Aerolineas Argentinas

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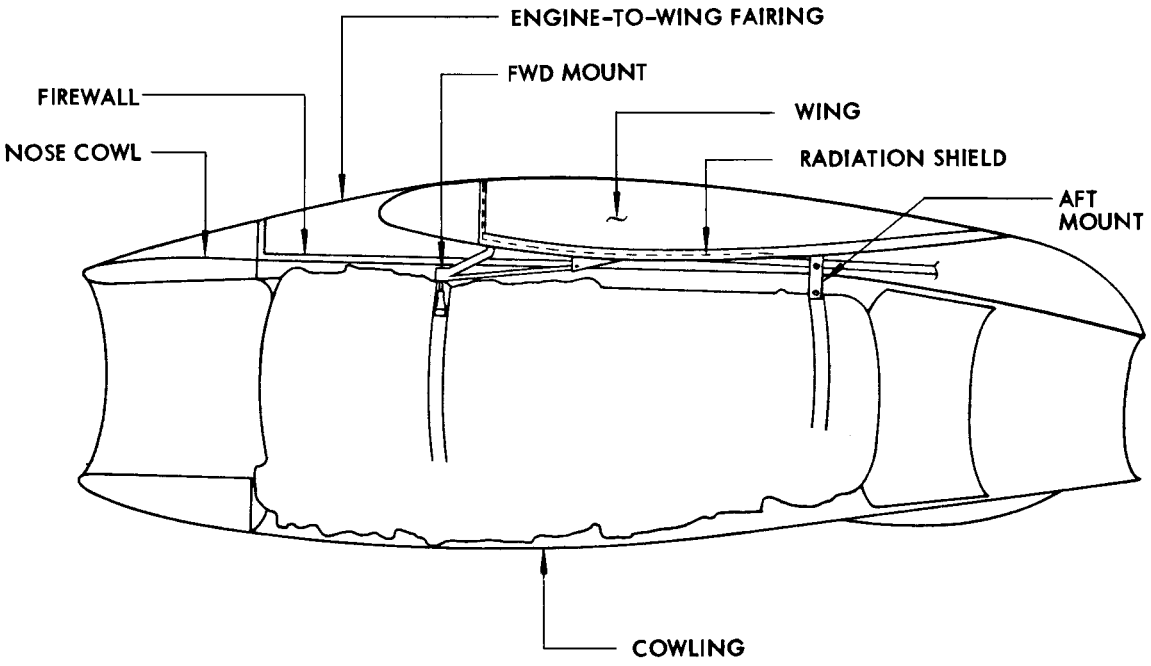
CHAPTER 54 - NACELLES/PYLONS

TABLE OF CONTENTS

NACELLES/PYLONS - DESCRIPTION AND OPERATION

1. General
   A. Two engines are installed on the airplane, one on each wing. (See figure 1.) Each engine is mounted at three points directly from the wing. The cowling and supporting structure of the engines is generally constructed of aluminum alloy. Steel, stainless steel or titanium is used in areas where high structural strength and fire or heat resistance is required. The engine-to-wing fairing is supported by the wing. The fixed cowl is attached to the engine and the movable cowl is supported by hinges from the fixed cowl.
   B. The engines are mounted by cone bolts at two points forward and at a single point aft. The forward mounting, with thrust links, takes all thrust loads plus vertical and side loads. Engine vibration isolators are installed at the structural engine attachment points. The engine support fittings are designed to allow for thermal expansion of the engines.
   C. The forward attachment fittings consist of a steel forging suspended from fittings attached to wing structure. The aft attachment fitting is suspended from the outboard track of the inboard flap.
   D. Engine hoist fittings, with protective covers are installed on the surface of the wing.



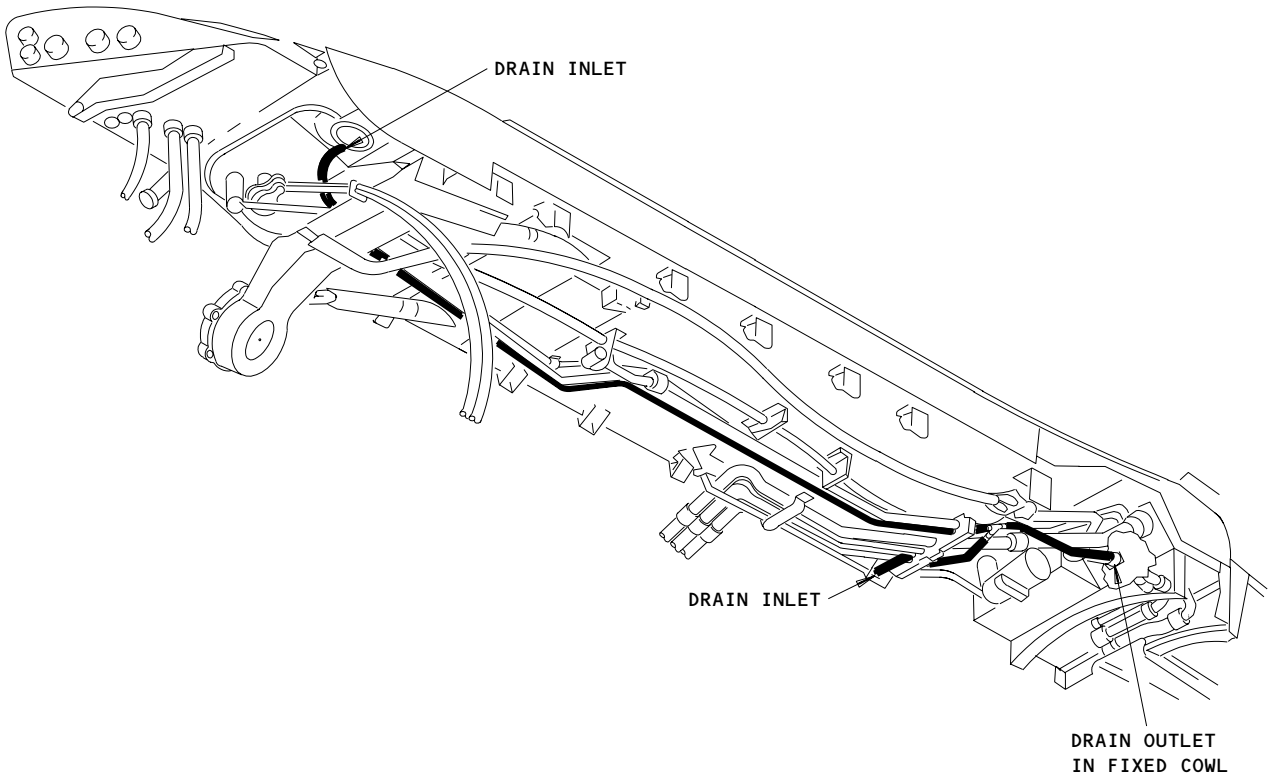
Engine Nacelles
Figure 1

MIDFAIRING DRAINS - INSPECTION/CHECK

1. General
   A. The midfairing drain system disposes of accumulated fluids leaking from system plumbing routed through the midfairing. The midfairing clearing procedure gives the instructions for clearing a midfairing drain system blockage using compressed air.
2. Clear Midfairing Drains
   A. Equipment and Materials
      (1) Air supply 25-35 psig regulated, hose and nozzle
      (2) Plugs - suitable for air-tight sealing of drain tube openings
   B. Prepare to Clear Drains
      (1) Remove forward, mid and aft access doors and panels from both sides of the midfairing.
      (2) Loosen the heat shield fasteners sufficiently to gain access to the flow passages in the midfairing cavity cross members.
   C. Clear Drains (Fig. 601)
      (1) Use 25-35 psig regulated air supply to clear drain line sections.
         (a) Block drain inlet in aft midfairing cavity with plug.
         (b) Apply air pressure to drain line outlet on fixed fairing, while covering pneumatic duct pan assembly drain inlet in forward midfairing with rags to collect debris.
         (c) Remove rags and debris from pneumatic duct pan assembly cavity.
         (d) Remove drain plug from aft drain inlet in aft midfairing cavity.
         (e) Plug pneumatic duct pan assembly drain inlet.
         (f) Apply air pressure to drain line outlet on fixed fairing, while covering aft drain inlet with rags to collect debris.
         (g) Remove rags and debris from aft cavity.
         (h) Remove plug from pneumatic duct pan assembly drain inlet.
      (2) Check for debris clogging flow passages in midfairing cavities cross members. Use air pressure to blow clear if necessary.
      (3) Inspect drain lines for dents or other damage.
   D. Return Airplane to Normal
      (1) Check that tools and loose materials are removed and midfairing cavities are free of debris before installing access doors and panels.

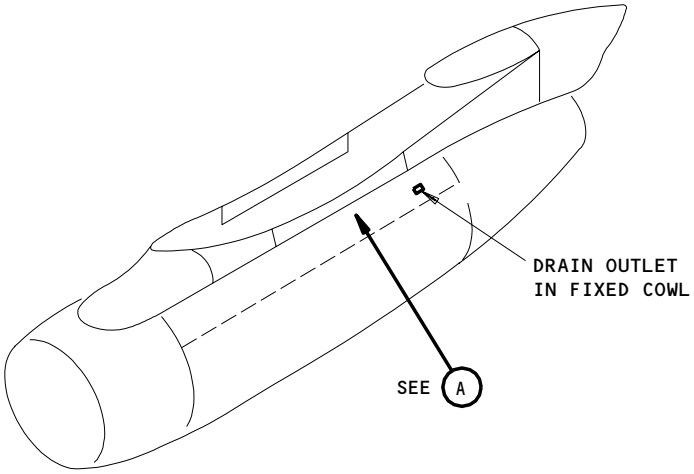
         CAUTION: TOOLS, LOOSE MATERIAL, AND DEBRIS IN MIDFAIRING CAVITIES MAY BLOCK DRAINS RENDERING DRAIN SYSTEM INEFFECTIVE.

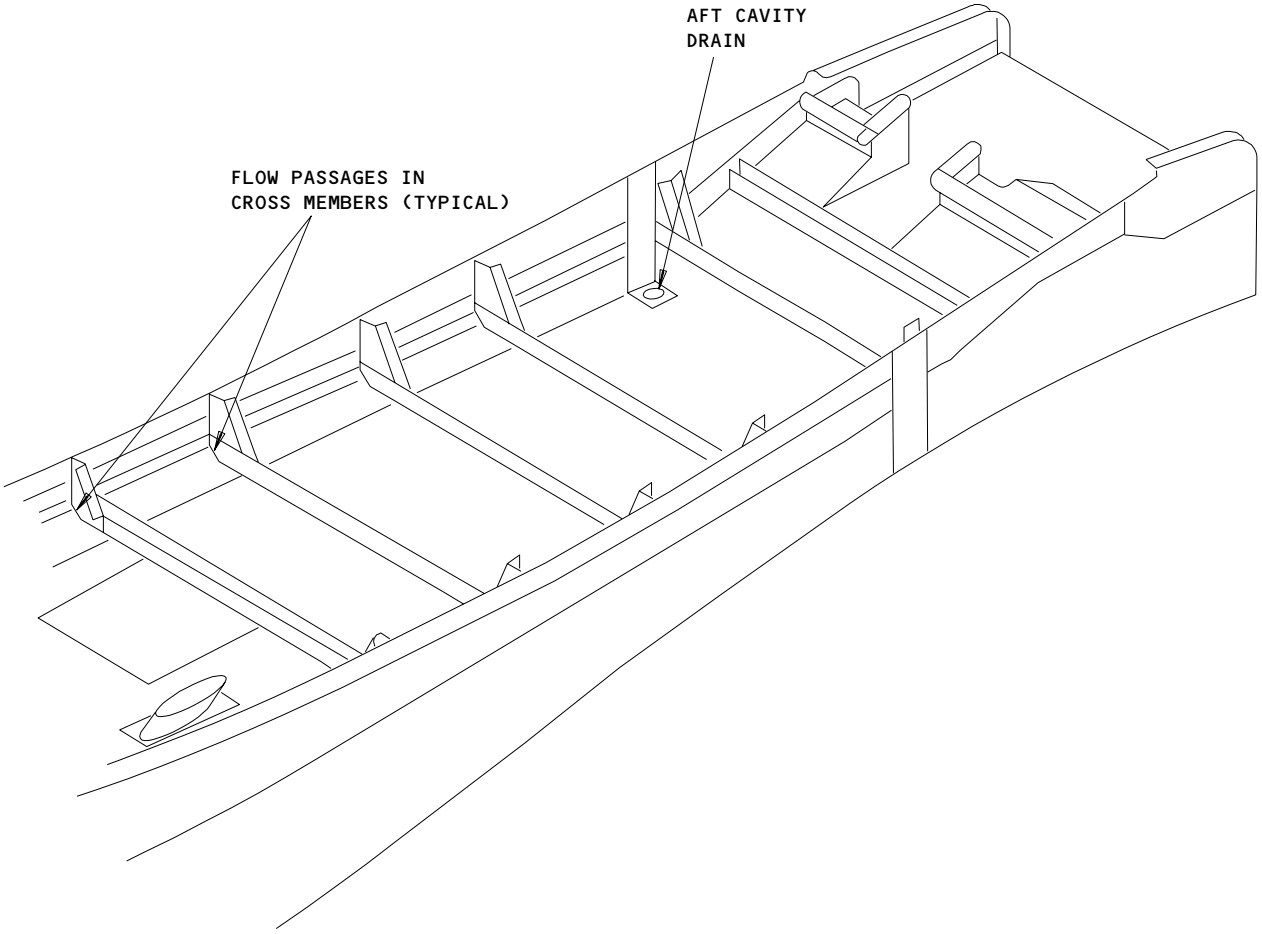
      (2) Install heat shield to firewall.
      (3) Install midfairing access doors and panels.



