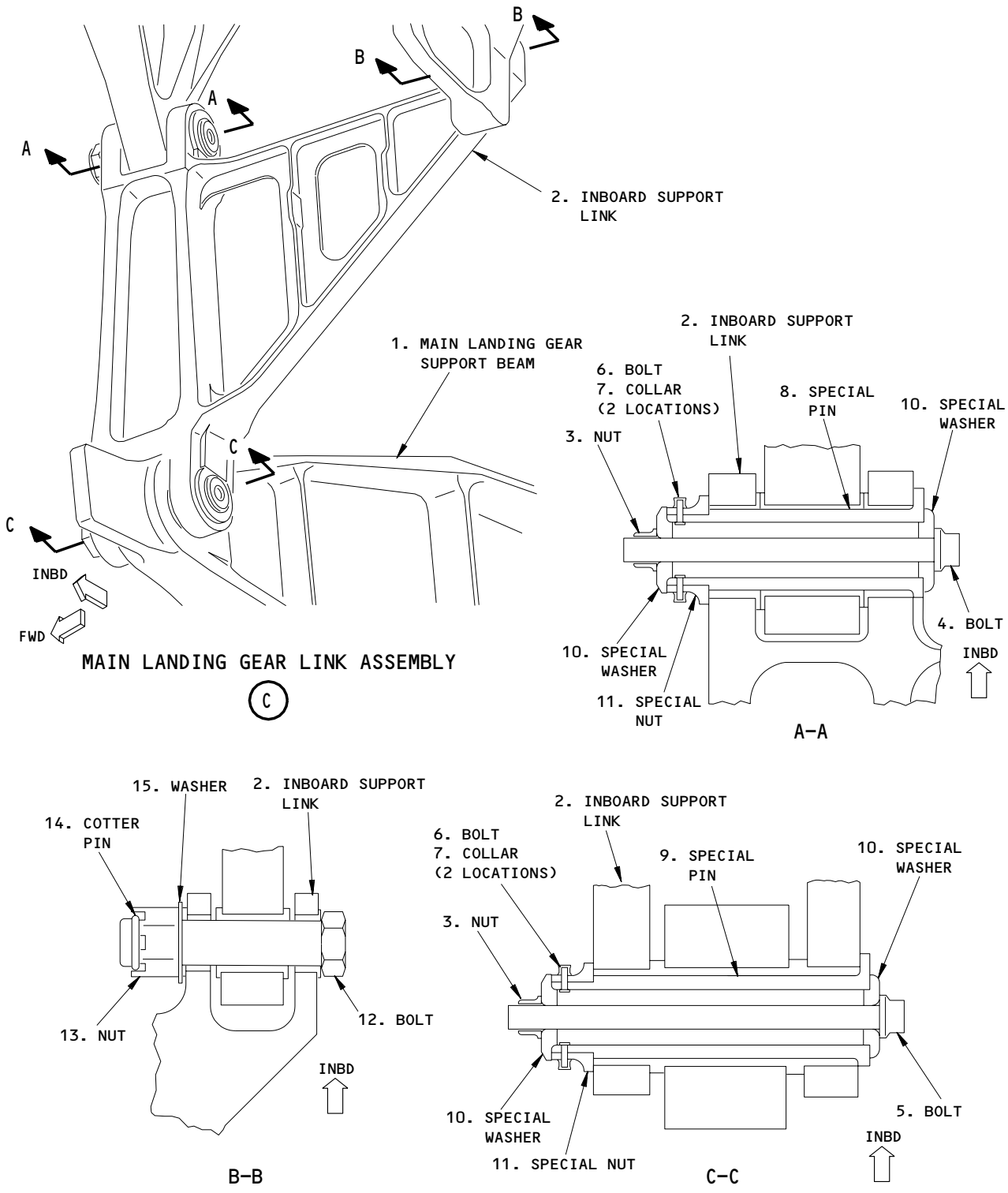


LEFT MAIN LANDING GEAR SUPPORT BEAM
(RIGHT SIDE OPPOSITE)

B

Main Landing Gear Support Beam Installation
Figure 401 (Sheet 2)

E86428



Main Landing Gear Support Beam Installation
Figure 401 (Sheet 3)

MLG SUPPORT BEAM - INSPECTION/CHECK

1. General
   A. This procedure has one task which inspects the Main Landing Gear (MLG) Support Beam. To do the inspection, you measure the applicable diameters of the bolts and bushings which attach the MLG support beam.
   B. This procedure has illustrations and a wear limit table.

TASK 57-54-01-206-001

2. MLG Support Beam Inspection (Fig. 601)
   A. References
      (1) AMM 57-54-01/401 MLG Support Beam
   B. Access
      (1) Location Zones
          710 Main Landing Gear
          720 Right Main Landing Gear
   C. Procedure

S 016-002

(1) To remove the MLG Support Beam, refer to this procedure, (AMM 57-54-01/401).

S 226-003

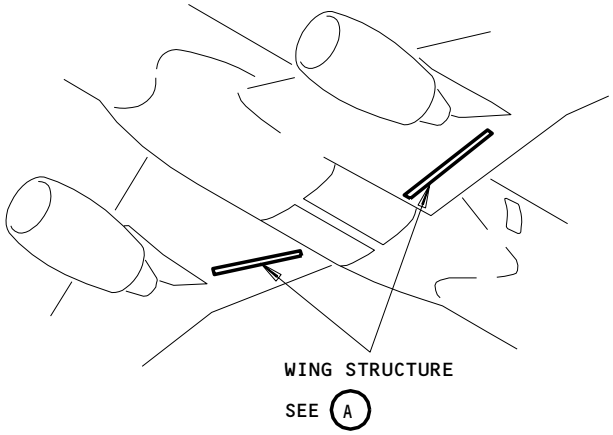
(2) Look for worn areas on the fuse pins, special pins, and bolts which attach the support beam, (Fig. 601).
   (a) Measure the applicable diameters of the fuse pins, special pins, and bushings.

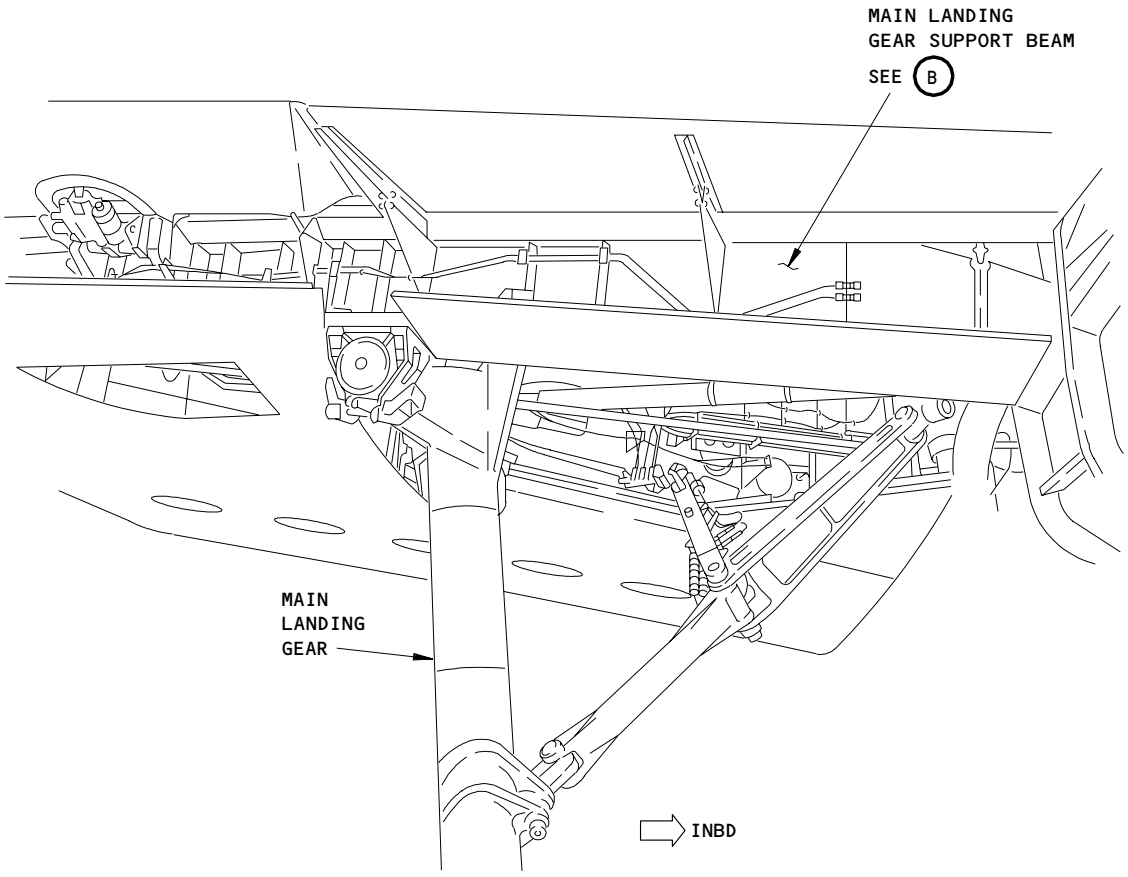
   NOTE: Use a micrometer or a vernier caliper.

   (b) Compare the dimensions you measured, with the allowed dimensions shown in (Fig. 601).
   (c) Replace the parts which are out of the tolerance.

S 416-004

(3) To install the MLG Support Beam, refer to this procedure (AMM 57-54-01/401).

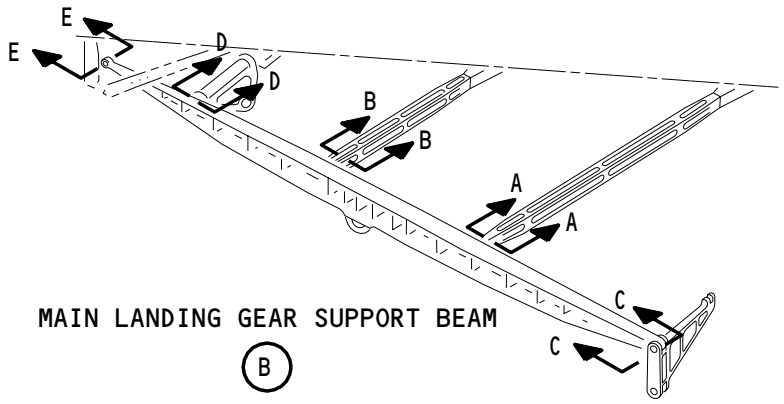




WING STRUCTURE

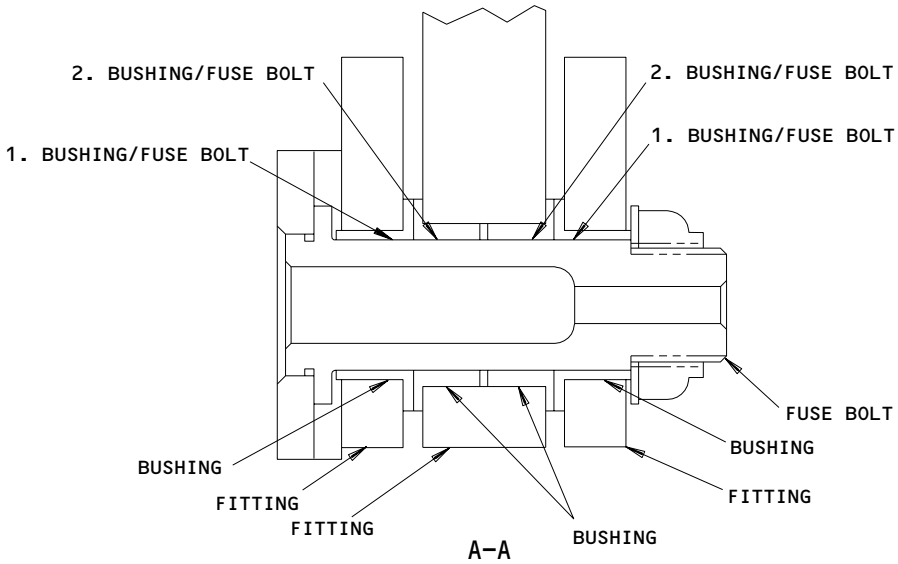
A

Main Landing Gear Support Beam Wear Limits
Figure 601 (Sheet 1)

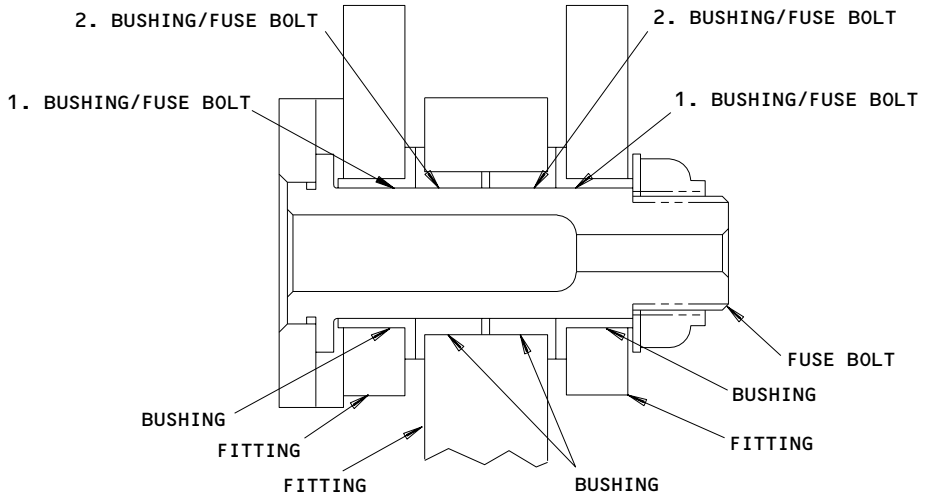


MAIN LANDING GEAR SUPPORT BEAM

(B)

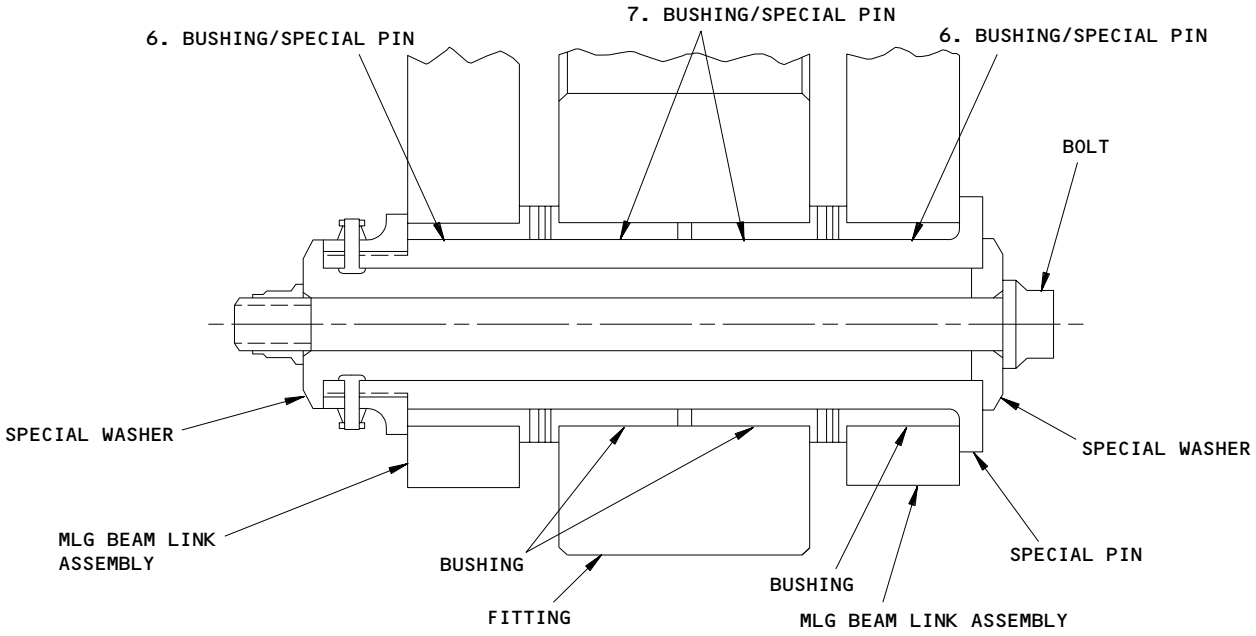


A-A

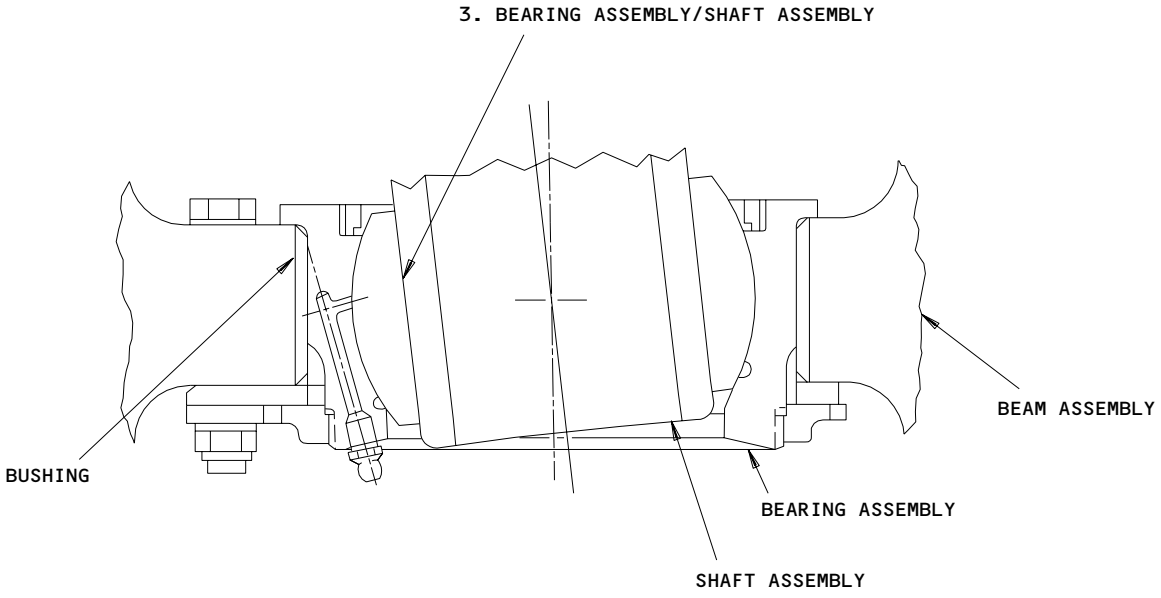


B-B

Main Landing Gear Support Beam Wear Limits
Figure 601 (Sheet 2)

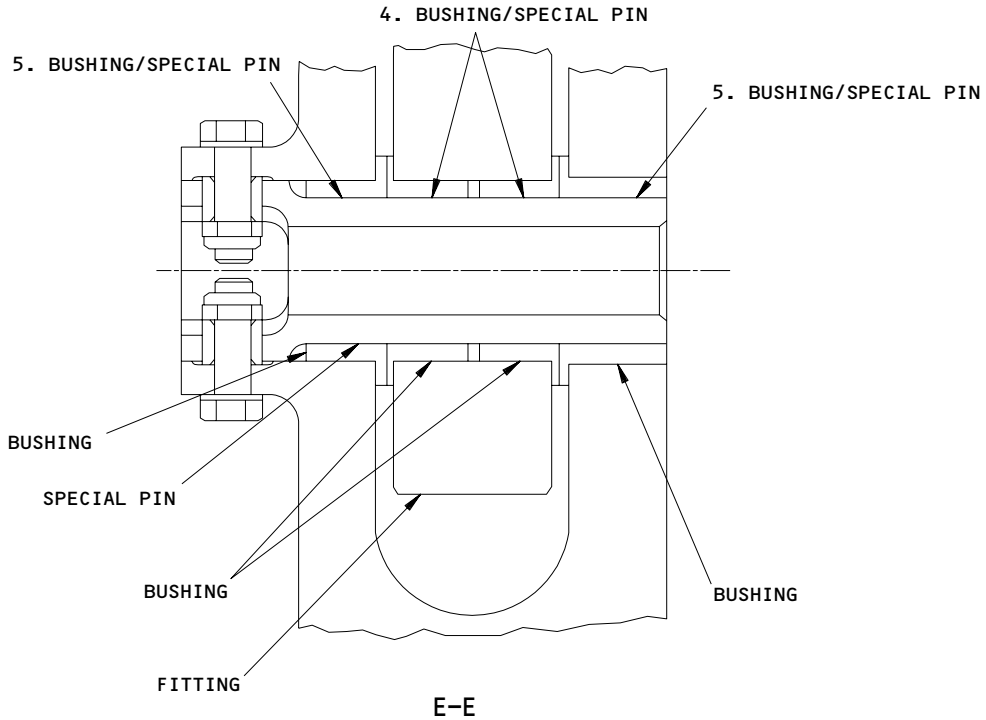


C–C



D–D

Main Landing Gear Support Beam Wear Limits
Figure 601 (Sheet 3)



Main Landing Gear Support Beam Wear Limits
Figure 601 (Sheet 4)

INDEX NO.	PART NAME	DIM.	DESIGN LIMITS		WEAR LIMITS		REPLACE WORN PART	REPAIR WORN PART
			DIAMETER		PER-MITTED WEAR DIM.	MAX. DIA CLEAR-ANCE		
			MIN.	MAX.				
1	BUSHING	ID	0.9695	0.9703	0.9737	0.050	X	
	FUSE BOLT	OD	0.9679	0.9687	0.9653		X	
2	BUSHING	ID	0.9695	0.9703	0.9737	0.050	X	
	FUSE BOLT	OD	0.9679	0.9687	0.9653		X	
3	BEARING ASSEMBLY	ID	3.0030	3.0050	3.0100	0.0100	X	
	SHAFT ASSEMBLY	OD	2.9980	3.0000	2.9950		X	X
4	BUSHING	ID	1.8142	1.8150	1.8197	0.0070	X	
	SPECIAL PIN	OD	1.1220	1.8127	1.8080		X	X
5	BUSHING	ID	1.8142	1.8150	-	0.0070	X	
	SPECIAL PIN	OD	1.1220	1.8127	1.8080		X	X
6	BUSHING	ID	2.0030	2.0050	2.0080	0.0080	X	
	SPECIAL PIN	OD	1.9980	2.0000	1.9970		X	
7	BUSHING	ID	2.0030	2.0050	-	0.0080	X	
	SPECIAL PIN	OD	1.9980	2.0000	1.9970		X	

Main Landing Gear Support Beam Wear Limits
Figure 601 (Sheet 5)

MLG BEAM STABILIZER LINKS - REMOVAL/INSTALLATION

1. General
   A. This procedure has two tasks:
      (1) The first task is the instructions to remove the MLG Beam Stabilizer Links.
      (2) The second task is the instructions to install the MLG Beam Stabilizer Links.

   TASK 57-54-03-004-001

2. Remove the Stabilizer Links (Fig. 401)
   A. References
      (1) 07-11-01/201, Jacking Airplane
      (2) 29-11-00/201, Pressurize/Depressurize Main Hydraulic Systems
      (3) 32-00-15/201, Landing Gear Door Locks
      (4) 32-32-17/401, Main Gear Truck Position Shuttle Valve
      (5) IPC 57-54-51 Fig. 15
   B. Access
      (1) Location Zones
          500/600 Left Wing/Right Wing

      (2) Access Panels
          (a) 551AT/651AT Landing Gear Beam Access Panel
          (b) 551BB/651BB Inboard Trailing Edge Access Panel
          (c) 551CT/651CT Landing Gear Actuator Pin Access Panel
          (d) 551DTX/651DTX Outboard MLG Beam Support Structure Panel
          (e) 551EBX/651EBX Fuel Shut-off Valve Access Panel
   C. Procedure - Remove the Stabilizer Links

      S 944-002
      (1) Lift the airplane on jacks (Ref 07-11-01).