1 NO. 1 ENGINE SHOWN

Midfairing Drain Locations
Figure 601 (Sheet 1)



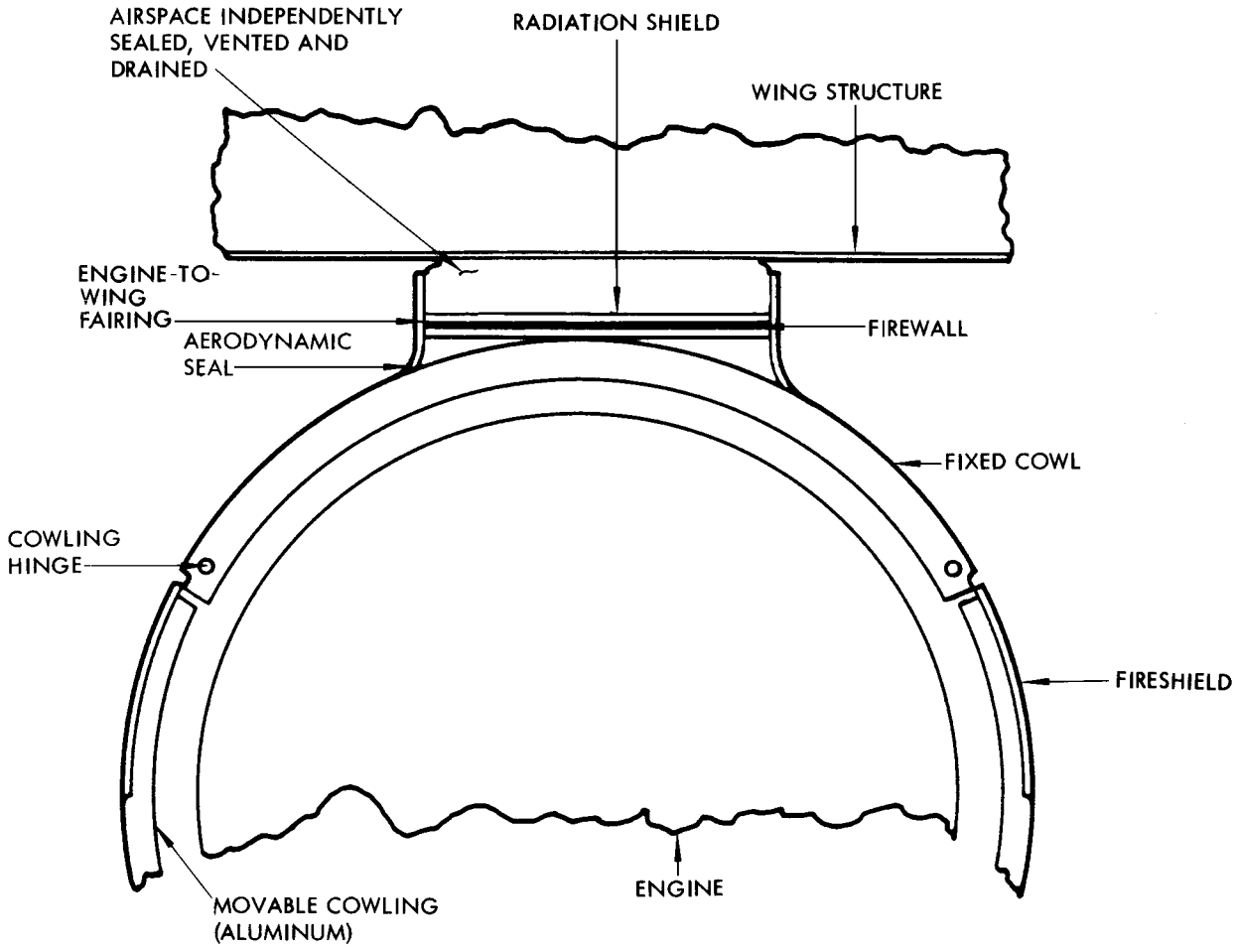


1 NO. 1 ENGINE SHOWN

Midfairing Drain Locations
Figure 601 (Sheet 2)

ENGINE FIREWALL - DESCRIPTION AND OPERATION

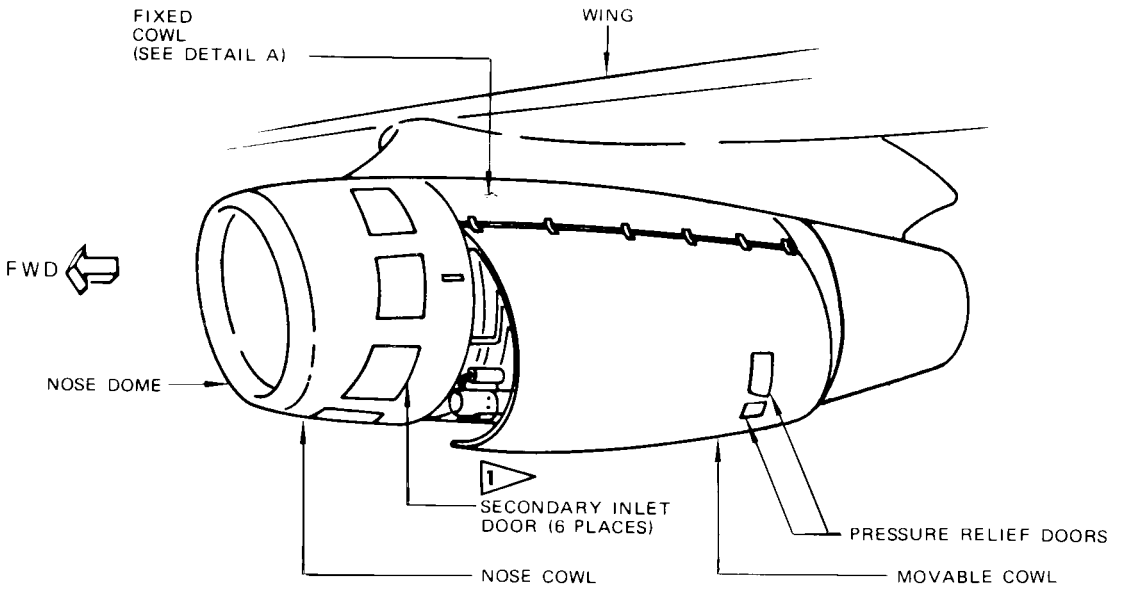
1. General
   A. Within the engine-to-wing fairing, a vapor-tight stainless steel firewall, and a radiation shield are installed as fire and heat protection. (See figure 1.) An armor plate is installed between nacelle stations 136 through 158 on the firewall.

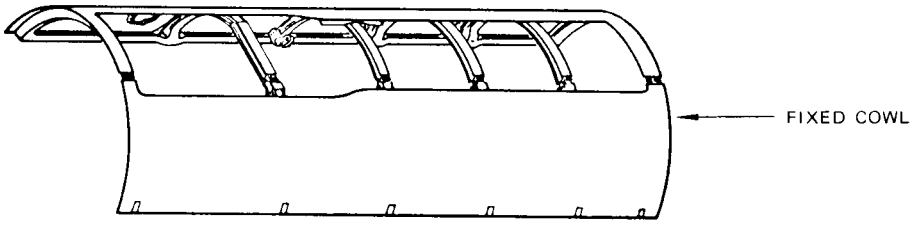


Engine Firewall
Figure 1

ENGINE COWLING – DESCRIPTION AND OPERATION

1. General
   A. The engine cowling consists of a nose dome, a nose cowl, two movable cowls, a fixed upper cowl, and thrust reverser fairings. (See figure 1.) Refer to Chapter 54 of the Structural Repair Manual for skin identification.
   B. The nose cowl has access openings for inspection and maintenance of the thermal anti-icing duct. The movable cowls have access openings for maintenance of engine accessories.
2. Nose Dome and Nose Cowl
   A. The nose dome is mounted on stubs forward of the inlet guide vanes. The nose cowl is attached to the forward flange of the engine inlet case. An acoustical panel, with a drain, is installed on the inside of the nose cowl. Six secondary air inlet doors are installed in the nose cowl on some airplanes.
3. Movable Cowls and Fixed Upper Cowls
   A. Movable cowls are installed on the left and right side of each engine. The structure of the movable cowl consists of frames and aluminum skin. A fireshield is attached to the upper section of the movable cowl. The movable cowl is mounted on the fixed cowl by means of latches.
      (1) The movable cowl has two pressure relief doors. Each door is held by a latch which will yield to excessive pressure inside the cowl and allow the door to open.
   B. The structure of the fixed cowl consists of stainless steel skin, frames and support brackets. The fixed cowl is attached to frames on the engine. When the engine is removed, the fixed fairing rests on support fittings attached to the forward engine mount and the engine-to-wing midfairing firewall.
4. Thrust Reverser Fairing
   A. The thrust reverser, with associated fairings and doors, is described in Chapter 78, Exhaust.





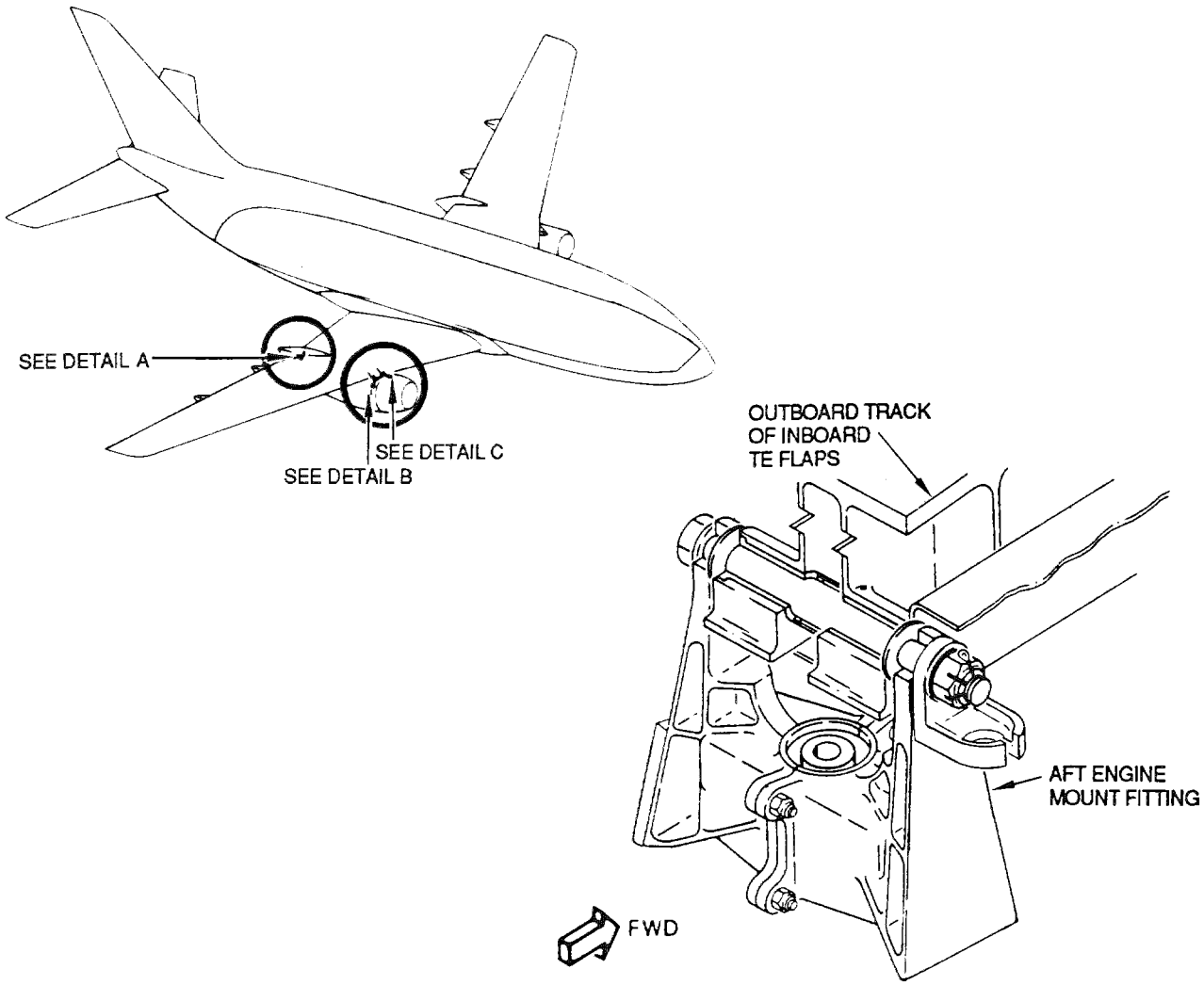
DETAIL A

1 NOT ON ALL AIRPLANES

Engine Cowling
Figure 1

ENGINE ATTACH FITTINGS - DESCRIPTION AND OPERATION

1. General
   A. The engine is attached at the forward end to a steel forging. This steel forging is suspended from wing structure in the following manner: One the inboard side, the steel forging is connected directly to a fitting attached to heavy lower wing skin immediately aft of the wing front spar, and on the outboard side, the steel forging is connected to a fitting attached to the forward side of the wing front spar with an intermediate short link (Fig. 1).
   B. The engine is attached at the aft end to a steel fitting which is suspended from the outboard track of the inboard flaps (Fig. 1).



DETAIL A

Engine Attach Fittings
Figure 1

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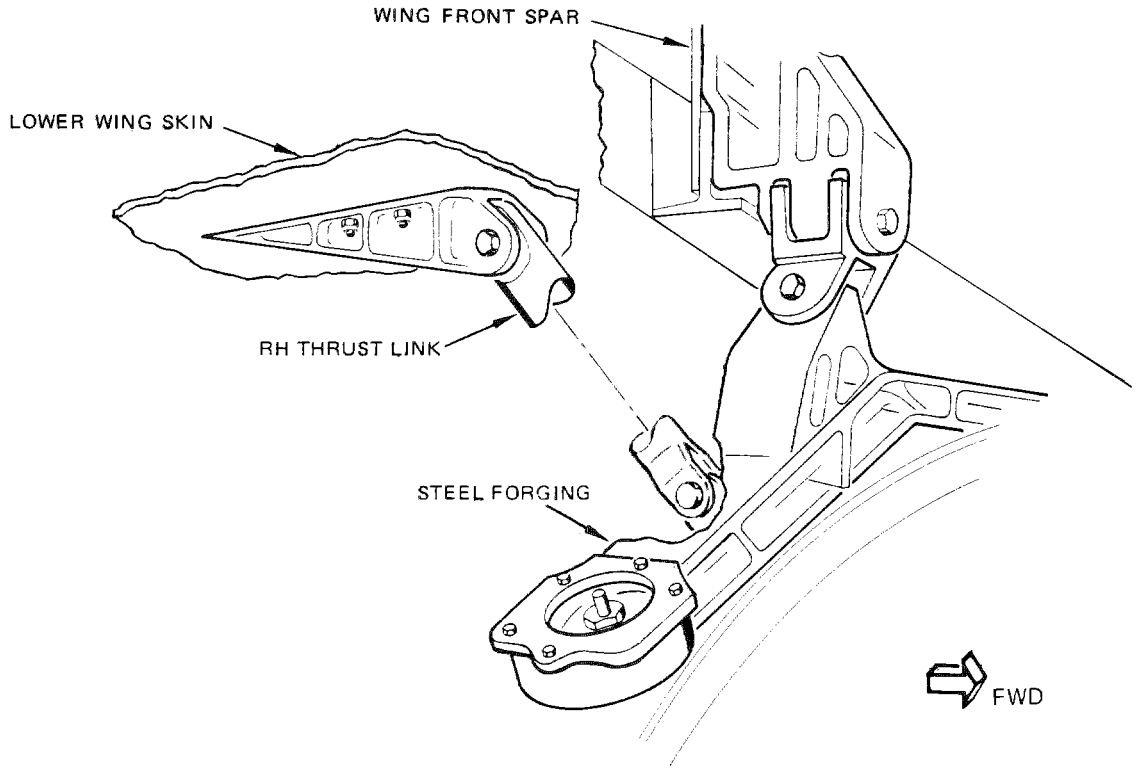
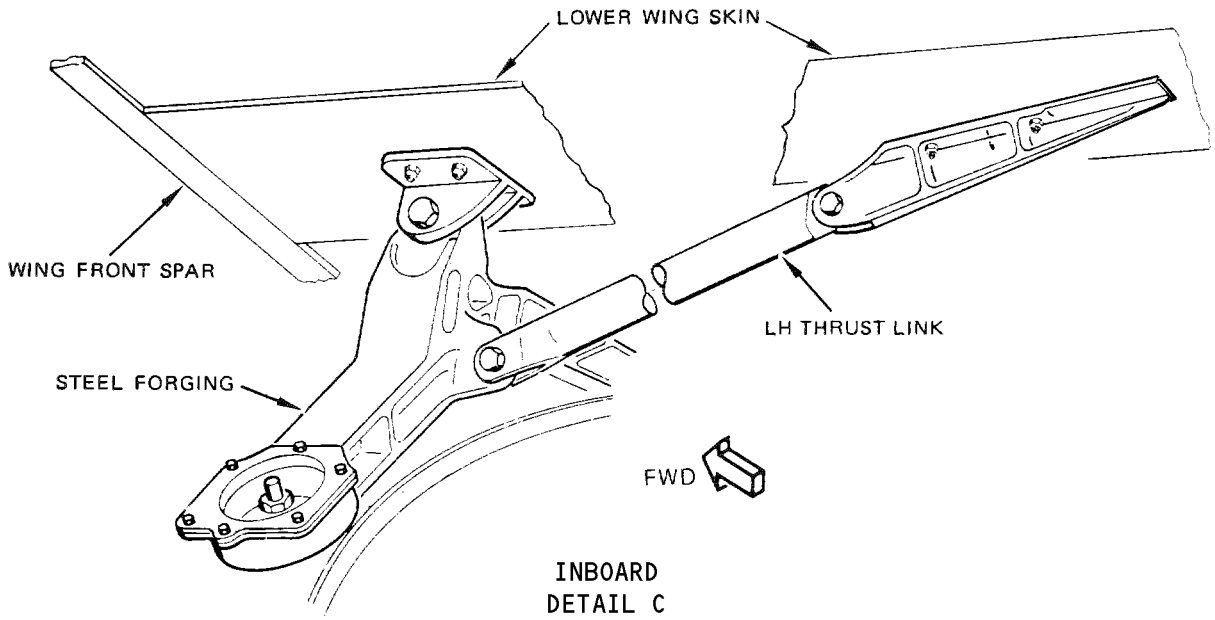


OUTBOARD
DETAIL B

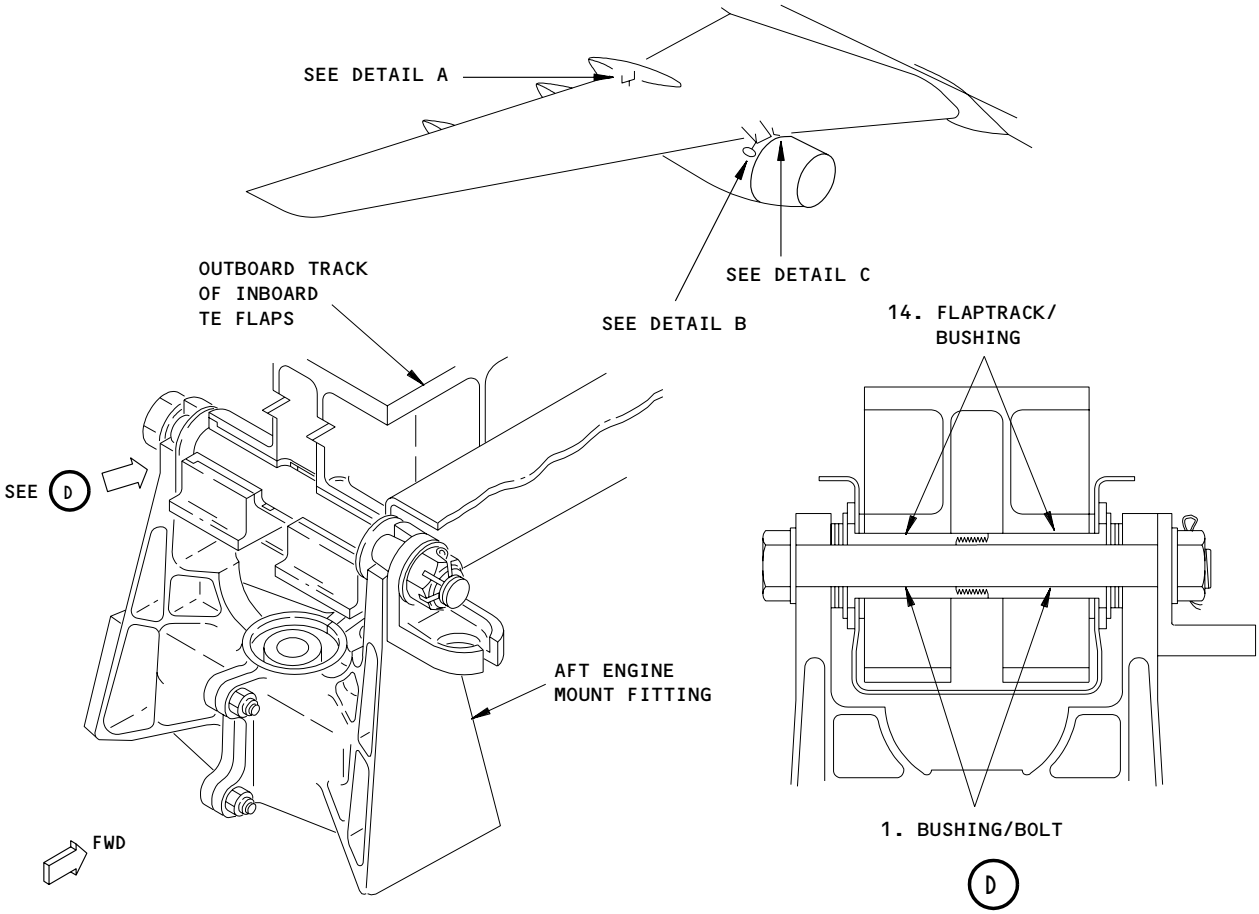


INBOARD
DETAIL C

No. 2 Engine Mount Shown, No. 1 Opposite
Figure 2

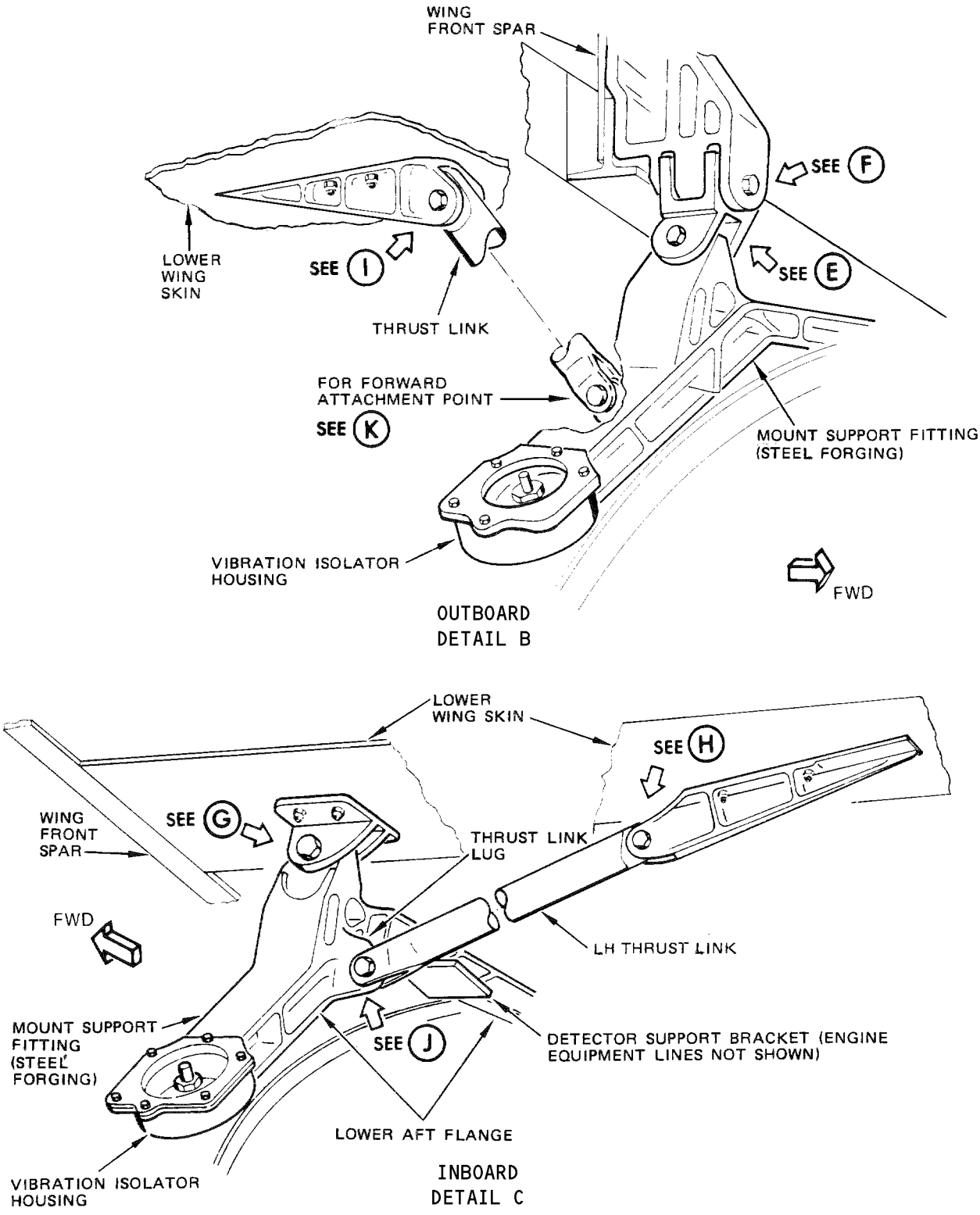
ENGINE ATTACH FITTINGS - INSPECTION/CHECK

1. General
   A. This data consists of illustrations and wear limits charts, and procedures for inspection of forward engine mount support fittings. There will be no procedure given in the inspection for gaining access to, or removing and replacing the component after inspection for wear. Refer to Component Removal/Installation for this information.
2. Forward Engine Mount Support Fittings Inspection (Fig. 601)
   A. Remove engine (AMM 71-00/401).
   B. Clean lower aft flange between vibration isolators, except under centerline fire detection bracket.
   C. Perform close visual inspection of all cleaned surfaces of lower aft flange, with special attention to edge radii on both sides of each thrust link lug.
   D. If cracks are found, replace fitting (AMM 54-41-11/401).
   E. If no cracks are found, install engine per AMM 71-00/401, and repeat step C.
3. Aft Engine Mount Support Fittings Inspection (Fig. 601)
   A. Remove engine (AMM 71-00-00/401).
   B. Clean aft mount fitting.
   C. Perform a close visual inspection of the aft mount fitting for cracks, corrosion, and wear.
   D. If damage or wear is found, replace the aft mount fitting.
   E. If no damage or wear is found, install the engine per AMM 71-00-00/401.
4. Engine Attach Fittings Wear Limits (Fig. 601)