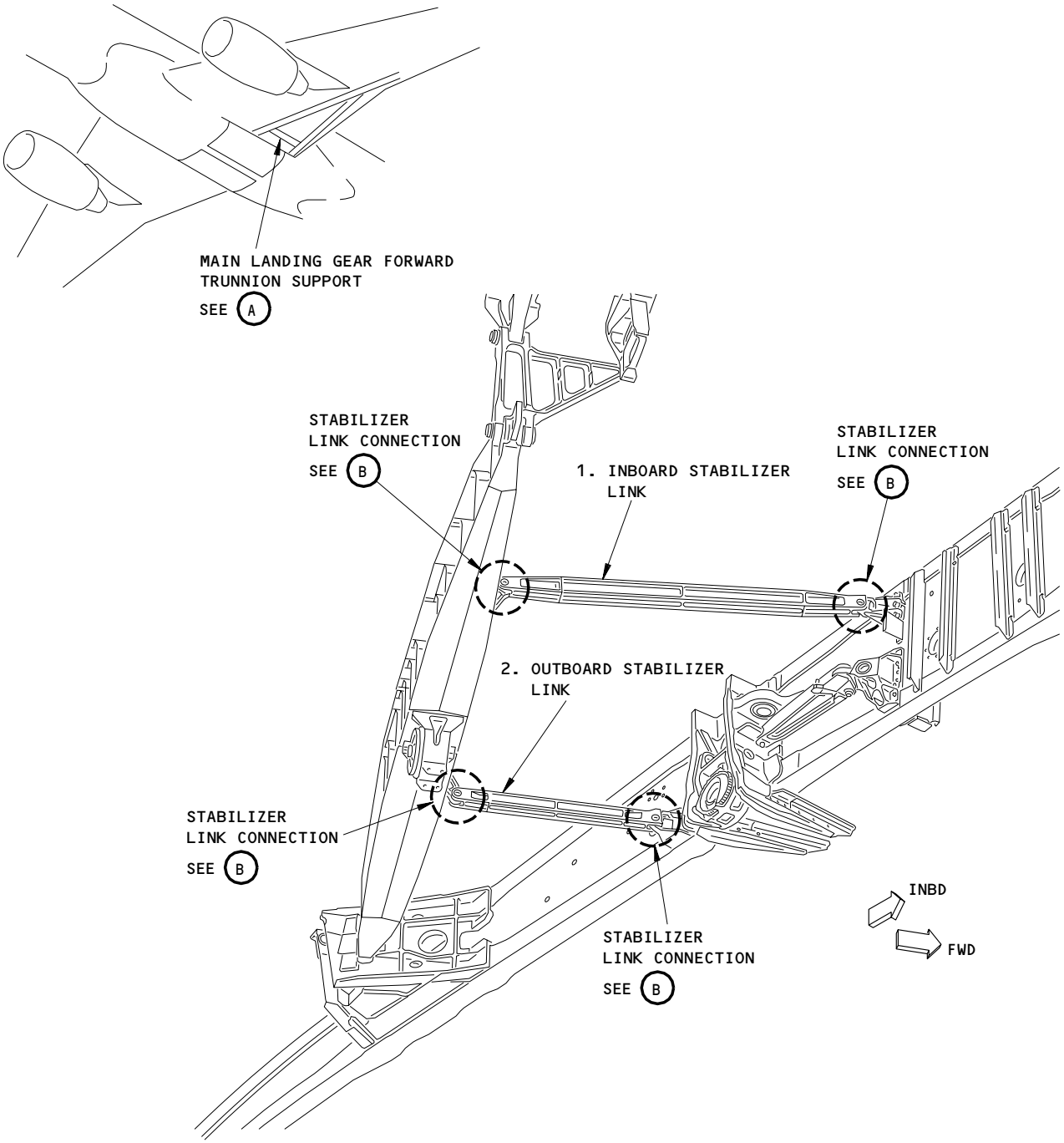
      S 864-003
      (2) Decrease the pressure on the L, R, and C hydraulic systems and reservoirs (Ref 29-11-00).

      S 014-022

      WARNING: FAST MOVEMENT OF THE DOORS CAN CAUSE INJURY OR DAMAGE IF THE LOCKS ARE NOT CORRECTLY INSTALLED (AMM 32-00-15/201).

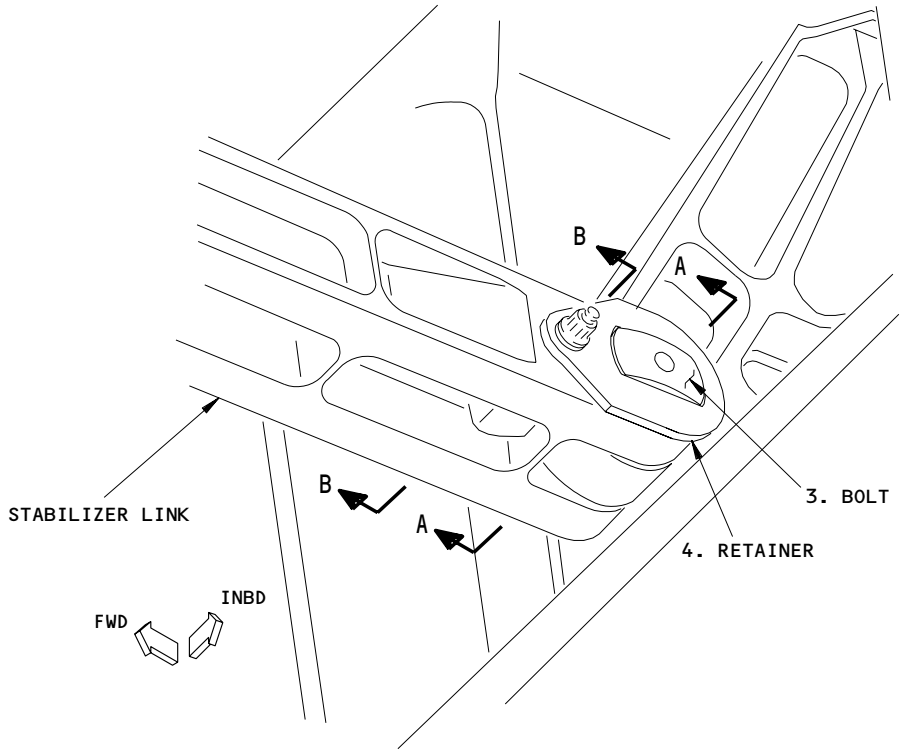
      (3) Open the landing gear doors and install the door locks (Ref 32-00-15).

          NOTE: Both the nose and main gear doors open at the same time by the ground release.



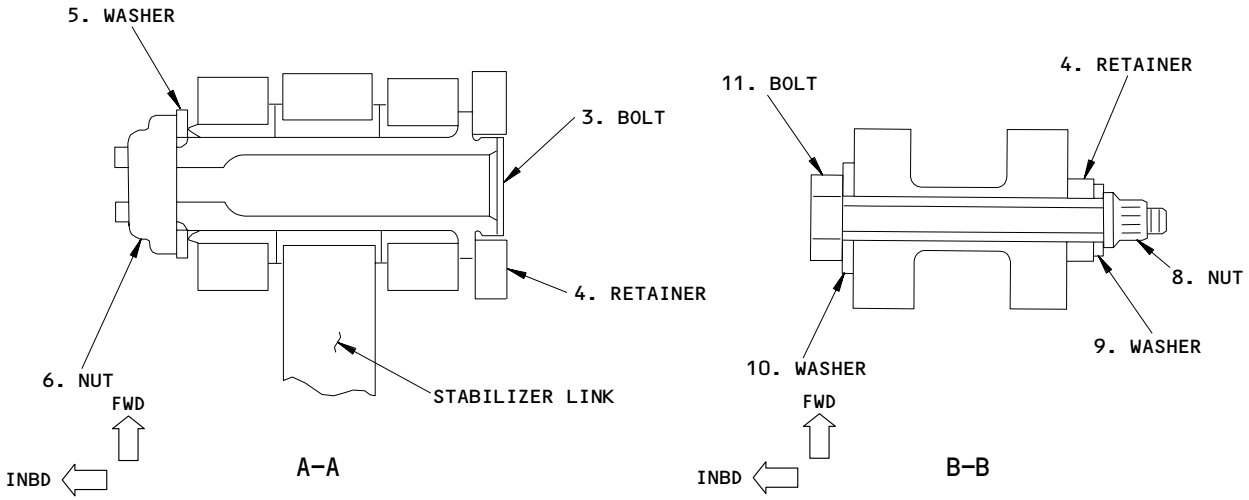
MAIN LANDING GEAR FORWARD TRUNNION SUPPORT
(LEFT SIDE IS SHOWN, RIGHT SIDE IS OPPOSITE)
A

Main Landing Gear (MLG) Stabilizer Links Installation
Figure 401 (Sheet 1)



STABILIZER LINK CONNECTION
(EXAMPLE)

B



Main Landing Gear (MLG) Stabilizer Links Installation
Figure 401 (Sheet 2)

S 034-005
(4) Remove the shuttle valve on the main gear truck position. (Ref 32-32-17).

S 014-025
(5) Remove the applicable panels surrounding the support beam, (AMM 06-44-00/201) .
(a) 551AT/651AT, Landing Gear Beam Access Panel
(b) 551BB/651BB, Inboard Trailing Edge Access Panel
(c) 551CT/651CT, Landing Gear Actuator Pin Access Panel
(d) 551DTX/651DTX, Outboard MLG Beam Support Structure Panel
(e) 551EBX/651EBX, Fuel Shut-off Valve Access Panel

S 034-006
(6) Remove the hydraulic line brackets on the stabilizer link.

S 034-007
(7) Disconnect and remove the hydraulic lines on the support beam.

S 424-008
(8) Install protective caps on the open hydraulic lines.

S 014-026
(9) Remove the inboard stablizer link (1) or the outboard stabilizer link (2):
(a) Put a support underneath the stabilizer link.
(b) Remove the two retainers (4), two nuts (8), two washers (9), two washers (10), and two bolts (11) at the ends of the link, (Fig. 401).
(c) Disconnect the bonding jumpers.
(d) Remove the two retainers (4), two nuts (6), two washers (5), and two bolts (3).
(e) Do the steps above for the other stabilizer link.

TASK 57-54-03-404-011

3. Install the Stabilizer Links (Fig. 401)

A. Parts

AMM			AIPC		
FIG	ITEM	NOMENCLATURE	SUBJECT	FIG	ITEM
401	1	Inboard Link Assembly (MLG Stabilizer Link)	57-54-51	15	225
	2	Bolts			185
	3	Washers			19
	4	Nuts			195
	5	Outboard Link Assembly (MLG Stabilizer Link)			280

B. References

(1) 07-11-01/201, Jacking Airplane
(2) 12-21-33/301 Wing Structure
(3) 29-11-00/201, Pressurize/Depressurize Main Hydraulic Systems
(4) 32-00-15/201, Landing Gear Door Locks
(5) 32-32-17/401, Main Gear Truck Positioner Shuttle Valve

C. Access

(1) Location Zones

500/600 Left Wing/Right Wing

(2) Access Panels

(a) 551AT/651AT Landing Gear Beam Access Panel

(b) 551BB/651BB Inboard Trailing Edge Access Panel
(c) 551CT/651CT Landing Gear Actuator Pin Access Panel
(d) 551DTX/651DTX Outboard MLG Beam Support Structure Panel
(e) 551EBX/651EBX Fuel Shut-off Valve Access Panel

D. Procedure - Install the stabilizer links.

S 434-012

(1) Install the inboard stabilizer link (1) or the outboard stabilizer link (2):
(a) Apply a thin layer of grease to the bolts (3) and bolts (11).
(b) Put one of the stabilizer links in position for installation.
(c) Install the two retainers (4), two nuts (6), two washers (5), two bolts (3), two nuts (8), two washers (9), two washers (10), and two bolts (11) to attach the stabilizer link to the rear spar and the support beam (Fig. 401).
1) Tighten the bolts (3) to 500-1000 pound-inches.
(d) Connect the bonding jumpers to the stabilizer link.
(e) Do the steps above for the other stabilizer link.

S 644-015

(2) Lubricate the end fittings of the installed links (AMM 12-21-33).

S 034-016

(3) Remove the protective caps from the hydraulic lines.

S 434-017

(4) Connect the hydraulic lines.

S 434-018

(5) Install the hydraulic line brackets.

S 784-028

(6) Pressurize the Main Hydraulic System (AMM 29-11-00/201).

S 434-019

(7) Install the shuttle valve for the main gear truck position (AMM 32-32-17).

S 034-023

WARNING: FAST MOVEMENT OF THE DOORS CAN CAUSE INJURY OR DAMAGE (AMM 32-00-15/201).

(8) Remove the door locks and close the landing gear doors (Ref 32-00-15).

S 414-027

(9) Install the applicable panels surrounding the support beam, (AMM 06-44-00/201).
(a) 551AT/651AT, Landing Gear Beam Access Panel
(b) 551BB/651BB, Inboard Trailing Edge Access Panel

(c) 551CT/651CT, Landing Gear Actuator Pin Access Panel
(d) 551DTX/651DTX, Outboard MLG Beam Support Structure Panel
(e) 551EBX/651EBX, Fuel Shut-off Valve Access Panel

S 944-021

(10) Lower the airplane and remove the jacks (AMM 07-11-01).

MAIN LANDING GEAR RETRACT ACTUATOR YOKE - REMOVAL/INSTALLATION

1. General

A. This procedure contains two tasks. The first task removes the main landing gear actuator yoke assembly from the wing. The second tasks installs the main landing gear actuator yoke assembly into the wing.

TASK 57-54-04-004-001

2. Removal of the Main Landing Gear Actuator Yoke Assembly

A. Equipment

(1) Torque Wrench - TEC175 Series (or equivalent)
Snap-On Tools (Latin-American Division)
8100 SW 81st Dr., Ste. 290
Miami, FL 33134-6684

B. References

(1) AMM 06-44-00/201, Wing Access Doors and Panels - Maintenance Practices
(2) AMM 07-11-01/201, Jacking Airplane - Maintenance Practices
(3) AMM 29-11-00/201, Main Hydraulic Systems - Maintenance Practices
(4) AMM 32-00-15/201, Landing Gear Door Ground Operations and Locking Procedures - Maintenance Practices
(5) AMM 32-00-20/201, Landing Gear Downlocks - Maintenance Practices
(6) AMM 32-32-01/401, Main Gear Retract Actuator - Removal/Installation

C. Access

(1) Location Zones
551 Rear Spar to MLG Support Beam (Left)
651 Rear Spar to MLG Support Beam (Right)

(2) Access Panels
551BB Wing Access Panel (Bottom, Left)
551EBX Wing Access Panel (Bottom, Left)
551CT Wing Access Panel (Top, Left)
651BB Wing Access Panel (Bottom, Right)
651EBX Wing Access Panel (Bottom, Right)
651CT Wing Access Panel (Top, Right)

D. Prepare for Removal

S 214-002

(1) Make sure the downlocks for the nose and main landing gear are installed (AMM 32-00-20/201).

S 494-003

WARNING: MAKE SURE THE DOOR LOCK INSTALLATION PROCEDURE IS DONE CORRECTLY. FAST MOVEMENT OF THE DOORS COULD CAUSE INJURY OR DAMAGE IF THE LOCKS ARE NOT INSTALLED CORRECTLY.

(2) Open the main gear doors and install the door locks (AMM 32-00-15/201).

S 864-004

(3) Remove the pressure from the center hydraulic system and the hydraulic reservoir (AMM 29-11-00/201).

S 584-005

(4) Lift the airplane until the wheels are off the ground (AMM 07-11-01/201).

S 014-006

(5) To remove the Support Fitting for the left actuator, remove the access panels that follow (AMM 06-44-00/201):
(a) 551BB
(b) 551EBX
(c) 551CT

S 014-007

(6) To remove the Support Fitting for the right actuator, remove the access panels that follow (AMM 06-44-00/201):
(a) 651BB
(b) 651EBX
(c) 651CT

E. Removal of the Main Landing Gear Actuator Yoke Assembly

S 024-008

(1) Remove the lock bolt from pin on the outboard end of the Main Landing Gear Retract Actuator (AMM 32-32-01/401).
(a) Remove the retaining nut from the pin.
(b) Remove the pin.

S 024-028
(2) Remove the aft thru bolt from the yoke assembly.

S 024-029
(3) Remove the special cap screw P/N 113N1093.

S 024-030
(4) Rotate shaft to align pin P/N 113N1038 in cap screw hole.
(a) Remove pin.

S 024-031
(5) Remove shaft from yoke assembly by movinig shaft aft and out.

S 024-039

WARNING: SUPPORT THE MAIN LANDING GEAR ACTUATOR YOKE ASSEMBLY BEFORE REMOVING THE ATTACH PIN. IF YOU DO NOT SUPPORT THE ACTUATOR YOKE ASSEMBLY, IT CAN FALL AND CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

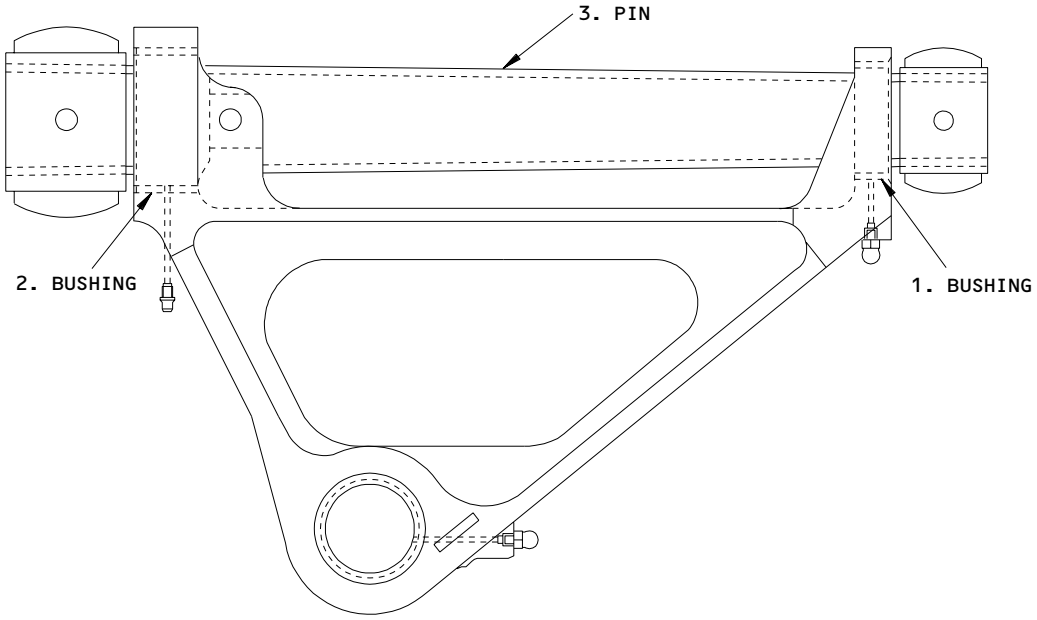
(6) Remove the yoke assembly.

TASK 57-54-04-404-012

3. Install the Main Landing Gear Actuator Yoke Assembly

A. Equipment
(1) Main Gear Door Locks - (AMM 32-00-15/201)
(2) Torque Wrench - TEC175 Series or equivalent
Snap-On Tools (Latin-American Division)
8100 SW 81st Dr., Ste. 290
Miami, FL 33134-6684
(3) Drill - Standard

B. Consumable Materials
(1) A00247 Sealant - Chromate Type, BMS 5-95
(2) D00633 Grease - BMS 3-33 (Preferred)



INDEX NO.	PART NAME	DIM.	DESIGN LIMITS		WEAR LIMITS		REPLACE WORN PART	REPAIR WORN PART	REPAIR INSTR
			DIAMETER		PERMITTED WEAR DIMENSION INCHES (mm)	MAXIMUM DIAMETER CLEARANCE INCHES (mm)			
			MINIMUM INCHES (mm)	MAXIMUM INCHES (mm)					
1	BUSHING-7	ID	2.3780 (60.401)	2.3800 (60.452)	2.3840 (60.553)	0.010 (0.254)	X 1		
2	BUSHING-8	ID	3.0030 (70.276)	3.0050 (76.327)	3.0110 (76.479)	0.010 (0.254)	X 1		
3	PIN	OD	TBD	TBD	TBD	TBD		X	

1 REPLACE BUSHING WITH A NEW 113N1005-X BUSHING PER BAC5435 AND ENGINEERING REQUIREMENTS, 113N1379.

Main Landing Gear Actuator Attachment Yoke Assembly Wear Limits
Figure 401

(3) D00013 Grease - MIL-PRF-23827 (Supersedes MIL-G-23827) (Alternate)
(4) D00014 Grease - MIL-G-21164 (Alternate)

C. References
(1) AMM 06-44-00/201, Wing Access Doors and Panels - Maintenance Practices
(2) AMM 07-11-01/201, Jacking Airplane - Maintenance Practices
(3) AMM 29-11-00/201, Main Hydraulic System - Maintenance Practices
(4) AMM 32-00-15/201, Landing Gear Door Ground Operations and Locking Procedures - Maintenance Practices
(5) AMM 32-00-20/201, Landing Gear Downlocks - Maintenance Practices
(6) AMM 32-32-01/401, Main Gear Retract Actuator - Removal/Installation

D. Access
(1) Location Zones
551 Rear Spar to MLG Support Beam (Left)
651 Rear Spar to MLG Support Beam (Right)
(2) Access Panels
551BB Wing Access Panel (Bottom, Left)
551EBX Wing Access Panel (Bottom, Left)
551CT Wing Access Panel (Top, Left)
651BB Wing Access Panel (Bottom, Right)
651EBX Wing Access Panel (Bottom, Right)
651CT Wing Access Panel (Top, Right)

E. Installation of the Main Landing Gear Actuator Yoke Assembly

S 984-013
(1) Make sure the rod of the actuator is fully retracted.

S 114-014
(2) Clean the area from where you removed the Yoke Assembly.
(a) Make sure you clean the unwanted sealant before you install a new yoke assembly.

S 014-033
(3) Position yoke assembly in place.

S 014-034
(4) Install shaft through aft bearing and yoke assembly.

S 014-035
(5) Align foward shaft pin hole.
(a) Install pin P/N 113N1038.
(b) Install special cap screw P/N 113N1093.
(c) Torque cap screw to 450-550 inch-pounds.
(d) Lubricate forward bearing assembly with grease.

S 014-036
(6) Rotate shaft to align aft through bolt hole in yoke assembly.
(a) Install through bolt and nut.

(b) Tighten the nut finger tight (15 inch-pounds), and back off nut to the nearest slot and cotter pin hole.
(c) Install cotter pin.

S 014-037
(7) Install retract actuator to yoke assembly (AMM 32-32-01/401).

F. Put the Airplane Back to Its Initial Condition.

S 014-038
(1) Install the access panels that follow (AMM 06-44-00/201):
(a) 551BB (651BB, bottom, right)
(b) 551EBX (551EBX, bottom, right)
(c) 551CT (651CT,top right)

S 094-022

WARNING: USE THE PROCEDURE IN AMM 32-00-15/201 TO REMOVE THE DOOR LOCKS. THE DOORS OPEN AND CLOSE QUICKLY AND CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(2) Remove the door locks from the landing gear doors and close the doors (AMM 32-00-15/201).

S 584-023
(3) Lower the airplane and remove the jacks (AMM 07-11-01/201).

S 864-024
(4) Put the control lever for the landing gear to the DN position.

S 864-025
(5) Pressurize the center hydraulic system if it is necessary (AMM 29-11-00/201).

MLG FORWARD TRUNNION BEARING AND SUPPORT - REMOVAL/INSTALLATION

1. General
   A. This procedure has four tasks:
      (1) The first task is instructions to remove the MLG forward trunnion support.
      (2) The second task is instructions to install the MLG forward trunnion support.
      (3) The third task is instructions to remove the MLG forward trunnion bearing.
      (4) The fourth task is instructions to install the MLG forward trunnion bearing.

TASK 57-54-05-004-003

2. Remove the Forward Trunnion Support (Fig. 401)
   A. Equipment
      (1) Adapter Equipment, B57003-33

          NOTE: The adapter equipment includes the adapter tool and the sockets.

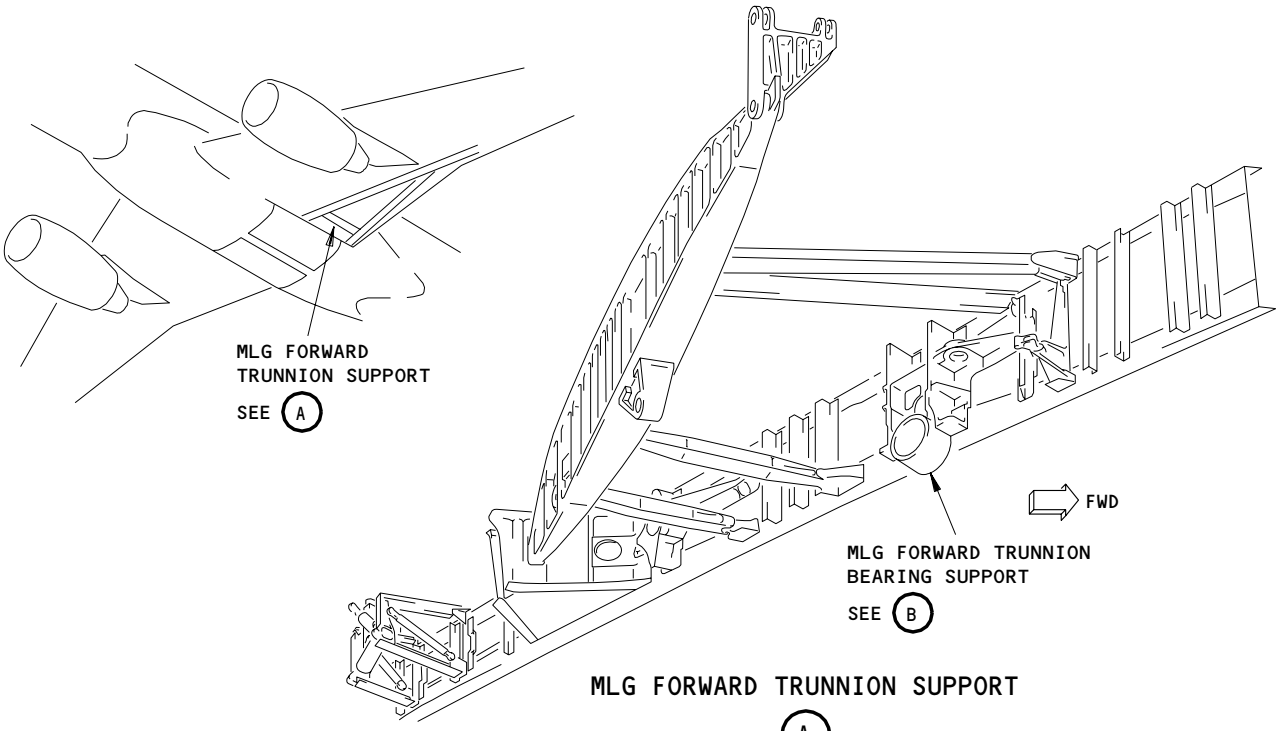
   B. References
      (1) AMM 32-11-01/401, Main Landing Gear
      (2) AMM 57-51-10/401, MLG Trunnion Fairing
      (3) AIPC 57-54-05, Fig. 1
   C. Access
      (1) Location Zones
          571/671 MLG Trunnion Fairing

   D. Procedure - Remove the Forward Trunnion Support

      S 014-004
      (1) Remove the main landing gear (AMM 32-11-01/401).