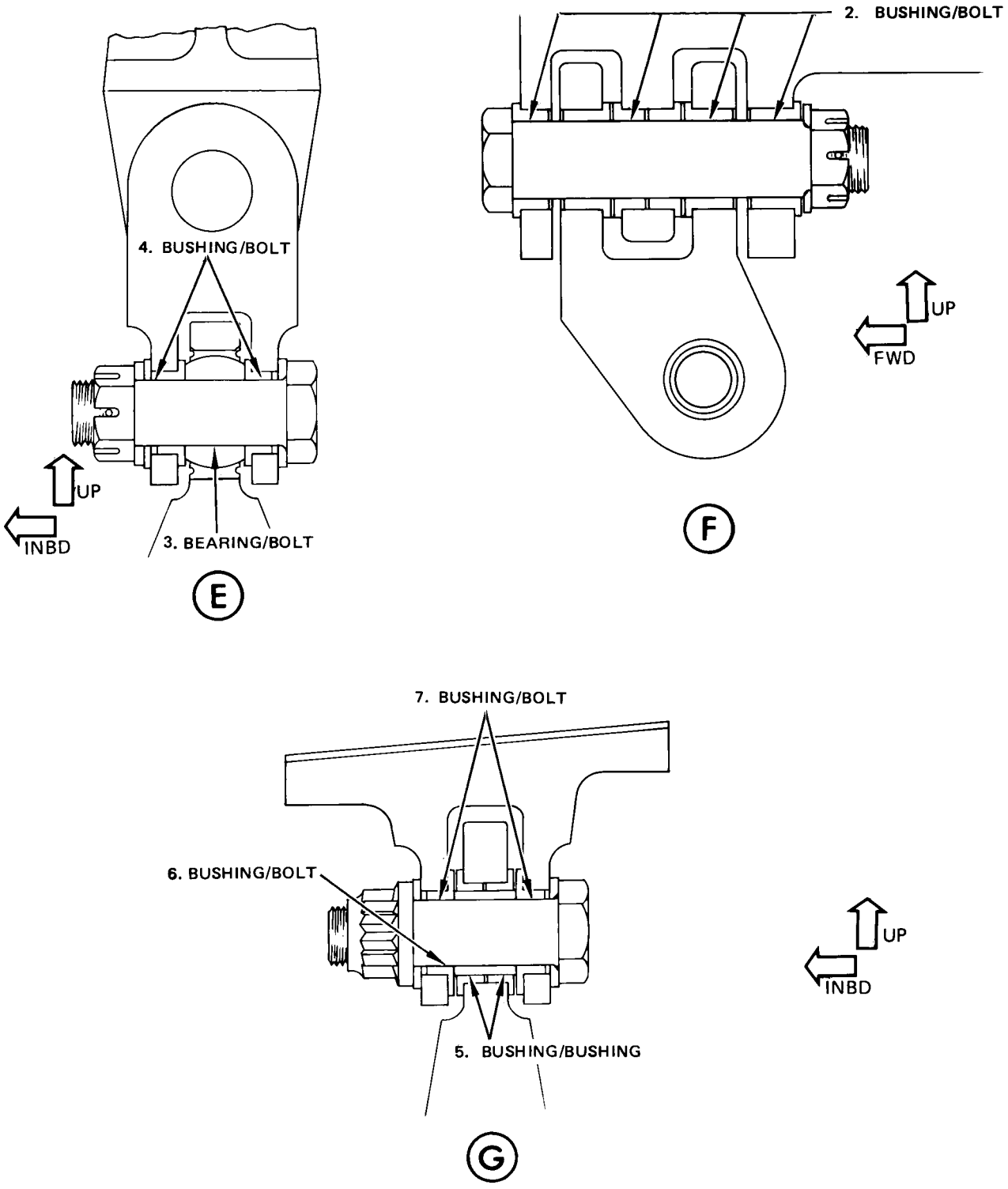


DETAIL A

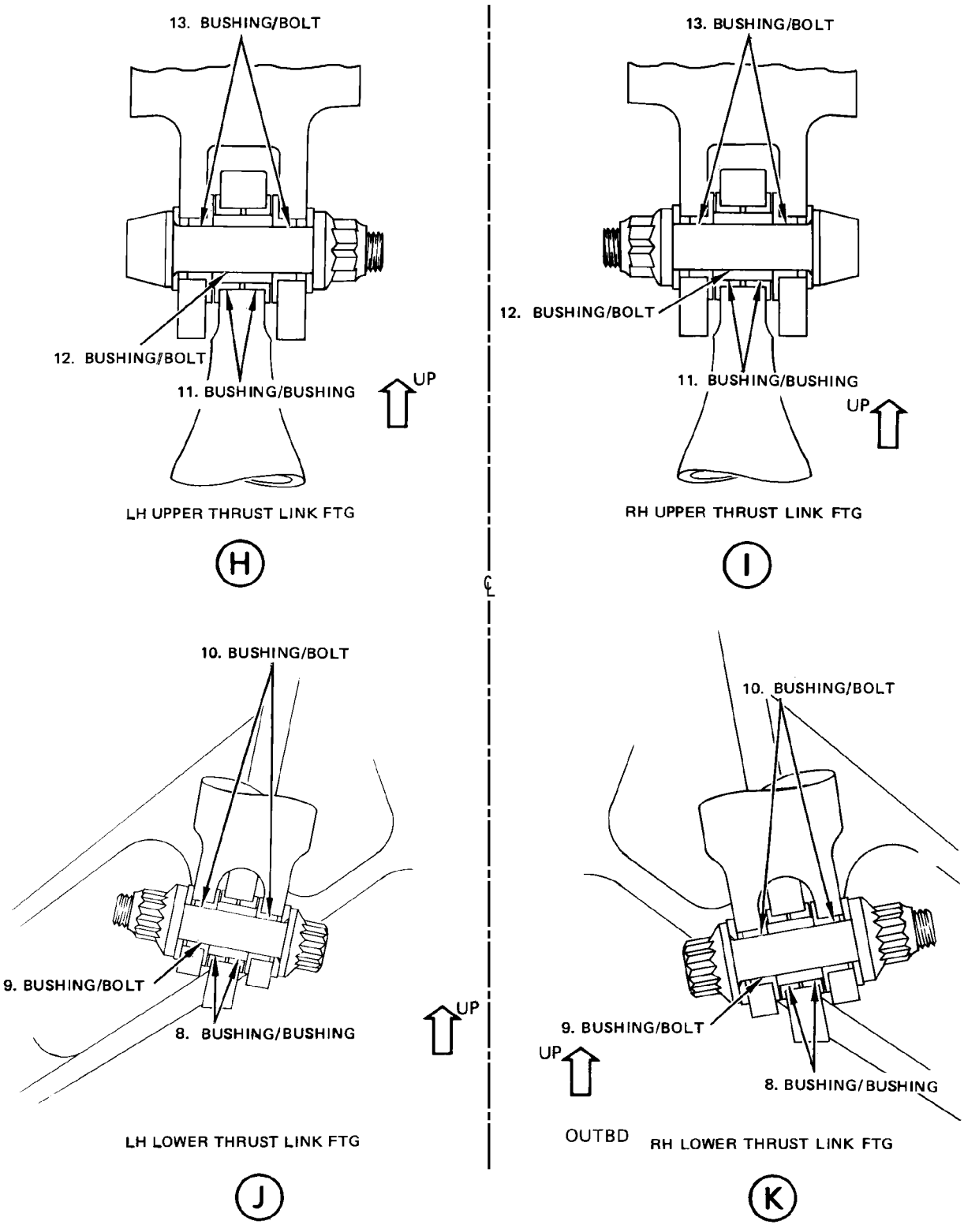
Engine Attach Fittings Wear Limits
Figure 601



No. 2 Engine Mount Shown, No. 1 Opposite
Figure 602



Engine Attach Fittings Wear Limits
Figure 603 (Sheet 1)



Engine Attach Fittings Wear Limits
Figure 603 (Sheet 2)

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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	BUSHING (FLAP TRACK)	ID	0.5620	0.5630	0.5670	0.0054	X		
	BOLT (FLAT TRACK)	OD	0.5607	0.5616	0.5566		X		
1	BUSHING (MOUNT FITTING LUGS)	ID	0.5620	0.5630	0.5670	0.0054			2
	BOLT (MOUNT FITTING LUGS)	OD	0.5607	0.5616	0.5566		X		
2	BUSHING (ALL LUGS)	ID	0.8175	0.8190	0.8200	0.0060	X		1
	BOLT (ALL LUGS)	OD	0.8155	0.8165	0.8140		X		
3	BEARING (CENTER LUG)	ID	0.6245	0.6250	0.6290	0.0050	X		3
	BOLT (CENTER LUG)	OD	0.6230	0.6240	0.6195		X		
4	BUSHING (OUTSIDE LUGS)	ID	0.6250	0.6265	0.6300	0.0060	X		1
	BOLT (OUTSIDE LUG)	OD	0.6230	0.6240	0.6190		X		
5	OUTER BUSHING (CENTER LUG)	ID	0.7197	0.7207	0.7227	0.0030	X		1
	INNER BUSHING (CENTER LUG)	OD	0.7187	0.7197	0.7167		X		
6	INNER BUSHING (CENTER LUG)	ID	0.5000	0.5015	0.5050	0.0055	X		
	BOLT (CENTER LUG)	OD	0.4985	0.4995	0.4945		X		
7	BUSHING (OUTSIDE LUGS)	ID	0.5000	0.5015	0.5050	0.0055	X		1
	BOLT (OUTSIDE LUGS)	OD	0.4985	0.4995	0.4945		X		

Engine Attach Fittings Wear Limits
Figure 603 (Sheet 3)

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					
8	OUTER BUSHING (CENTER LUG)	ID	0.7197	0.7207	0.7227	0.0030	X		1
	INNER BUSHING (CENTER LUG)	OD	0.7187	0.7197	0.7167		X		
9	INNER BUSHING (CENTER LUG)	ID	0.5000	0.5015	0.5050	0.0055	X		
	BOLT (CENTER LUG)	OD	0.4985	0.4995	0.4945		X		
10	BUSHING (OUTSIDE LUGS)	ID	0.4995	0.5005	0.5025	0.0030	X		1
	BOLT (OUTSIDE LUGS)	OD	0.4985	0.4995	0.4965		X		
11	OUTER BUSHING (CENTER LUG)	ID	0.7197	0.7207	0.7227	0.0030	X		1
	INNER BUSHING (CENTER LUG)	OD	0.7187	0.7197	0.7167		X		
12	INNER BUSHING (CENTER LUGS)	ID	0.5000	0.5015	0.5051	0.0060	X		
	BOLT (CENTER LUG)	OD	0.4971	0.4991	0.4940		X		
13	BUSHING (OUTSIDE LUGS)	ID	0.4995	0.5005	0.5051	0.0060	X		1
	BOLT (OUTSIDE LUGS)	OD	0.4971	0.4991	0.4935		X		
14	TRACK	ID	0.8750	0.8820	0.8860	0.0120	X		
	BUSHING	OD	0.8738	0.8748	0.8630		X		

1 Ream bushing to design limits after installation.

2 Replace existing bushing with AMS 4640 Al-Ni-Bronze bushing. Ream bushing to design limits after installation.

NOTE: Install bushings thoroughly coated with BMS 10-11, type I primer, on all faying surfaces between housing and bushing. Install bolts with MIL-G-23827 grease.

3 Replace bearing if bearing is not free to rotate, or if radial movement between ball and race exceeds 0.006 inch. Rapid bearing wear can be anticipated when radial clearance approaches maximum limit.