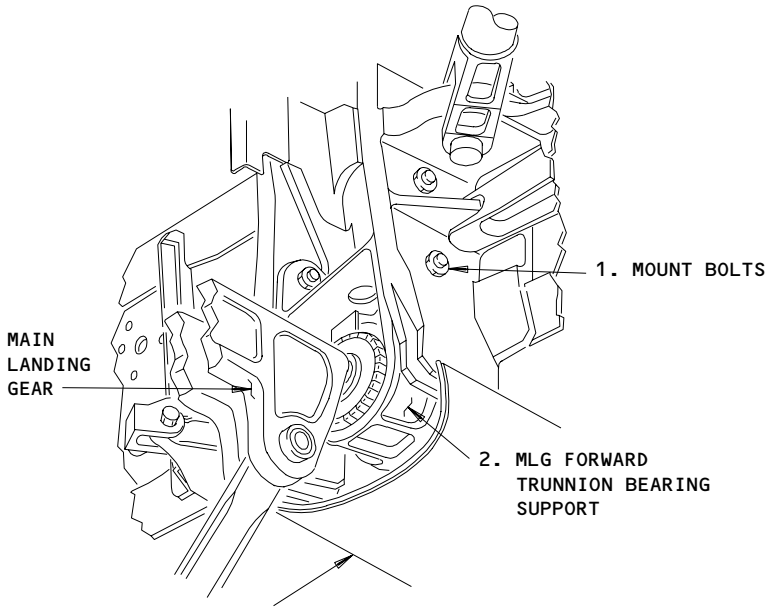
      S 014-005
      (2) Remove the forward section of the MLG trunnion fairing (AMM 57-51-10/401).

      S 034-006
      (3) Do the steps that follow to remove the mount bolts:
          (a) Remove the large trunnion nut on the outboard side of the MLG trunnion fitting with the adapter tool and a wrench.



MLG FORWARD TRUNNION SUPPORT

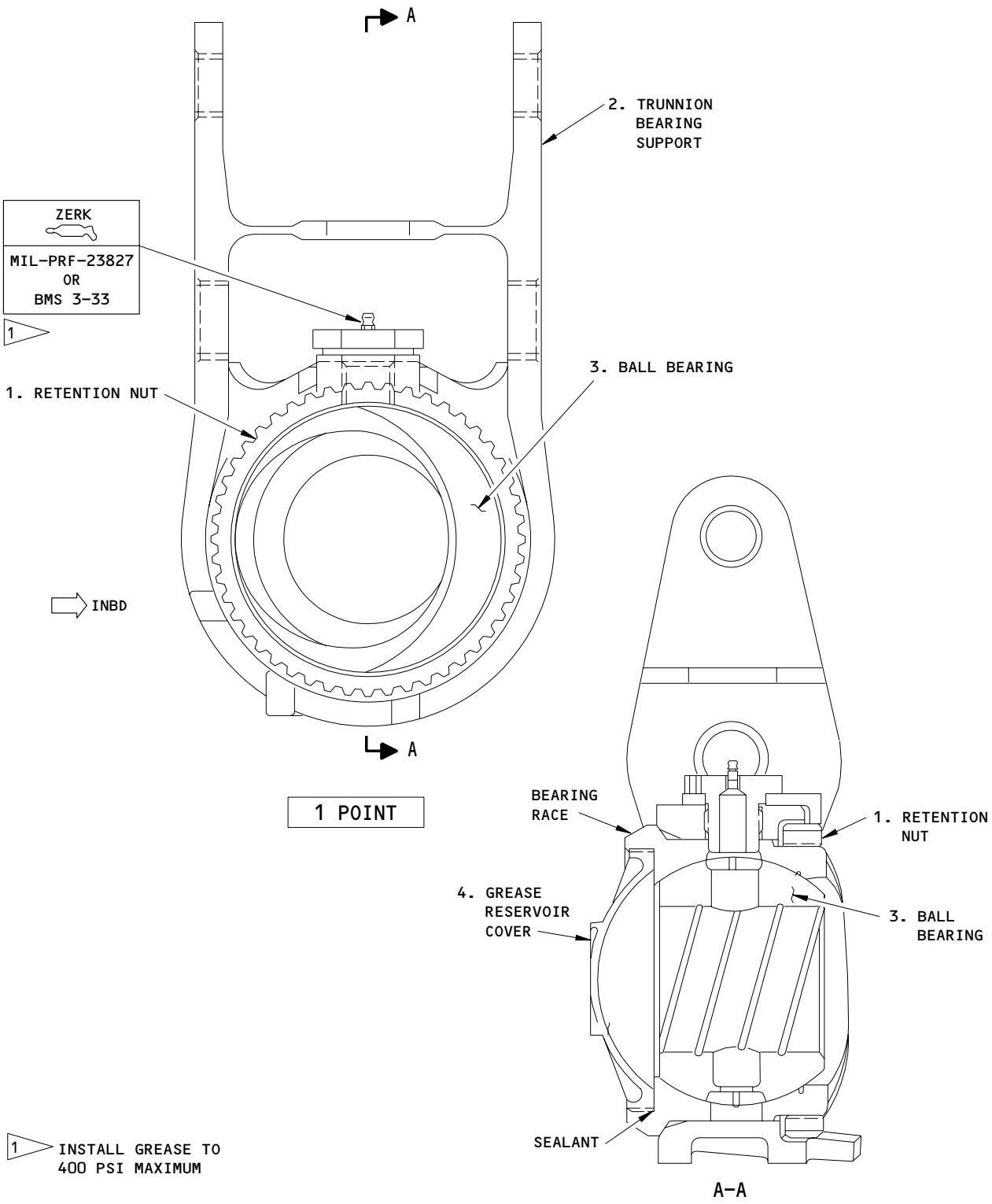
A



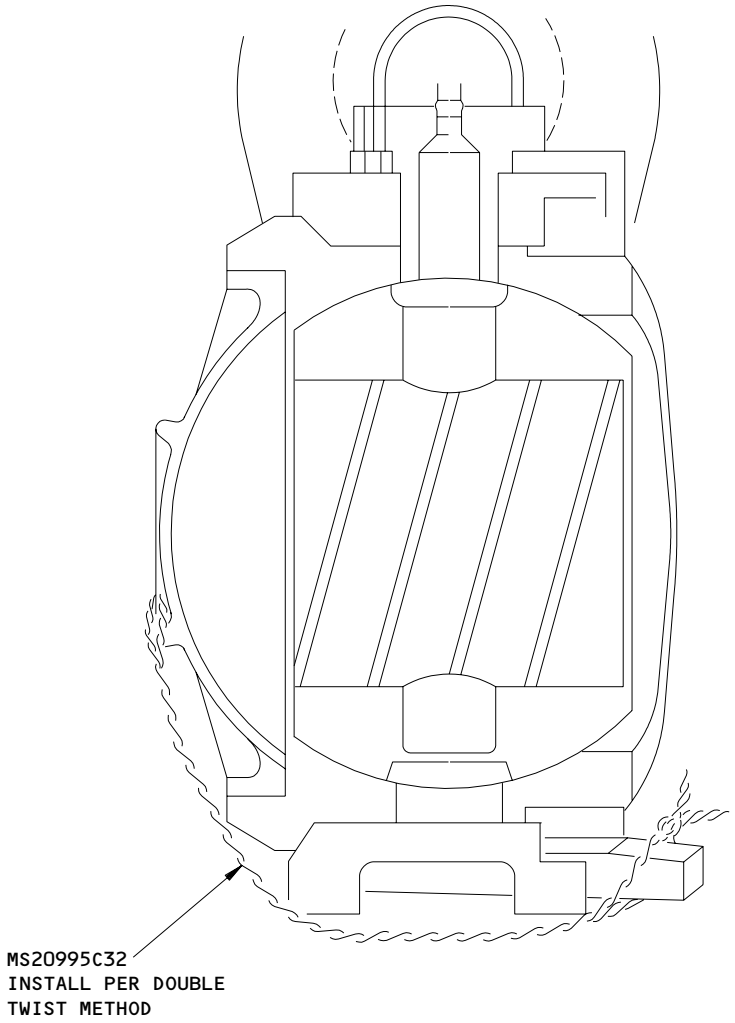
MLG FORWARD TRUNNION BEARING SUPPORT

B

Main Landing Gear (MLG) Forward Trunnion Support
Figure 401



Main Landing Gear (MLG) Forward Trunnion Bearing
Figure 402



MLG Forward Trunnion Bearing Reservoir Cap Lockwire
Figure 403

(b) Use the sockets to remove the remaining trunnion nuts.
(c) Remove the mount bolts (1).

S 024-031
(4) Remove the trunnion bearing support (2).

TASK 57-54-05-404-001
3. Install the Forward Trunnion Support (Fig. 401)
A. Equipment
(1) Adapter Equipment, B57003-33

NOTE: The adapter equipment includes the adapter tool and the sockets.

B. References
(1) AMM 32-11-01/401, Main Landing Gear
(2) AMM 57-51-10/401, MLG Trunnion Fairing
C. Parts

AMM		NOMENCLATURE	AIPC		
FIG	ITEM		SUBJECT	FIG	ITEM
401	1	Bolts (mount bolts)	57-54-05	01	102
	1	Bolts (mount bolts)			103
	2	Machine Assembly (Trunnion Bearing Support)			113

D. Access
(1) Location Zones
571/671 MLG trunnion fairing (Left/Right)

E. Procedure - Install the Forward Trunnion Support

S 434-008
(1) Put the trunnion bearing support (2) in position to align the bolt holes.

S 434-009
(2) Do the steps that follow to install the mount bolts:
(a) Put the mount bolts (1) in the correct locations.
(b) Install the large trunnion nut on the outboard side of the MLG trunnion fitting with the adapter tool and a wrench.
(c) Use the sockets to install the remaining trunnion nuts.

(d) Tighten the mount bolts to 5600-7200 pound-inches.

S 434-011

(3) Install the main landing gear (AMM 32-11-01/401).

S 434-012

(4) Install the MLG trunnion fairing (AMM 57-51-10/401).

TASK 57-54-05-004-013

4. Remove the MLG Forward Trunnion Bearing (Fig. 402)

A. Equipment

(1) Adapter Equipment, B57003-33

NOTE: The adapter equipment includes the adapter tool and the sockets.

B. References

(1) AIPC 57-54-05, Fig. 1

C. Access

(1) Location Zones

571/671 MLG trunnion fairing (Left/Right)

D. Procedure - Remove the Forward Trunnion Bearing

S 034-014

(1) Remove the forward trunnion support.

S 034-015

(2) Remove the grease reservoir cover (4) from the bearing race.

S 034-016

(3) Remove the ball bearing (3) through the slots in the race.

S 034-017

(4) Use the sockets to remove the retention nut (1).

S 034-018

(5) Move the bearing race out of the trunnion support.

TASK 57-54-05-404-030

5. Install the Forward Trunnion Bearing (Fig. 402)

A. Equipment

(1) Adapter Equipment, B57003-33

NOTE: The adapter equipment includes the adapter tool and the sockets.

B. Consumable Materials

(1) D00633 Grease - BMS3-33 (Preferred)

(2) D00013 Grease - MIL-PRF-23827 (Supersedes MIL-G-23827) (Alternate)
(3) Adhesive, BAC5010 Type 60:
    (a) A50102 Adhesive - Silicone RTV 174
    (b) A01077 Adhesive - Silicone Rubber RTV 102
    (c) A00508 Adhesive - Dow Corning Q3-7063 RTV
(4) G01048 Lockwire - Corrosion Resistant Steel
    (0.032 Inch Diameter) (NASM20995C32).

C. Parts
(1) 757-200;
    Refer to the table that follows:

AMM			AIPC		
FIG	ITEM	NOMENCLATURE	SUBJECT	FIG	ITEM
402	1	Nut (Retention Nut)	57-54-05	01	109
	2	Machine Assembly (Trunnion Support Bearing)			113
	3	Bearing Assembly (Ball Bearing)			11
	4	Reservoir (Grease Reservoir Cover)			111

D. Access
(1) Location Zones
    571/671 MLG trunnion fairing (Left/Right)

E. Procedure - Install the Forward Trunnion Bearing

S 644-019
(1) Apply a large quantity of grease to the bearing and the race surfaces.

S 034-020
(2) Install the bearing race in the trunnion support.

S 644-021
(3) Apply grease, BMS 3-33, to the retention nut threads.

S 034-022
(4) Install the retention nut (1) with the socket set.

S 034-023
(5) Tighten the retention nut (1) to 6000-15000 pound-inches.

NOTE: The landing gear must be removed to tighten the retention nut.
(a) Torque nut to 6000 pound-inch minimum.
(b) Tighten nut to allow alignment of lockplate.

S 034-024
(6) Install the ball bearing (3) in the race.

S 644-025
(7) Apply grease to the reservoir threads.

S 434-026
(8) Apply a continuous bead of adhesive to the bearing race.

S 434-027
(9) Install the grease reservoir cover (4) in the bearing race.

S 434-028
(10) Tighten the grease reservoir cover (4) to 200-400 pound-inches.

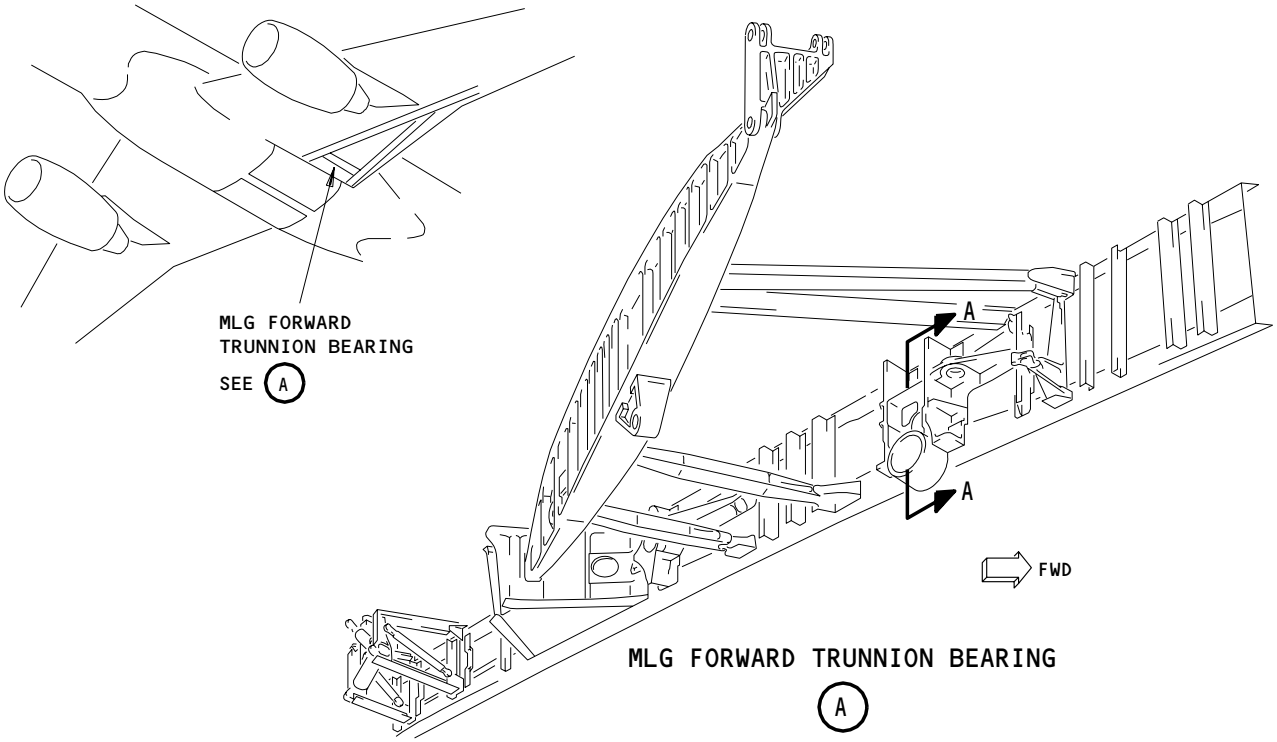
S 434-029
(11) Install the forward trunnion support.

S 434-064
(12) Safety wire reservoir cover to support lower lug with lockwire, G01048, using double twist method.

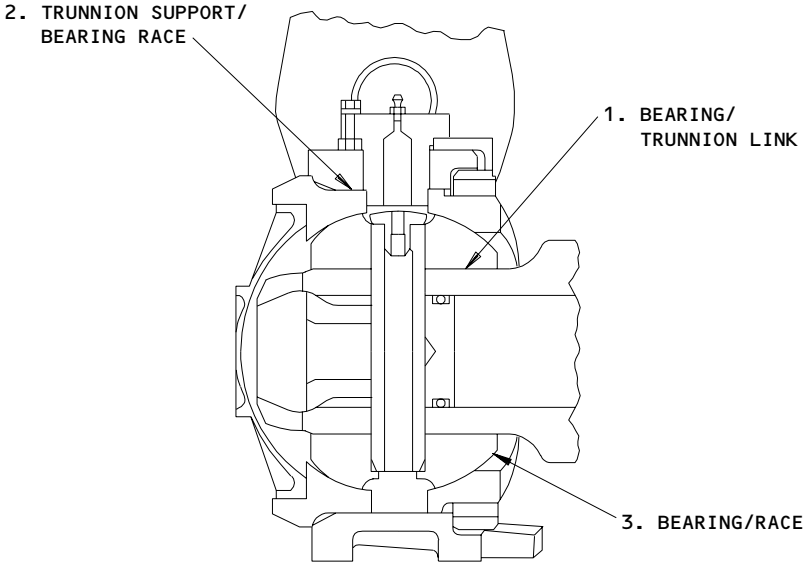
MLG FORWARD TRUNNION BEARING AND SUPPORT - INSPECTION/CHECK

TASK 57-54-05-206-009

1. MLG Forward Trunnion Bearing Wear Limits
   A. General
      (1) This procedure has illustrations and wear limits charts. No instructions are given in this procedure to get access for the inspection. For this information, refer to MLG Forward Trunnion Bearing and Support - Removal/Installation (AMM 57-54-05/401).



MLG FORWARD TRUNNION BEARING
A



A-A

MLG Forward Trunnion Bearing and Support Wear Limits
Figure 601 (Sheet 1)

INDEX NO.	PART NAME	DIM.	DESIGN LIMITS		WEAR LIMITS		REPLACE WORN PART	REPAIR WORN PART	REPAIR INSTR.
			DIAMETER		MAX WEAR DIM.	MAX DIAM CLEAR-ANCE			
			MIN	MAX					
1	BEARING	ID	3.8755	3.8765	3.8870	0.0120	X		
	TRUNNION LINK	OD	3.8735	3.8750					
2	TRUNNION SUPPORT	ID	7.4000	7.4018	7.4194	0.0200	X		
	BEARING RACE	OD	7.3982	7.3994	7.3818		X		
3	RACE	ID	6.5060	6.5080	6.5270	0.025	X		
	BEARING	OD	6.5000	6.5020	6.4830		X		

MLG Forward Trunnion Bearing and Support Wear Limits
Figure 601 (Sheet 2)

MLG AFT TRUNNION BEARING AND SUPPORT - REMOVAL/INSTALLATION

1. General
   A. This procedure has four tasks:
      (1) The first task is the instruction for removal of the aft trunnion support.
      (2) The second task is instruction for the installation of the aft trunnion support.
      (3) The third task is instructions for the removal of the aft trunnion bearing.
      (4) The fourth task is instructions for the installation of the aft trunnion bearing.

TASK 57-54-07-004-001

2. Remove the Aft Trunnion Support (Fig. 401)
   A. References
      (1) 32-11-01/401, Main Landing Gear
      (2) 57-51-10/401, MLG Trunnion Fairing
   B. Access
      (1) Location Zones
          500/600 Left Wing/Right Wing

   C. Procedure - Remove the Aft Trunnion Support

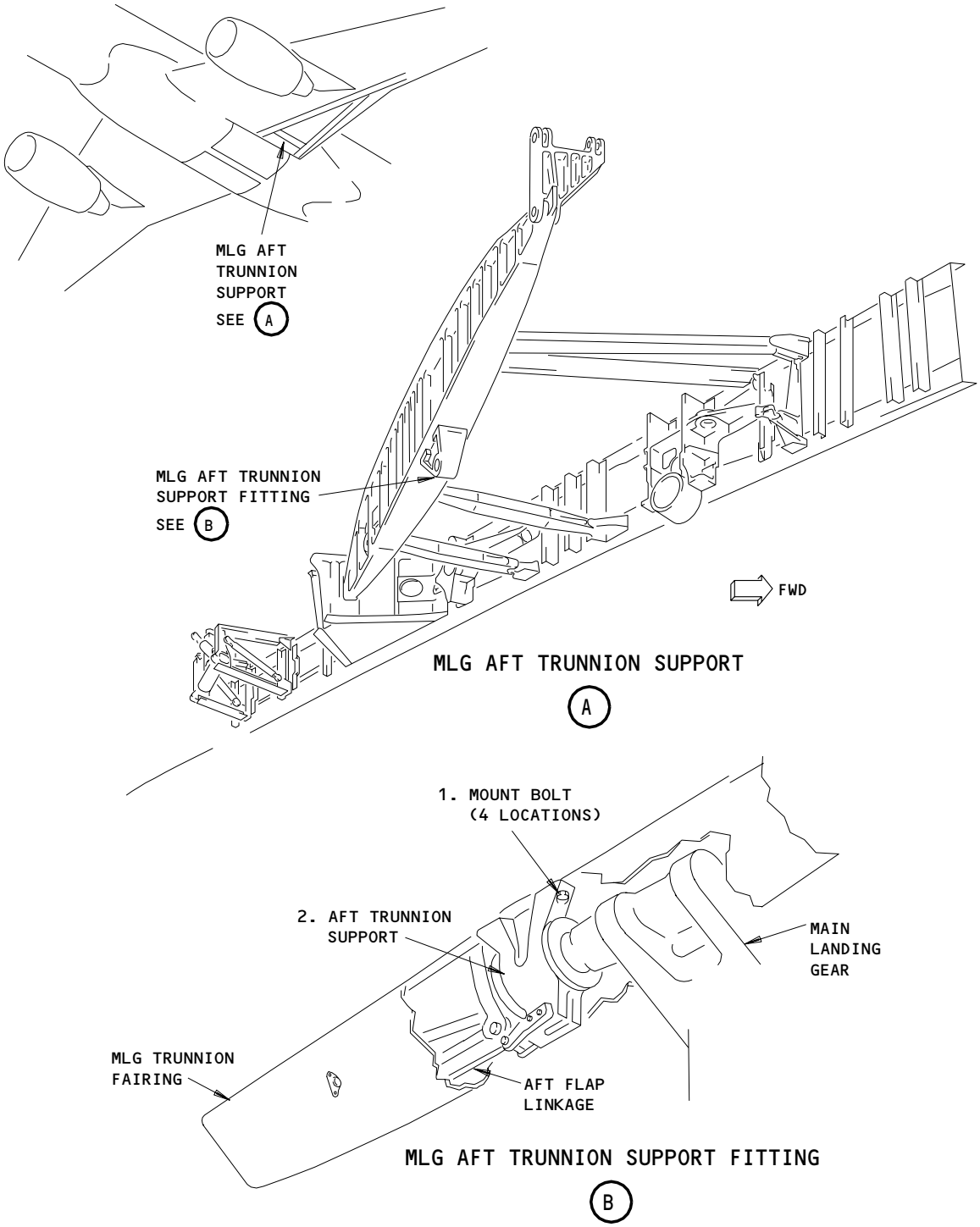
      S 014-040
      (1) If you want to replace the aft trunnion support fitting without removing the main landing gear, do these steps:
          (a) Make sure the landing gear down locks are installed (AMM 32-00-20).
          (b) Open the landing gear doors and install door locks (AMM 32-00-15).
          (c) Jack the airplane sufficiently to take the weight off the landing gears (AMM 07-11-01).
          (d) Omit the following step to remove the landing gear, and continue the procedure.

      S 014-002
      (2) If you want to remove the main landing gear, do this task: Remove the main landing gear (AMM 32-11-01).