Engine Attach Fittings Wear Limits
Figure 603 (Sheet 4)

FORWARD ENGINE MOUNT - REMOVAL/INSTALLATION

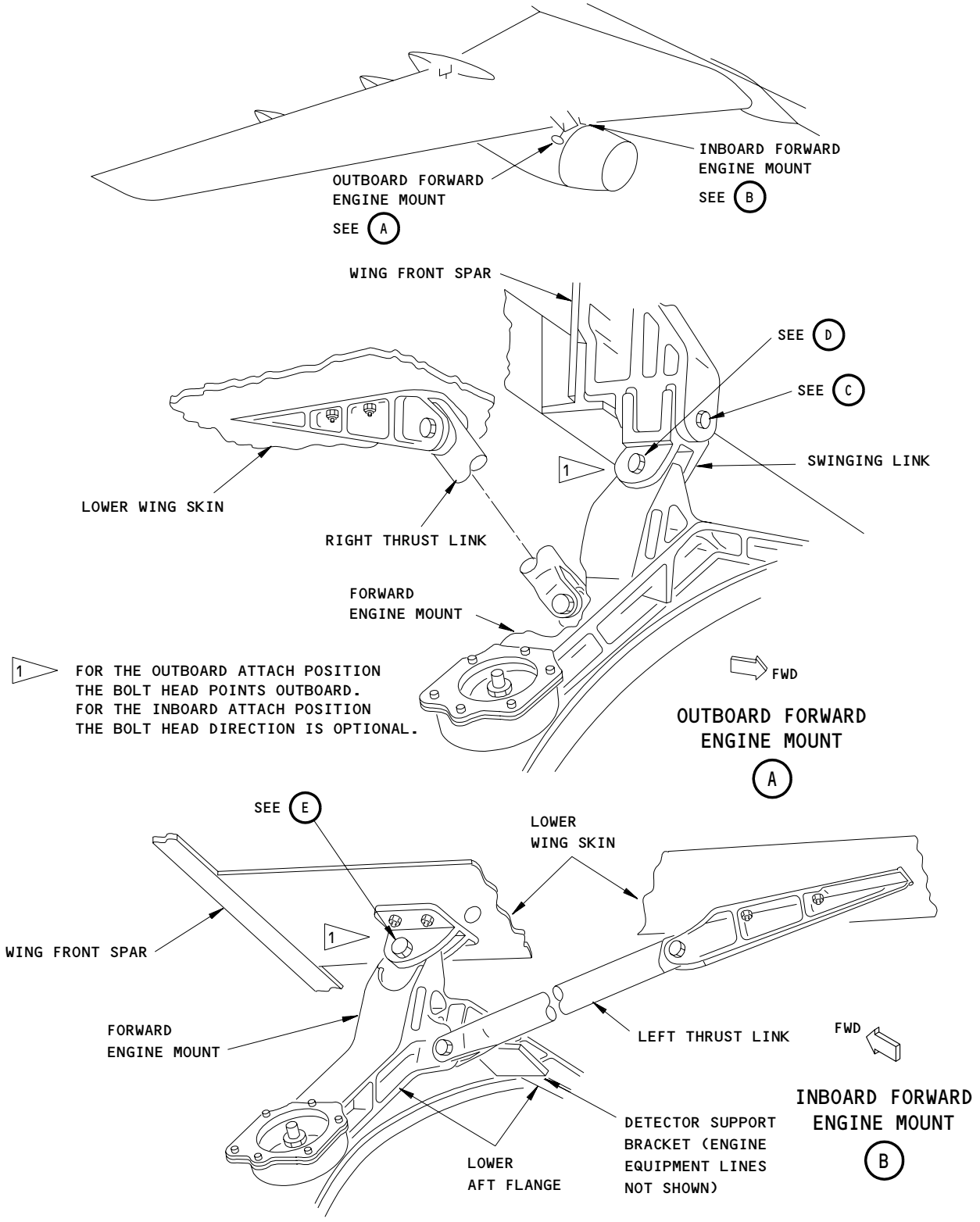
1. Equipment and Materials
   A. Firewall Sealant - BMS 5-63 (AMM 20-30-11)
   B. Grease - BMS 3-33 (Preferred)
   C. Grease - MIL-PRF-23827 (Supercedes MIL-G-23827) (Alternate)
   D. Torque Wrench
2. Prepare for Removal
   A. Remove engine (AMM 71-00-00/401).
   B. Remove access panels 6301 (L.E.) (left side) or 6401 (L.E.) (right side).
3. Remove Forward Engine Mount (Figure 401)
   A. Break seals between firewall and forward engine mount.
   B. Remove detector support bracket from forward engine mount.
   C. Remove nuts, washers, and bolts securing forward ends of thrust links to forward engine mount.
   D. Remove the outboard foward engine mount as follows:
      (1) AIRPLANES WITHOUT THE COTTER PIN INSTALLED ON THE OUTBOARD FORWARD ENGINE MOUNT (PRE-SB 54-1009); Remove the self-locking nut, washers, and bolt securing the forward engine mount to the wing.
      (2) AIRPLANES WITH THE COTTER PIN INSTALLED ON THE OUTBOARD FORWARD ENGINE MOUNT (POST-SB 54-1009); Remove the cotter pin, nut, washers, and bolt securing the forward engine mount to the wing.
          (a) Discard the cotter pin that were removed.
   E. Remove the inboard foward engine mount as follows:
      (1) AIRPLANES WITHOUT THE COTTER PIN INSTALLED ON THE INBOARD FORWARD ENGINE MOUNT (PRE-SB 54-1007); Remove the self-locking nut, washers, and bolt securing the forward engine mount to the wing.
      (2) AIRPLANES WITH THE COTTER PIN INSTALLED ON THE INBOARD FORWARD ENGINE MOUNT (POST-SB 54-1007); Remove the cotter pin, nut, washers, and bolt securing the forward engine mount to the wing.
          (a) Discard the cotter pin that were removed.
      (3) Loosen left and right thrust link cover plates.
      (4) Remove forward engine mount.
      (5) Remove swinging link installed on the outboard forward engine mount by removing the cotter pin, nut, washer, and bolt.
          (a) Discard the cotter pin that were removed.

4. Install The Forward Engine Mount (Figure 401)
   A. Check bolts and bolt holes for wear, and lower aft flange for cracks (AMM 54-41-0/601).
   B. Install the swinging link for the outboard foward engine mount as follows:
      (1) Install the bolt, washers, and nut to secure the swinging link for the outboard forward engine mount.
         (a) Make sure the bolt threads and nut threads are free of grease and torque the nut to a value of 660-980 inch-pounds (75-111 newton-meters).
         (b) Install the cotter pin.
   C. Install the outboard foward engine mount as follows:
      (1) Place forward engine mount in position for insertion of attachment bolts.
      (2) Apply grease on the shank of the bolts only, on the outside diameter of the bushings and on the spherical bearing ball of the outboard lug.
      (3) AIRPLANES WITHOUT THE COTTER PIN INSTALLED ON THE OUTBOARD FORWARD ENGINE MOUNT (PRE-SB 54-1009); Install the bolt, washers, and self-locking nut to secure the outboard forward engine mount to the wing.
         (a) Do not apply a torque to the self-locking nut until the inboard side of the foward engine mount is also installed.
      (4) AIRPLANES WITH THE COTTER PIN INSTALLED ON THE OUTBOARD FORWARD ENGINE MOUNT (POST-SB 54-1009); Install the bolt, washers, and nut to secure the outboard forward engine mount to the wing. Do not install the cotter pin at this step.
         (a) Do not apply a torque to the nut until the inboard side of the foward engine mount is also installed.
      (5) Install the bolt, washers, and nut, securing the forward end of outboard thrust link to outboard forward engine mount.
   D. Install the inboard foward engine mount as follows:
      (1) AIRPLANES WITHOUT THE COTTER PIN INSTALLED ON THE INBOARD FORWARD ENGINE MOUNT (PRE-SB 54-1007); Install the bolt, washers, and self-locking nut securing the inboard forward engine mount to the wing.
         (a) Make sure the bolt threads and self-locking nut threads are free of grease and torque the self-locking nut to a value of 630-1070 inch-pounds (71-121 newton-meters).

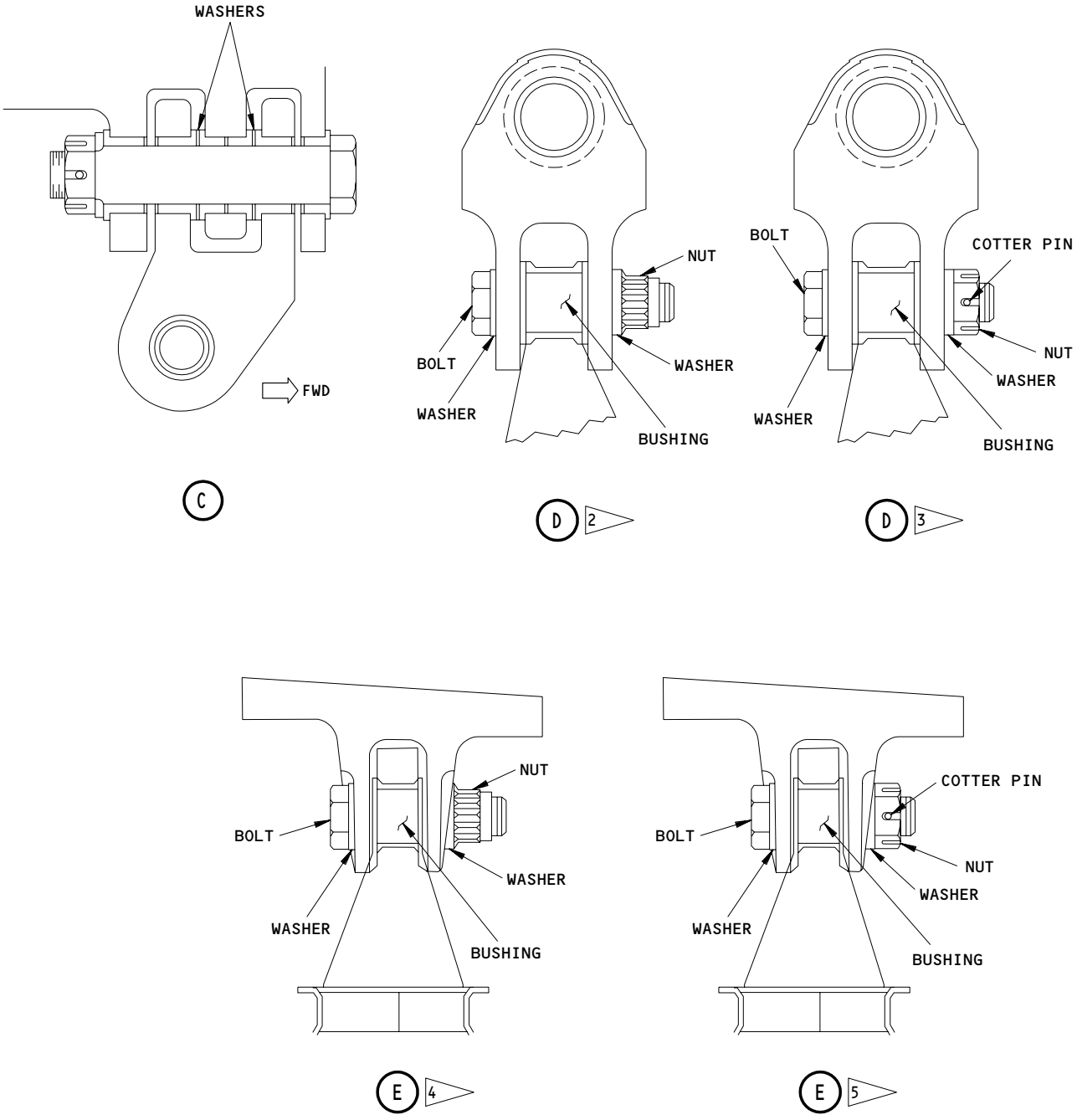
(2) AIRPLANES WITH THE COTTER PIN INSTALLED ON THE INBOARD FORWARD ENGINE MOUNT (POST-SB 54-1007); Install the bolt, washers, and the nut, securing the inboard forward engine mount to the wing. Do not install the cotter pin at this step.
(a) Make sure the bolt threads and nut threads are free of grease and torque the nut to a value of 440-650 inch-pounds (50-73 newton-meters).
(b) Install the cotter pin.
(3) Install the bolt, washers, and nut, securing the forward end of inboard thrust link to inboard forward engine mount.

E. Torque the outboard foward engine mount as follows:
(1) AIRPLANES WITHOUT THE COTTER PIN INSTALLED ON THE OUTBOARD FORWARD ENGINE MOUNT (PRE-SB 54-1009); Make sure the bolt threads and self-locking nut threads are free of grease and torque the nut to a value of 800-1000 inch-pounds (90-113 newton-meters).
(2) AIRPLANES WITH THE COTTER PIN INSTALLED ON THE OUTBOARD FORWARD ENGINE MOUNT (POST-SB 54-1009); Make sure the bolt threads and nut threads are free of grease and torque the nut to a value of 350-900 inch-pounds (40-102 newton-meters).
(a) Install the cotter pin.

5. Put the Airplane Back to Its Usual Condition
A. Install the detector support bracket from forward engine mount.
B. Install the seal between firewall and forward engine mount.
C. Install engine (AMM 71-00-00/401).
D. Install access panels.



Forward Engine Mount Installation
Figure 401 (Sheet 1)



2 AIRPLANES WITHOUT COTTER PINS INSTALLED ON OUTBOARD ENGINE MOUNT (PRE-SB 54-1009)

3 AIRPLANES WITH COTTER PINS INSTALLED ON OUTBOARD ENGINE MOUNT (POST-SB 54-1009)

4 AIRPLANES WITHOUT COTTER PINS INSTALLED ON INBOARD ENGINE MOUNT (PRE-SB 54-1007)

5 AIRPLANES WITH COTTER PINS INSTALLED ON INBOARD ENGINE MOUNT (POST-SB 54-1007)

Forward Engine Mount Installation
Figure 401 (Sheet 2)

FIBER WASHER - REMOVAL/INSTALLATION

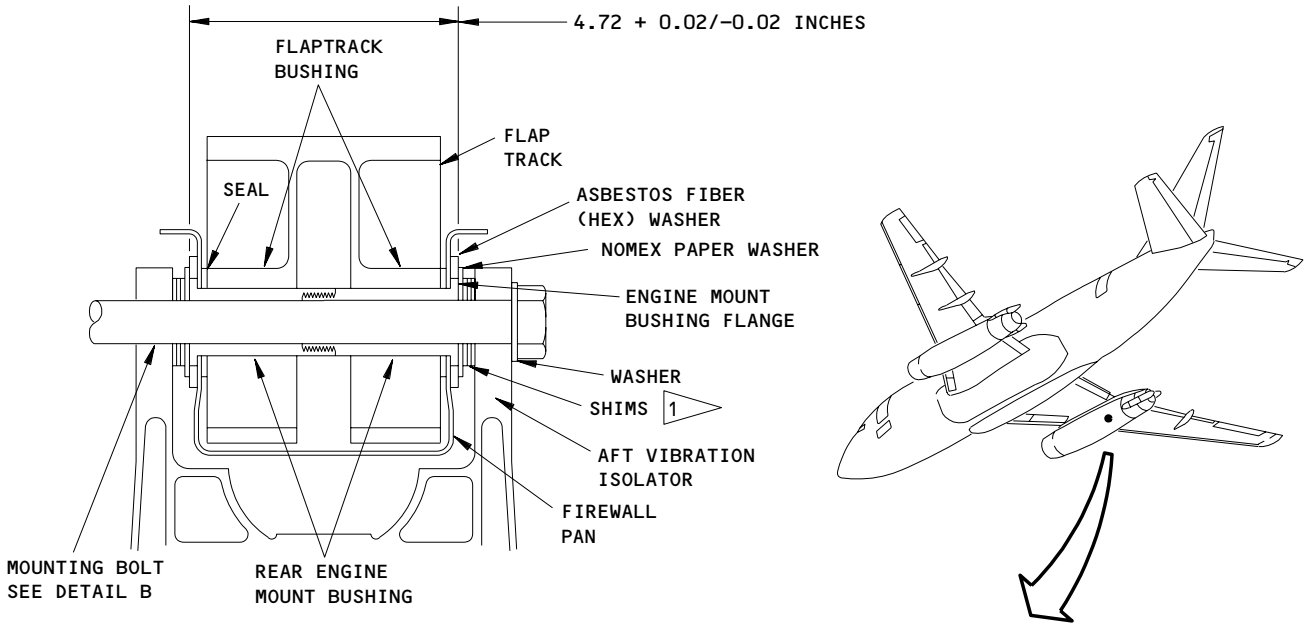
1. Equipment and Materials
   A. Adhesive - BMS 5-14, Synthetic Rubber Buna N Cement
2. Remove Asbestos Fiber Washer (Fig. 401)
   A. After power plant is removed, remove aft vibration isolator (Ref 71-21-11 R/I).
   B. Remove asbestos fiber (hex) washer from firewall pan.

      NOTE: Asbestos fiber (hex) washer is cemented to firewall pan with BMS 5-14 adhesive.

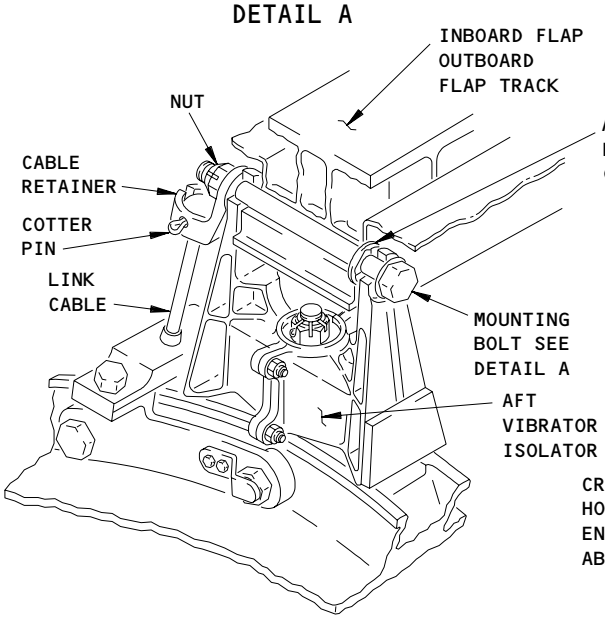
3. Install Asbestos Fiber Washer (Fig. 401)
   A. Check that overall dimension across flanges of hex-head flap track bushings is 4.72 +0.02/-0.02 inches. Adjust bushings (using a wrench on each bushing) as required.
   B. Clean firewall pan in area where asbestos fiber (hex) washer is to be installed per Overhaul Manual, 20-50-12, Application of Adhesives.
   C. Cement asbestos fiber (hex) washer to firewall pan over hex flats of each bushing per Overhaul Manual, 20-50-12, Application of Adhesives.
   D. Check again dimension obtained in step 3.A. except this time measure overall dimension across asbestos fiber (hex) washers. Trim asbestos fiber (hex) washers equally as necessary.

      NOTE: Asbestos fiber (hex) washer is manufactured thicker than bushing head to assure complete coverage of bushing head under adverse tolerance stackup. Asbestos fiber (hex) washer may be trimmed back to allow proper installation; however, do not trim past a point flush top of bushing heads.

   E. Install aft vibration isolator (Ref 71-21-11 R/I).

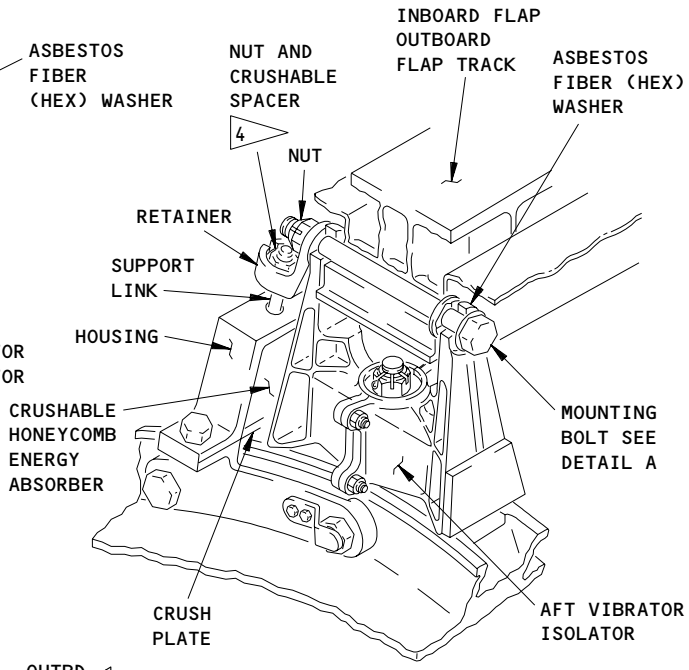


DETAIL A



(VIBRATION ISOLATOR SHOWN INSTALLED)

VIEW 1 2



OUTBD
FWD

(VIBRATION ISOLATOR SHOWN INSTALLED)

VIEW 1 3

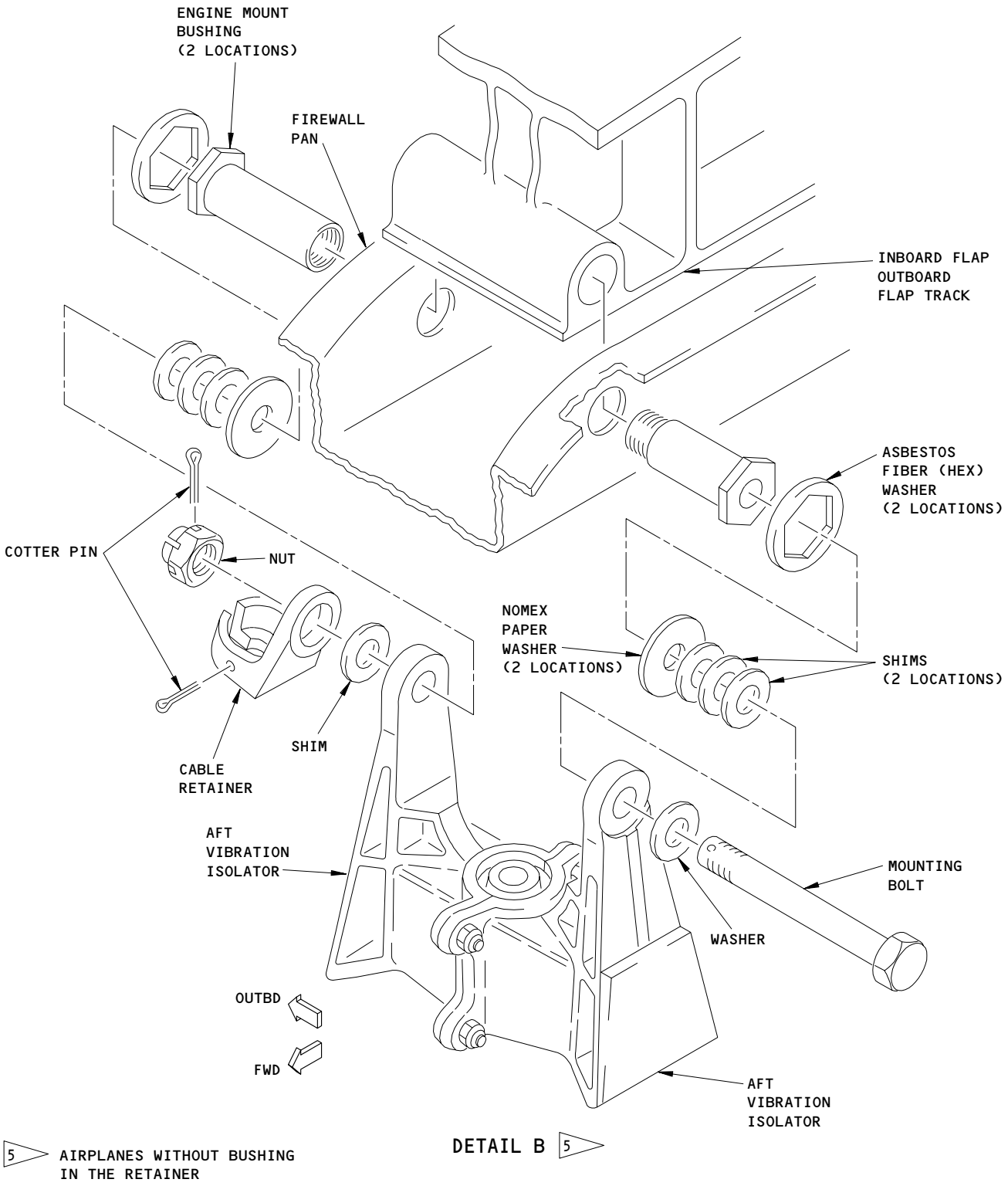
1 0.002 INCH MAXIMUM GAP (TYP) INSTALL SHIMS EQUALLY ON BOTH SIDES TO MEET MEASUREMENT

2 AIRPLANES WITH NON–ENERGY ABSORBING LOAD LIMITING AFT MOUNT SECONDARY SUPPORT LINKS

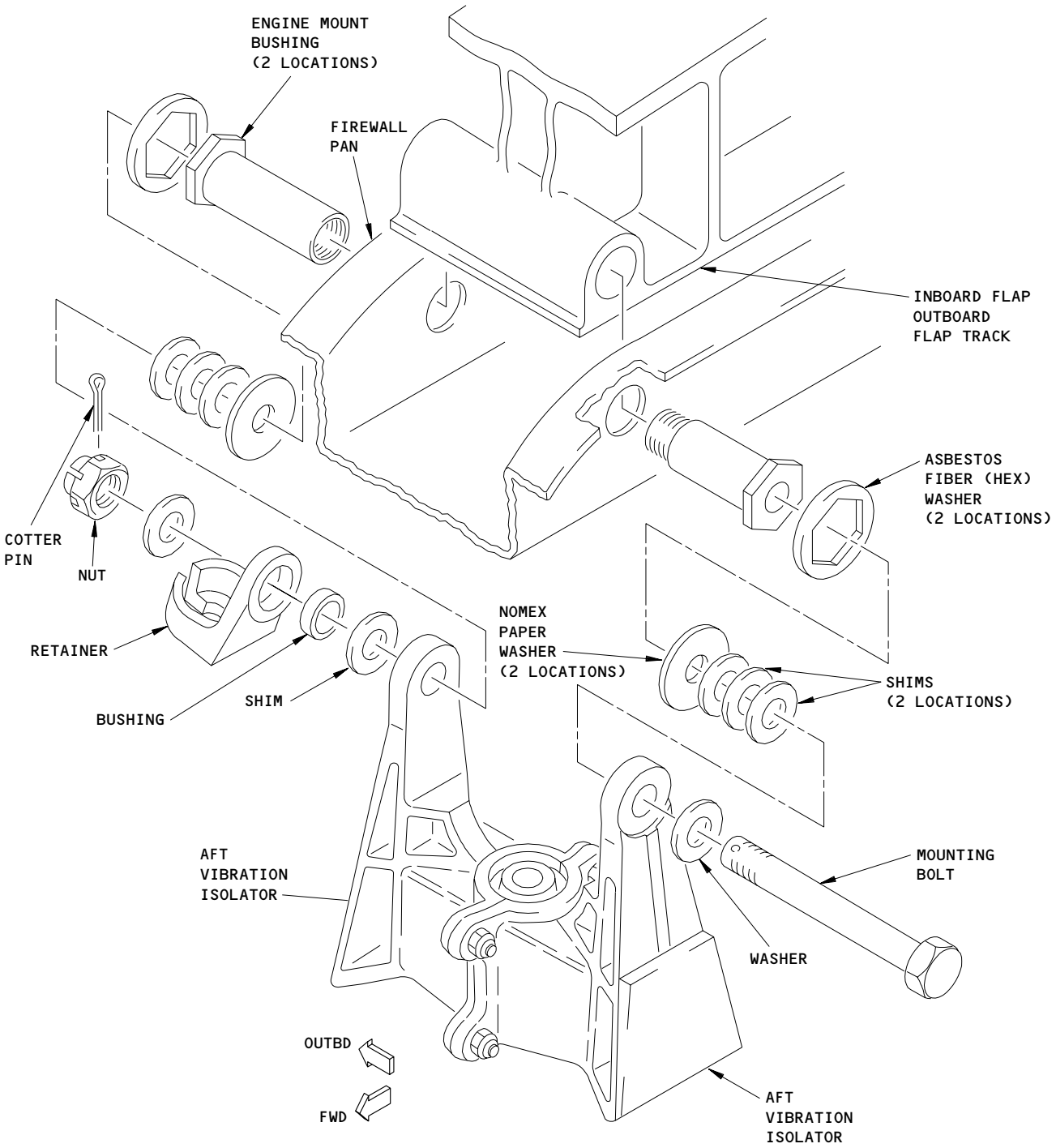
3 AIRPLANES WITH ENERGY ABSORBING LOAD LIMITING AFT MOUNT SECONDARY SUPPORT LINKS