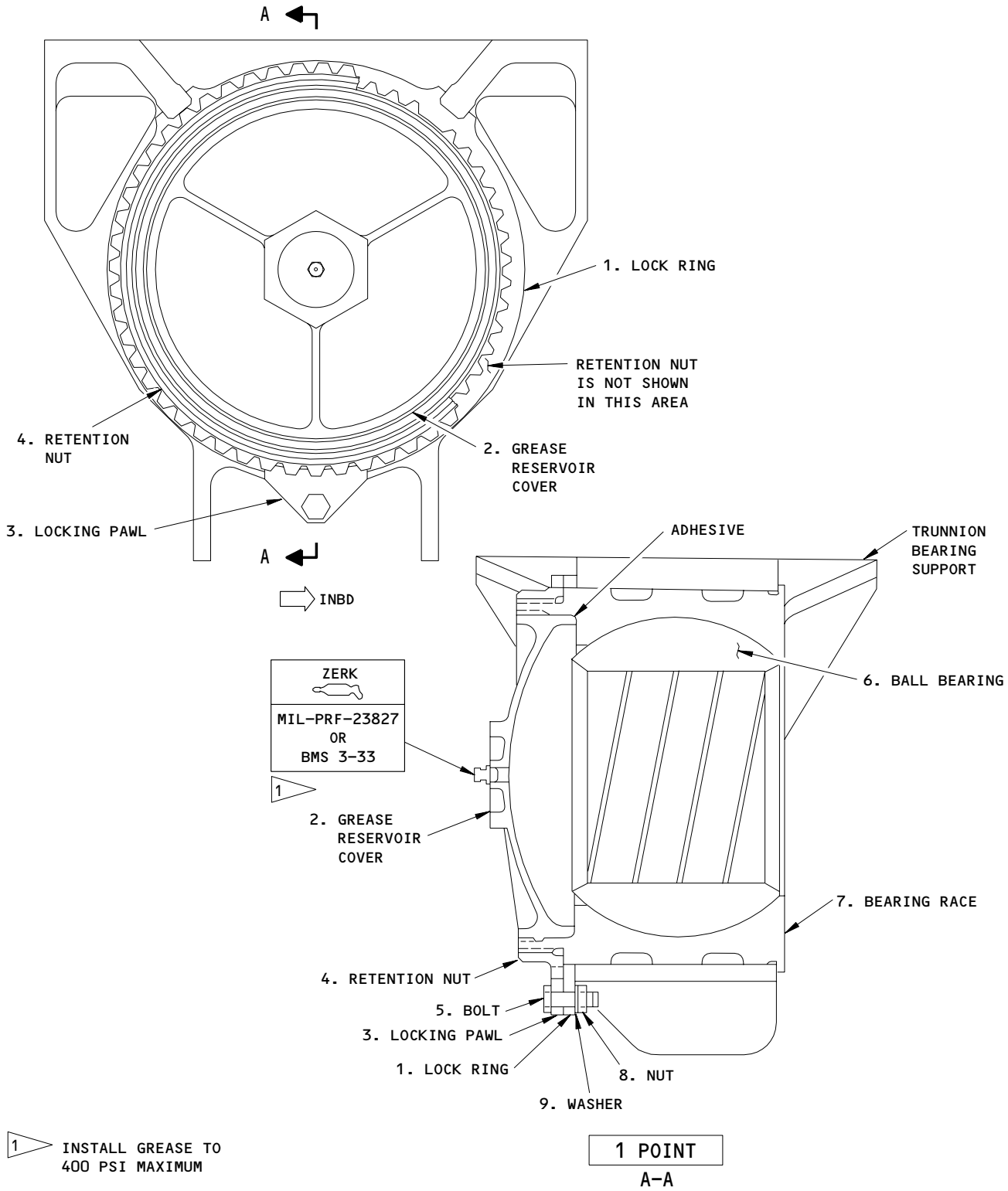
      S 014-003
      (3) Remove the two aft sections of the MLG trunnion fairing (AMM 57-51-10).

      S 414-004
      (4) Connect the aft inboard flap to the main inboard flap.

      S 014-005
      (5) Disconnect the aft flap linkage from the trunnion support.



Main Landing Gear (MLG) Aft Trunnion Support
Figure 401



Main Landing Gear (MLG) Aft Trunnion Bearing
Figure 402

S 034-006
(6) Remove the mount bolts (1).

S 024-007
(7) Remove the aft trunnion support (2).

TASK 57-54-07-404-035

3. Install the Aft Trunnion Support (Fig. 401)

A. Parts

AMM		NOMENCLATURE	AIPC		
FIG	ITEM		SUBJECT	FIG	ITEM
401	1	Special Bolts (Mount Bolts)	57-54-03	02	580 582 584
401	2	Pillow Block Assembly (Aft Trunnion Support)	57-54-03	02	600

B. References
(1) 32-11-01/401, Main Landing Gear
(2) 57-51-10/401, MLG Trunnion Fairing

C. Access
(1) Location Zones
500/600 Left Wing / Right Wing

D. Procedure - Install the Aft Trunnion Support

S 434-008
(1) Move the aft trunnion support (2) in position on the MLG beam.

S 434-009
(2) Install the mount bolts (1).
(a) Tighten the mount bolts to 2200-2400 pound-inches.

S 434-010
(3) Connect the aft flap linkage.

S 414-011
(4) Install the main landing gear (Ref 32-11-01).

S 414-012
(5) Install the MLG trunnion fairing (Ref 57-51-10).

TASK 57-54-07-004-013

4. Remove the Aft Trunnion Bearing (Fig. 402)

A. References

(1) 32-11-01/401, Main Landing Gear

(2) 57-51-10/401, MLG Trunnion Fairing

(3) IPC 57-54-51, Fig. 15

B. Access

(1) Location Zones

500/600 Left Wing/Right Wing

C. Procedure - Remove the Aft Trunnion Bearing

S 014-014

(1) Remove the main landing gear (Ref 32-11-01).

S 014-015

(2) Remove the two aft sections of the MLG trunnion fairing (Ref 57-51-10).

S 034-016

(3) Remove the lockwire.

S 034-017

(4) Remove the grease reservoir cover (2) from the bearing race.

S 024-018

(5) Remove the ball bearing (6) through the slots in the race.

S 024-019

(6) Remove the bolt (5), washer (9), nut (8) and the locking pawl (3).

S 024-020

(7) Remove the retention nut (4) with the socket set for the bearing retention nut.

S 024-021

(8) Move the lock ring (1) aft to remove it from the bearing race.

S 024-022

(9) Remove the bearing race (7) from the trunnion support.

TASK 57-54-07-404-036

5. Install the Aft Trunnion Bearing (Fig. 402)

A. Equipment

(1) Socket Set - MLG Trunnion Bearing Retention Nuts, B32027-1

B. Consumable Materials
(1) D00633 Grease - BMS 3-33 (Preferred)
(2) D00013 Grease - MIL-PRF-23827 (Supersedes MIL-G-23827) (Alternate)
(3) Adhesive, BAC5010 Type 60:
(a) A50102 Adhesive - Silicone RTV 174
(b) A01077 Adhesive - Silicone Rubber RTV 102
(c) A00508 Adhesive - Dow Corning Q3-7063 RTV

C. Parts

AMM			AIPC		
FIG	ITEM	NOMENCLATURE	SUBJECT	FIG	ITEM
402	1	(Lock Ring)	57-54-51	15	421F
	2	(Grease Reservoir Cover)			422D
	3	(Locking Pawl)			421E
	4	(Retention Nut)			421C
	5	(Bolt)			421
	6	(Ball Bearing)			422B
	7	(Bearing Race)			422B
	8	(Nut)			421B
	9	(Washer)			421A

D. References
(1) 32-11-01/401, Main Landing Gear
(2) 57-51-10/401, MLG Trunnion Fairing

E. Access
(1) Location Zones
500/600 Left Wing/Right Wing

F. Procedure - Install the Aft Trunnion Bearing

S 644-023
(1) Apply a large quantity of grease to the bearing and race surfaces.

S 434-024
(2) Move the bearing race in the trunnion support.

S 424-025
(3) Install the ball bearing (6) in the race.

S 424-026
(4) Install the lock ring (1) on the bearing race.

S 644-027
(5) Apply grease to the retention nut (4) threads.

S 434-037
(6) Install the retention nut (4) with the socket set. Tighten the retention nut to 2000-5000 pound-inches.

NOTE: If it is necessary to only tighten a loose retention nut, torque the nut to the value given above. It is not necessary to remove the aircraft weight unless a gap exists between the bearing outer race and the trunnion support fitting. If a gap exists, the aircraft weight must be relieved.

S 434-038
(7) Align the retention nut (4) to install the locking pawl (3).

S 434-028
(8) Install the locking pawl (3) with bolt (5), washer (9), and nut (8).
(a) Tighten bolt (5) to 100-150 pound-inches.

S 644-029
(9) Apply a layer of grease to the reservoir threads.

S 434-030
(10) Apply a continuous bead of adhesive to the bearing race as shown on Fig. 402.

S 434-031
(11) Install the grease reservoir cover (2) on the race. Tighten the grease reservoir cover to 200-400 pound-inches.

S 644-032
(12) Apply grease to the trunnion bearing (Fig. 402).

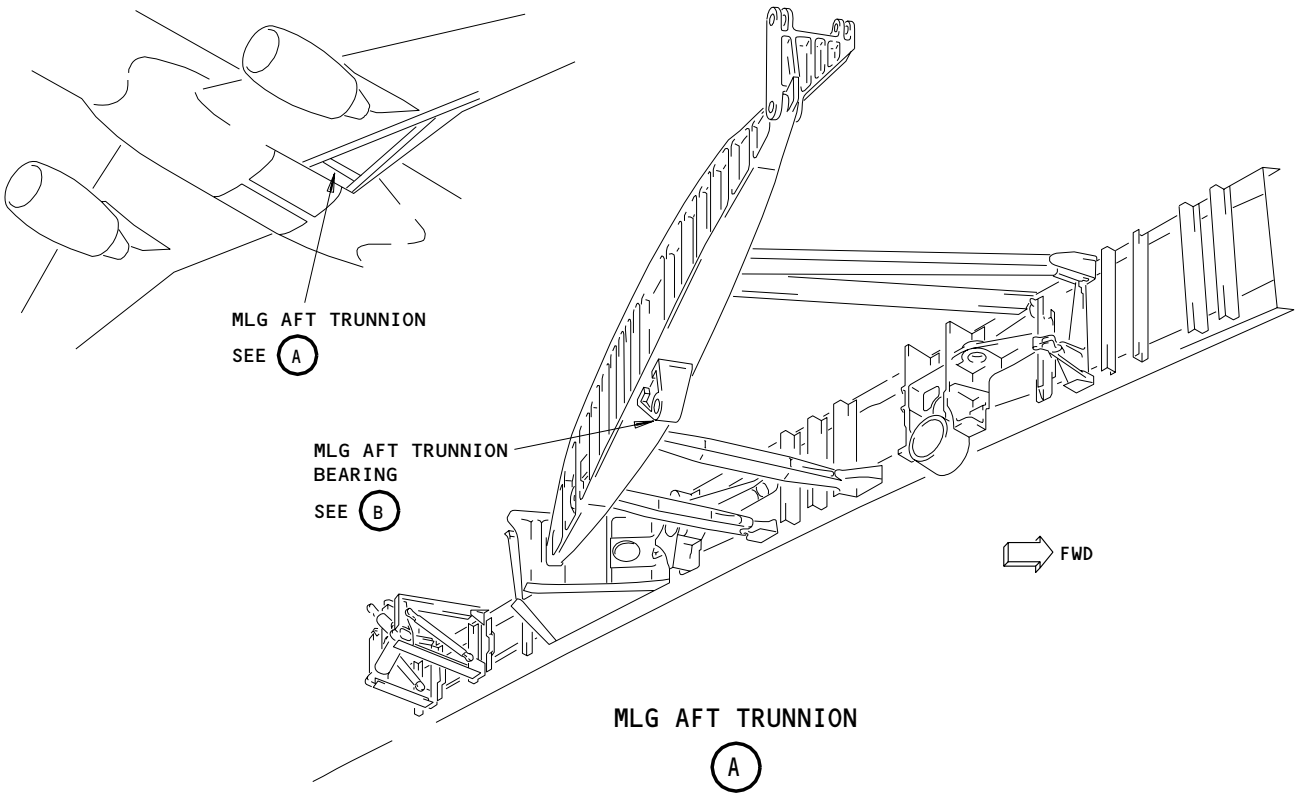
S 414-033
(13) Install the MLG trunnion fairing (Ref 57-51-10).

S 414-034
(14) Install the main landing gear (Ref 32-11-01).