4 AIRPLANES WITH SB 71–1289 HAVE A WASHER ASSEMBLY AND A CHAMFERED WASHER

Fiber Washer Installation
Figure 401 (Sheet 1)



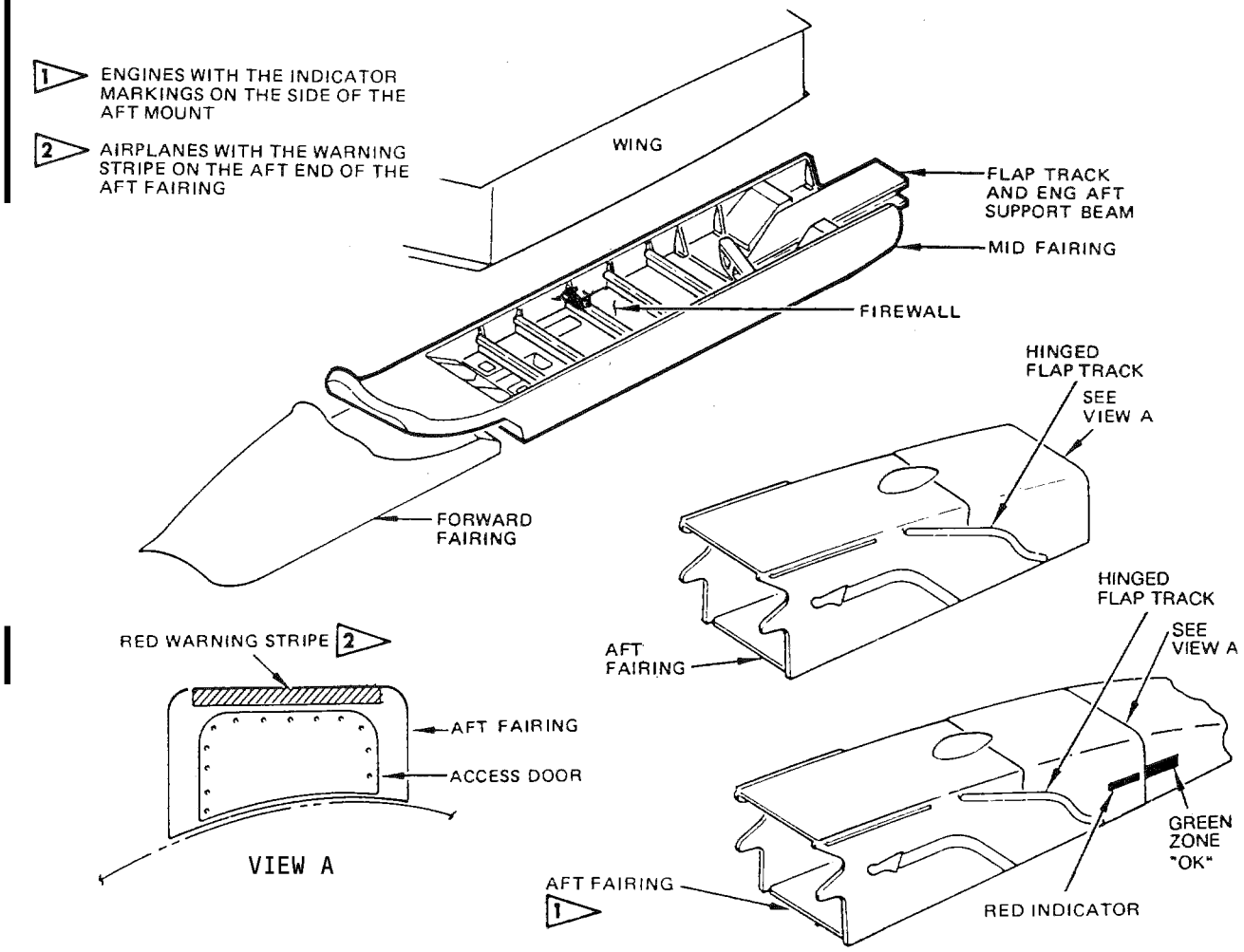
Fiber Washer Installation
Figure 401 (Sheet 2)



Fiber Washer Installation
Figure 401 (Sheet 3)

ENGINE-TO-WING FAIRING - DESCRIPTION AND OPERATION

1. General
   A. The engine-to-wing fairing is an aerodynamic titanium cover between the engine and the wing (Fig. 1). The fairing is divided into an aft fairing, a midfairing and a forward fairing. The removable aft fairing is cantilevered aft from thje wing rear spar. The midfairing is attached to the lower wing skin between the wing front and rear spars by means of angles. The forward fairing is removable and is attached to the forward end of the midfairing and the top side of the nose cowl by means of latches.
   B. On airplanes without a honeycomb energy absorber on the aft mount, a red stripe is installed at the aft end of the aft fairing. The red stripe will come in to view is there is a structural failure at the aft engine mount allowing the nacelle to say.
   C. On airplanes with a honeycomb energy absorber on the aft mount, there are red and green warning stripes on the aft outboard side of the left and right nacelle fairings. If the aft mount indicator pointer is out of the green zone, this is an indication of a structural failure at the aft engine mount.



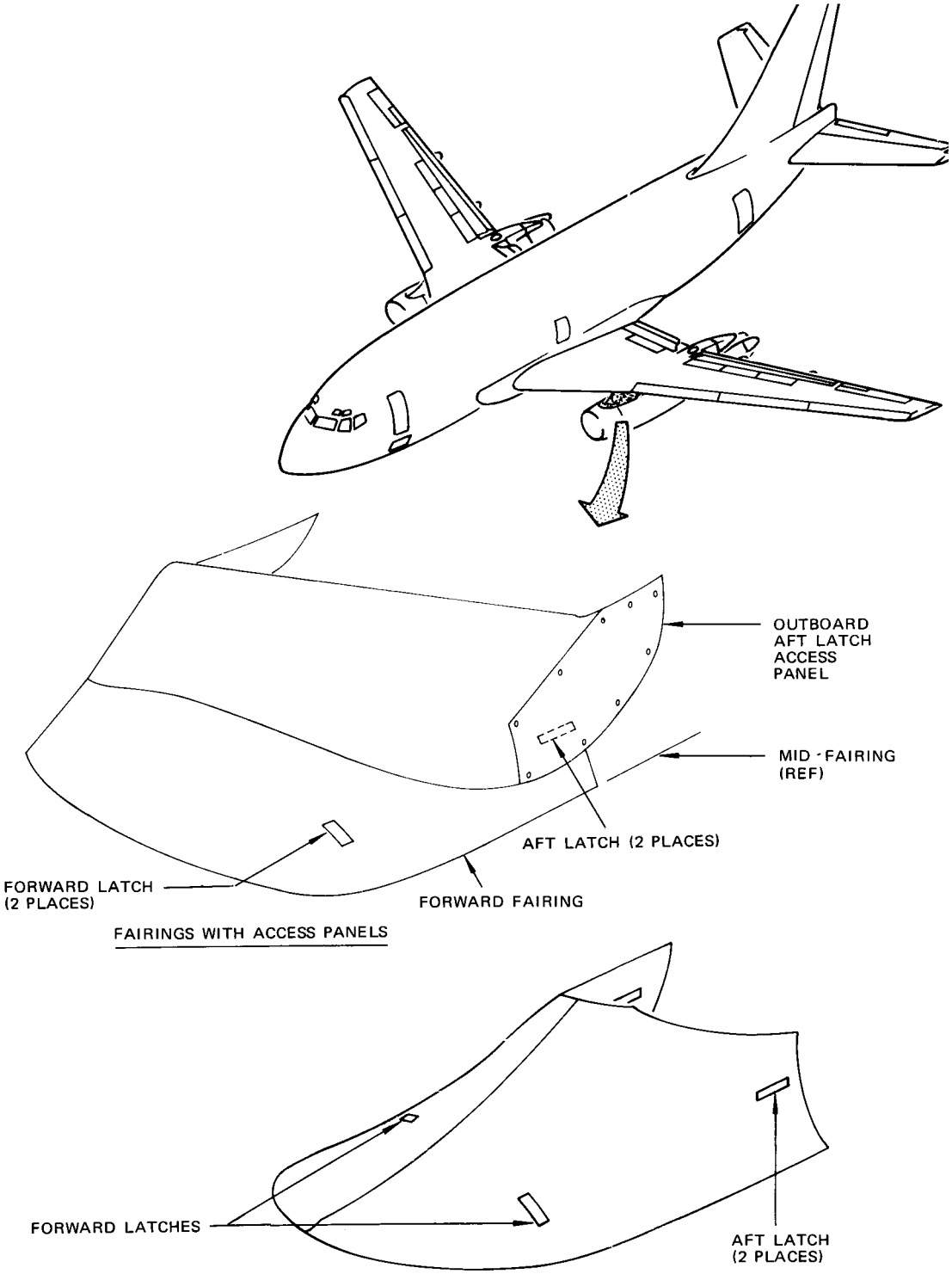
Engine-to-Wing Fairing
Figure 1

ENGINE-TO-WING FORWARD FAIRING - REMOVAL/INSTALLATION

1. Remove Engine-To-Wing Forward Fairing (See figure 401.)
   A. If installed, remove one Phillips screw securing forward fairing to midfairing at nacelle station 112.63 on the inboard side
   B. Release two forward latches.
   C. If installed, remove access panel to gain access to outboard aft latch.
   D. Release two aft latches.
   E. Remove forward fairing.
2. Install Engine To-Wing Forward Fairing (See figure 401.)
   A. Place forward latches in extreme open position.
   B. Install forward fairing in place, engaging all alignment pins.
   C. Close two aft latches

      NOTE: Forward latches must be in extreme open position.

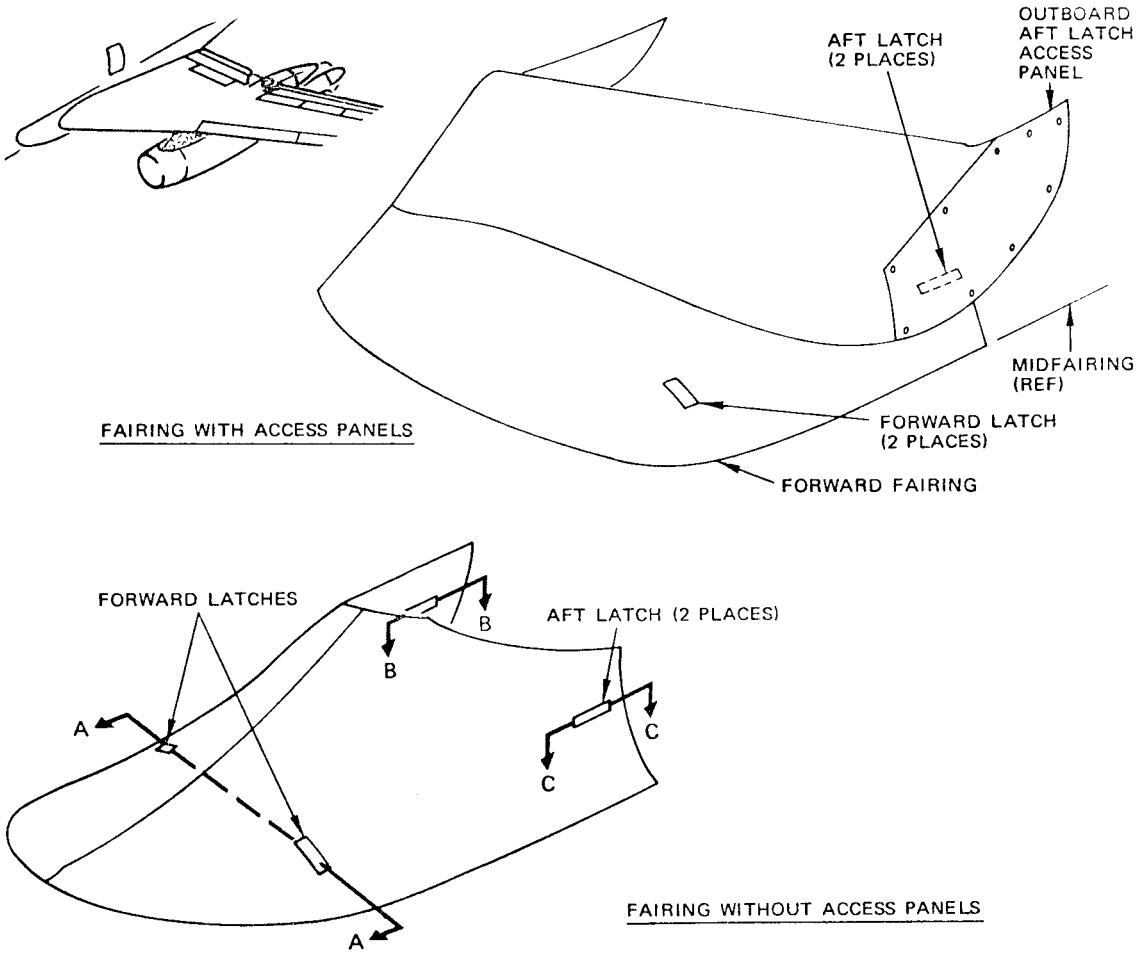
   D. Close two forward latches.
   E. Check that all latches are securely closed.
   F. If required, install one Phillips screw securing forward fairing to midfairing at nacelle station 112.63 on the inboard side.
   G. Install access panel over outboard aft latch if applicable.



Engine-to-Wing Forward Fairing Installation
Figure 401

ENGINE-TO-WING FORWARD FAIRING - ADJUSTMENT/TEST

1. Engine-to-Wing Forward Fairing Adjustment
   A. Remove access panel to gain access to outboard aft latch if applicable.
   B. Adjust forward latches by adding or removing shim laminations per figure 501 until latches close with a force of 20-30 pounds applied 1/2 inch from end of handle farthest from latch pivot point.
   C. Adjust aft latches by turning nuts per figure 501 until latches close with a force of 10-20 pounds applied 1/2 inch from end of handle farthest from latch pivot point.
   D. Forward latches must be in extreme open position during installation of forward fairing. Engage all alignment pins and close aft latches first, then close forward latches.
   E. Install access panel over outboard aft latch if applicable.



Engine-to-Wing Forward Fairing Adjustment
Figure 501 (Sheet 1)

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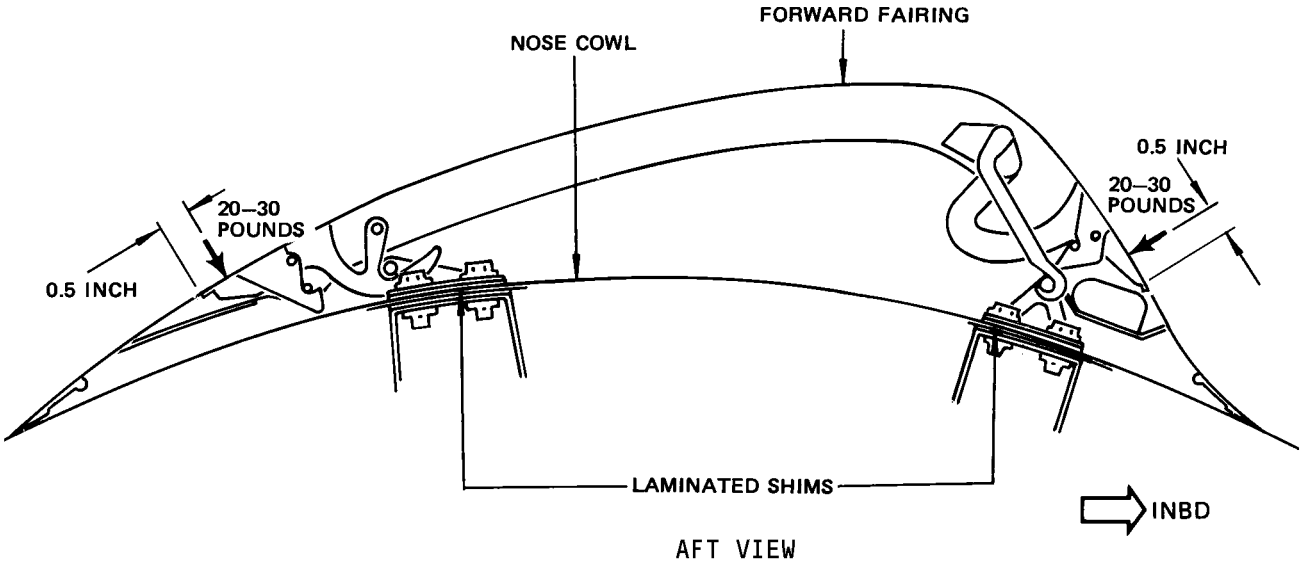
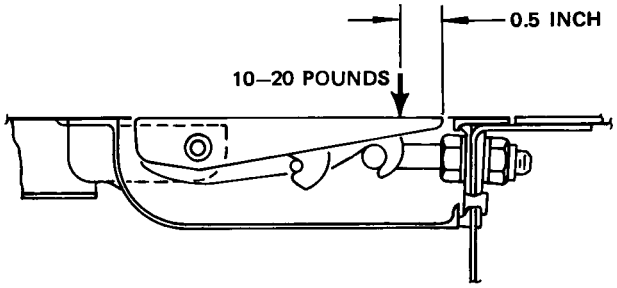
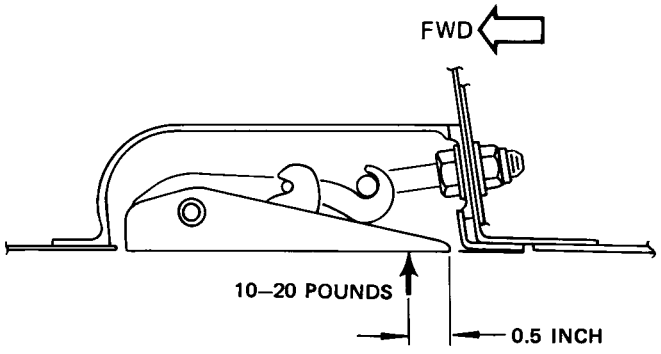


AFT VIEW
SECTION A–A



INBOARD LATCH
SECTION B–B



OUTBOARD
SECTION C–C

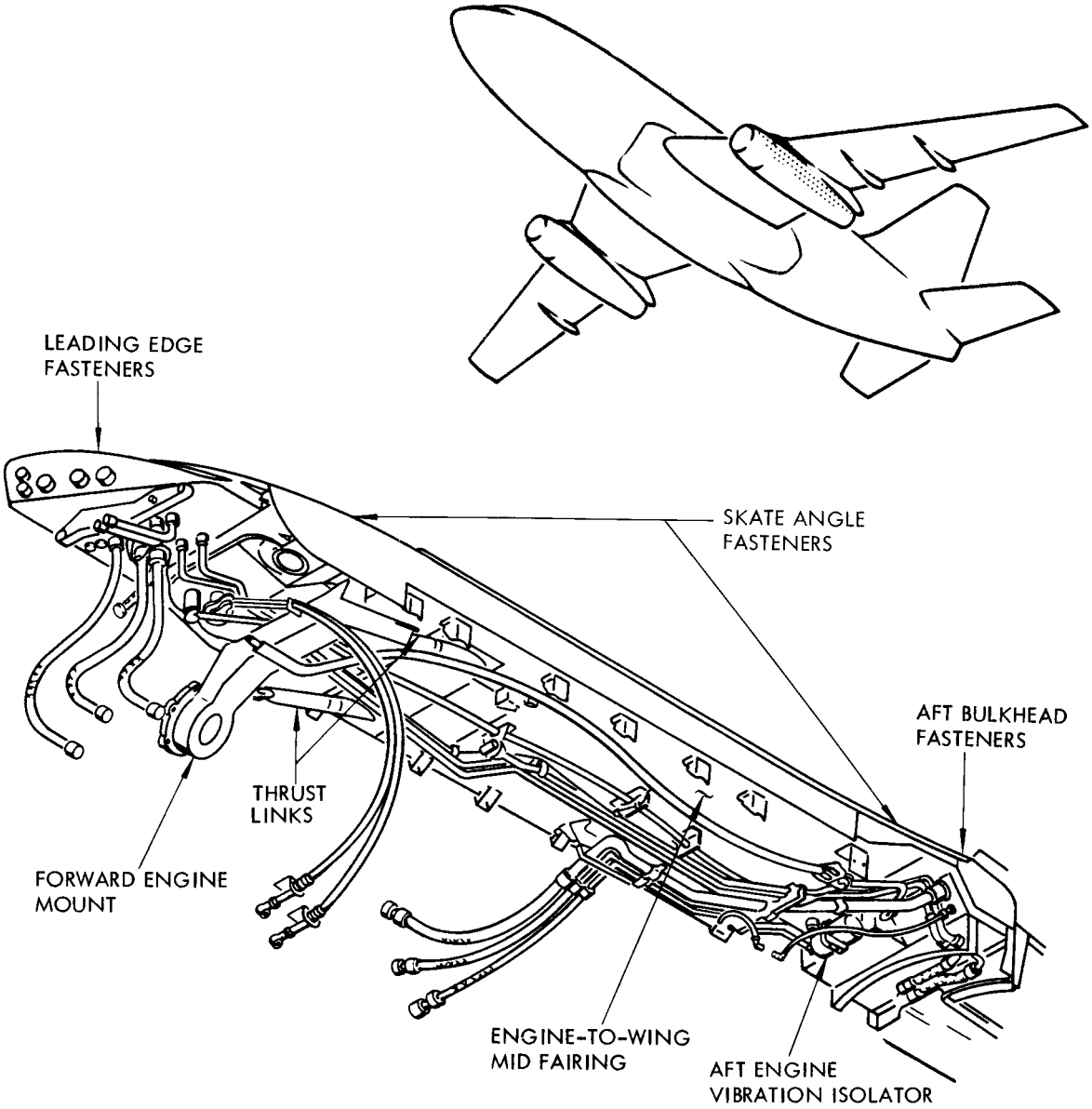
Engine–to–Wing Forward Fairing Adjustment
Figure 501 (Sheet 2)

ENGINE-TO-WING AFT FAIRING - REMOVAL/INSTALLATION

1. Prepare for Removal
   A. Remove top access panels on aft fairing.
   B. Remove deflector door fairing per Chapter 78, Thrust Reverser Fairing - Removal/Installation.
   C. Remove hinged flaps per Chapter 27, Hinged Flaps - Removal/Installation.
   D. Remove inboard trailing edge flap per Chapter 27, Inboard Trailing Edge Flap - Removal/Installation.
   E. Depressurize hydraulic system A.
   F. Lower aft end of engine 1/4 inch per Chapter 71, Power Plant - Removal/Installation.
2. Remove Aft Fairing
   A. Disconnect and plug thrust reverser hydraulic lines two places forward and two aft.
   B. Remove screws securing aft fairing angles to midfairing angles.
   C. Remove bolt, nut, washers and clamp-up bushings four places to dismount aft fairing from wing rear spar.
   D. Remove aft fairing.
3. Prepare for Installation
   A. Check that aft end of engine is lowered 1/4 inch. Refer to Chapter 71, Power Plant - Removal/Installation.
   B. Check that hydraulic system A is depressurized.
4. Install Aft Fairing
   A. Mount aft fairing on rear spar by installing clamp-up bushings, washers, nut and bolt four places. Install nuts toward nacelle B.L. 0.00. Tighten nuts to within 220 to 360 inch-pounds torque.
   B. Install screws securing aft fairing angles to midfairing angles.
   C. Unplug and connect thrust reverser hydraulic lines two places forward and two aft.
5. Restore Airplane to Normal
   A. Raise and install aft end of engine per Chapter 71, Power Plant - Removal/Installation.
   B. Pressurize hydraulic system A.
   C. Install inboard trailing edge flap per Chapter 27, Inboard Trailing Edge Flap - Removal/Installation.
   D. Install hinged flaps per Chapter 27, Hinged Flaps - Removal/Installation.
   E. Install deflector door fairing per Chapter 78, Thrust Reverser Fairing - Removal/Installation.
   F. Perform operational checks of inboard trailing edge flap system per Chapter 27, Inboard Trailing Edge Flap System - Adjustment/Test, and of thrust reverser per, Chapter 78, Thrust Reverser System - Adjustment/Test.

ENGINE-TO-WING MIDFAIRING - REMOVAL/INSTALLATION

1. Equipment and Materials
   A. Grease - BMS 3-33 (Preferred)
   B. Grease - MIL-PRF-23827 (Supercedes MIL-G-23827) (Alternate)
2. Prepare for Removal
   A. Remove engine per Chapter 71, Power Plant - Removal/Installation.
   B. Remove forward engine mount per 54-41-11, Forward Engine Mount - Removal/Installation.
   C. Remove aft engine vibration isolator per Chapter 71, Aft Vibration Isolator - Removal/Installation.
3. Remove Engine-to-Wing Midfairing (See figure 401.)
   A. Break compound seals and aerodynamic smoother as necessary.
   B. Disconnect engine equipment line couplings.
   C. Remove nuts, washers and bolts securing aft ends of thrust links to wing.
   D. Remove thrust links.
   E. Remove midfairing skate angle fasteners, leading edge fasteners and aft bulkhead fasteners.
   F. Remove midfairing.
4. Install Engine-to-Wing Midfairing (See figure 401.)
   A. Attach midfairing to wing by installing skate angle fasteners, leading edge fasteners and aft bulkhead fasteners.
   B. Grease thrust link bolts and bolt holes.
   C. Install nuts, washers and bolts securing aft ends of thrust links to wing. Tighten nuts to within 630 to 950 inch-pounds.
   D. Connect engine equipment line couplings.
   E. Install compound seals and aerodynamic smoother per Chapter 51, Seals and Sealing.
5. Restore Airplane to Normal
   A. Check that overall dimension across flanges of flap track bushings is 4.72 (± 0.02) inches. Adjust bushings (using a wrench on each bushing) as required.
   B. Install aft engine vibration isolator per Chapter 71, Aft Vibrator - Removal/Installation.
   C. Install forward engine mount per 54-41-11, Forward Engine Mount - Removal/Installation.
   D. Install engine per Chapter 71, Power Plant - Removal/Installation.



Engine-to-Wing Midfairing Installation
Figure 401