MLG AFT TRUNNION SUPPORT - INSPECTION/CHECK

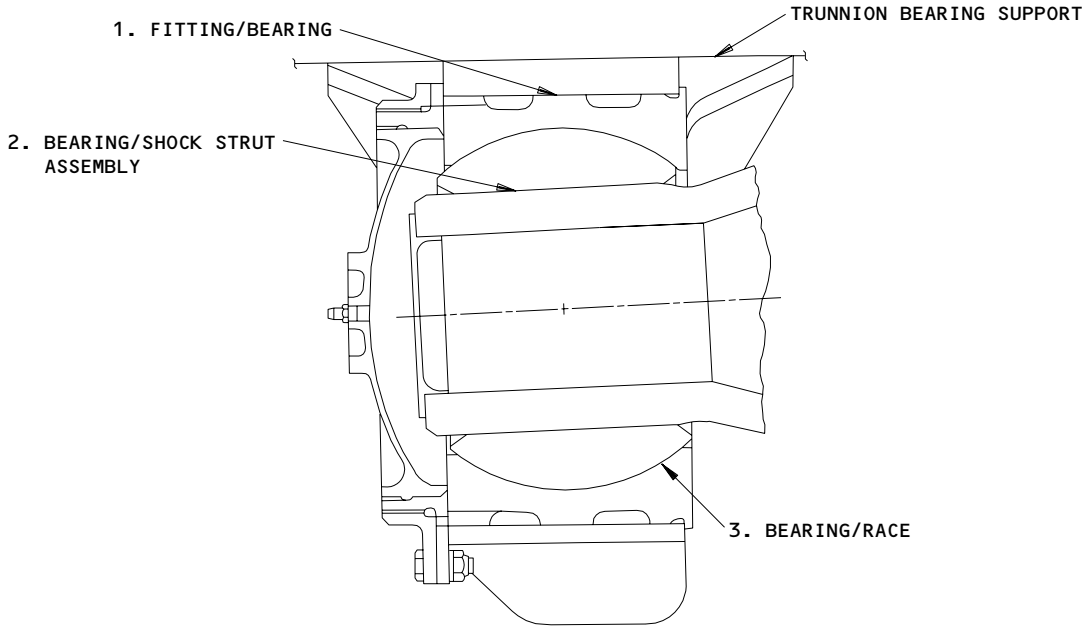
TASK 57-54-07-206-001

1. MLG Aft Trunnion Support Wear Limits (Fig. 601)
   A. General
      (1) This data has illustrations and a wear limit table. This procedure does not give information on how to gain access to, remove or replace the components.
      Refer to AMM 57-54-07/401 (MLG Aft Trunnion Bearing and Support - Removal/Installation) for this information.



MLG AFT TRUNNION

A



MLG AFT TRUNNION BEARING

B

MLG Aft Trunnion Bearing Wear Limits
Figure 601 (Sheet 1)

INDEX NO.	PART NAME	DIM.	DESIGN LIMITS		WEAR LIMITS		REPLACE WORN PART	REPAIR WORN PART
			DIAMETER		ALLOWED WEAR DIM. (INCH)	MAX DIAM CLEAR-ANCE (INCH)		
			MIN (INCH)	MAX (INCH)				
1	FITTING	ID	8.0030	8.0060	8.0100	0.0100		X
	BEARING	OD	7.9980	8.0000	7.9960		X	
2	BEARING	ID	4.5030	4.5050	4.5090	0.0100	X	
	SHOCK STRUT ASSEMBLY	OD	4.4970	4.4990	_____			X
3	RACE	ID	6.8060	6.8080	6.8270	0.025	X	
	BEARING	OD	6.8000	6.8020	6.7830		X	

MLG Aft Trunnion Bearing Wear Limits
Figure 601 (Sheet 2)

DEFLECTOR - AILERON AND AILERON TRIM CONTROL SYSTEM

1. General
   A. This procedure contains two tasks:
      (1) The first task is the removal of the deflector from the aileron and aileron trim control system.
      (2) The second task is the installation of the deflector on the aileron and aileron trim control system.

TASK 57-55-01-004-001

2. Remove the Deflector
   A. References
      (1) AMM 29-11-00/201, Pressurize/Depressurize Main Hydraulic Systems
      (2) AMM 32-00-15/201, Landing Gear Door Locks
      (3) AMM 32-00-20/201, Landing Gear Downlocks
      (4) IPC 27-11-14, Fig. 2
   B. Access
      (1) Location Zones
          143/144 MLG Wheel Well

   C. Prepare for the Removal

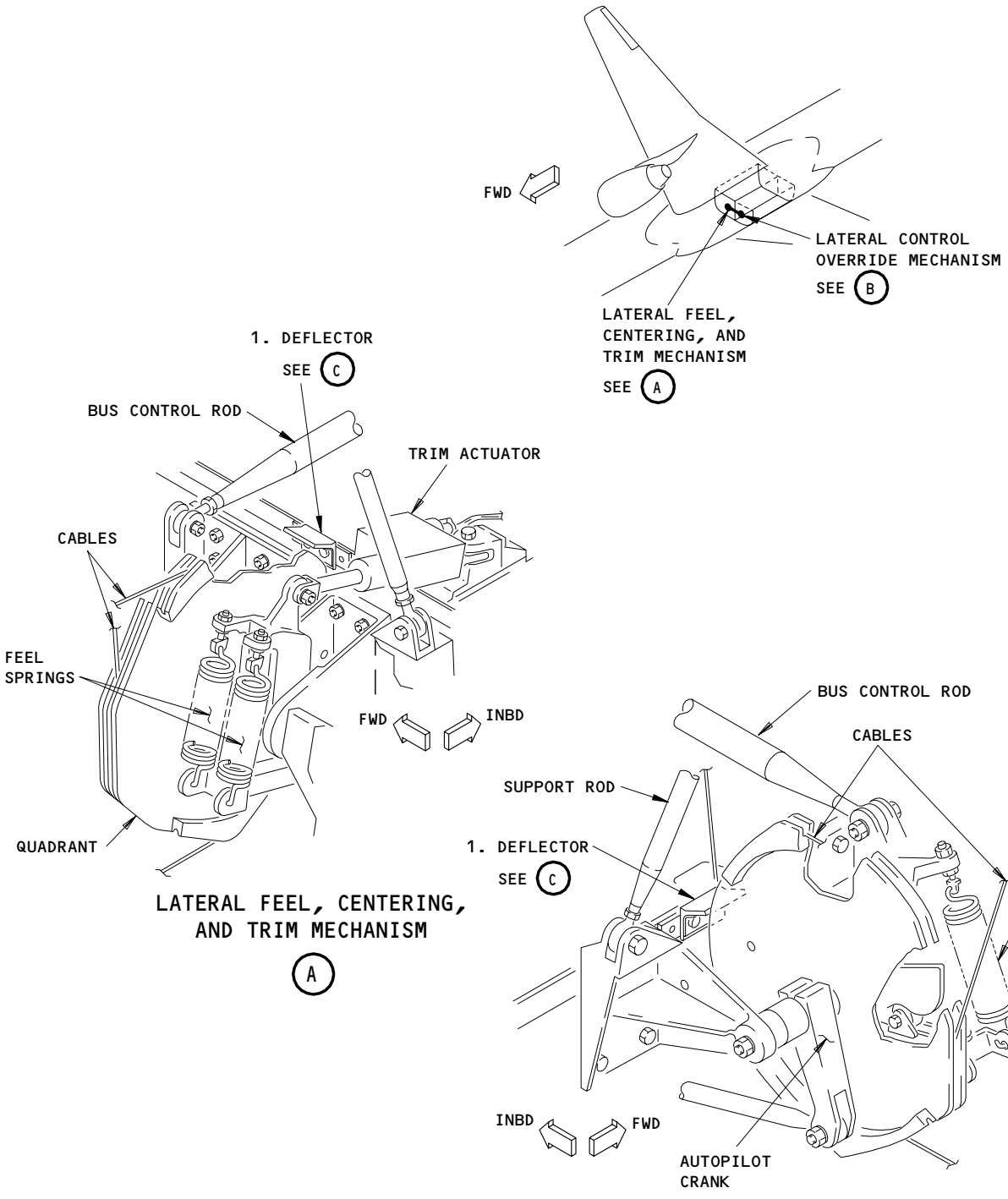
      S 864-002
      (1) Attach DO-NOT-OPERATE tags on the control wheels.

      S 214-003
      (2) Make sure that the downlocks are installed on the nose and main landing gear (AMM 32-00-20/201).

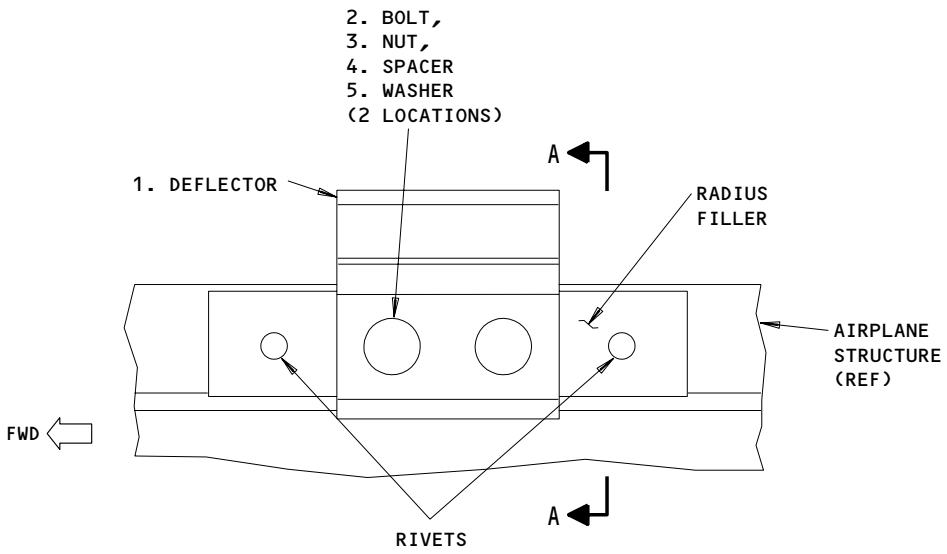
      S 494-004

      WARNING: USE THE PROCEDURE IN AMM 32-00-15/201 TO INSTALL THE DOOR LOCKS. THE DOORS OPEN AND CLOSE QUICKLY AND CAN CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

      (3) Open the doors for the landing gear and install the door locks (AMM 32-00-15/201).

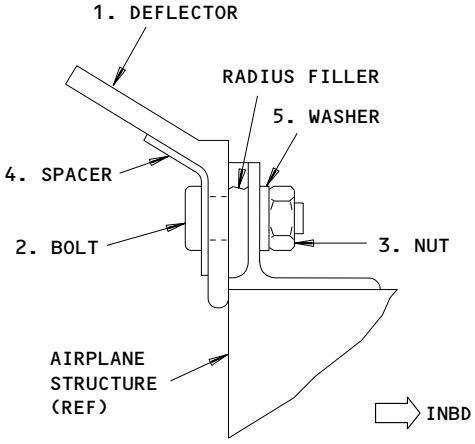


Deflector – Aileron and Aileron Trim Control System
Figure 401 (Sheet 1)



DEFLECTOR
(RIGHT SIDE SHOWN)

C



A-A

Deflector - Aileron and Aileron Trim Control System
Figure 401 (Sheet 2)

S 214-005
(4) Make sure the airplane does not have hydraulic power.

NOTE: If the airplane has hydraulic power, refer to the procedure in AMM 29-11-00/201 to remove the power from the left, center, and right hydraulic systems.

D. Procedure - Remove the Deflector

S 024-006
(1) Remove the bolt (2), nut (3), spacer (4), and washer (5) from the deflector (1) (Fig. 401).

S 024-007
(2) Remove the deflector (1).

TASK 57-55-01-404-008

3. Install the Deflector

A. References
(1) AMM 32-00-15/201, Landing Gear Door Locks

B. Parts

AMM		NOMENCLATURE	AIPC		
FIG	ITEM		SUBJECT	FIG	ITEM
401	1	Deflector Guard (Deflector)	27-11-14	02	180
	2	Bolt			155
	3	Nut			170
	4	Spacer			160
	5	Washer			165

C. Access
(1) Location Zones
143/144 MLG Wheel Well

D. Procedure - Install the Deflector

S 424-009
(1) Put the deflector (1) in the correct position.

S 424-019
(2) Install the bolt (2), nut (3), spacer (4), and washer (5) in the deflector (1) (Fig. 401).

E. Put the Airplane Back to Its Initial Condition

S 094-011

WARNING: USE THE PROCEDURE IN AMM 32-00-15/201 TO REMOVE THE DOOR LOCKS. THE DOORS OPEN AND CLOSE QUICKLY AND CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(1) Remove the door locks from the landing gear and close the doors (AMM 32-00-15/201).

S 864-012

(2) Remove the DO-NOT-OPERATE tags from the control wheels.