CHAPTER 52

DOORS

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Insert latest revised pages; destroy superseded or deleted pages.

* Asterisk indicates pages revised, added, or deleted by the current revision. The portion of the text affected by the current revision is indicated by a vertical line in the outer margin of the page.

Revision Number	Status	Date	Location	Insertion Date	Inserter's Initials	Removal Date	Removers Initials
52-1	Inactive	Oct 16/92	52-12-01 Page 205	Oct 16/92	LJ	Jun 25/93 *Rev. 59*	LJ
52-2	Inactive	Feb 16/96	52-12-02 Page 207	Feb 16/96	LJ	Feb 11/00 *Rev. 68*	LJ
52-3	Inactive	Jun 23/00	52-20-00 Page 203	Jun 23/00	LJ	Jan 12/01 Rev. 70	LJ

DOORS - DESCRIPTION AND OPERATION

1. **Description**
   A. Doors are provided for the passenger/crew compartment, tailcone equipment section, nose compartment equipment section, and landing gear. In addition, an emergency exit door is installed in the aft right side of the fuselage. All doors fit flush with the fuselage and open outward with the exception of the emergency exit door, which opens inward.

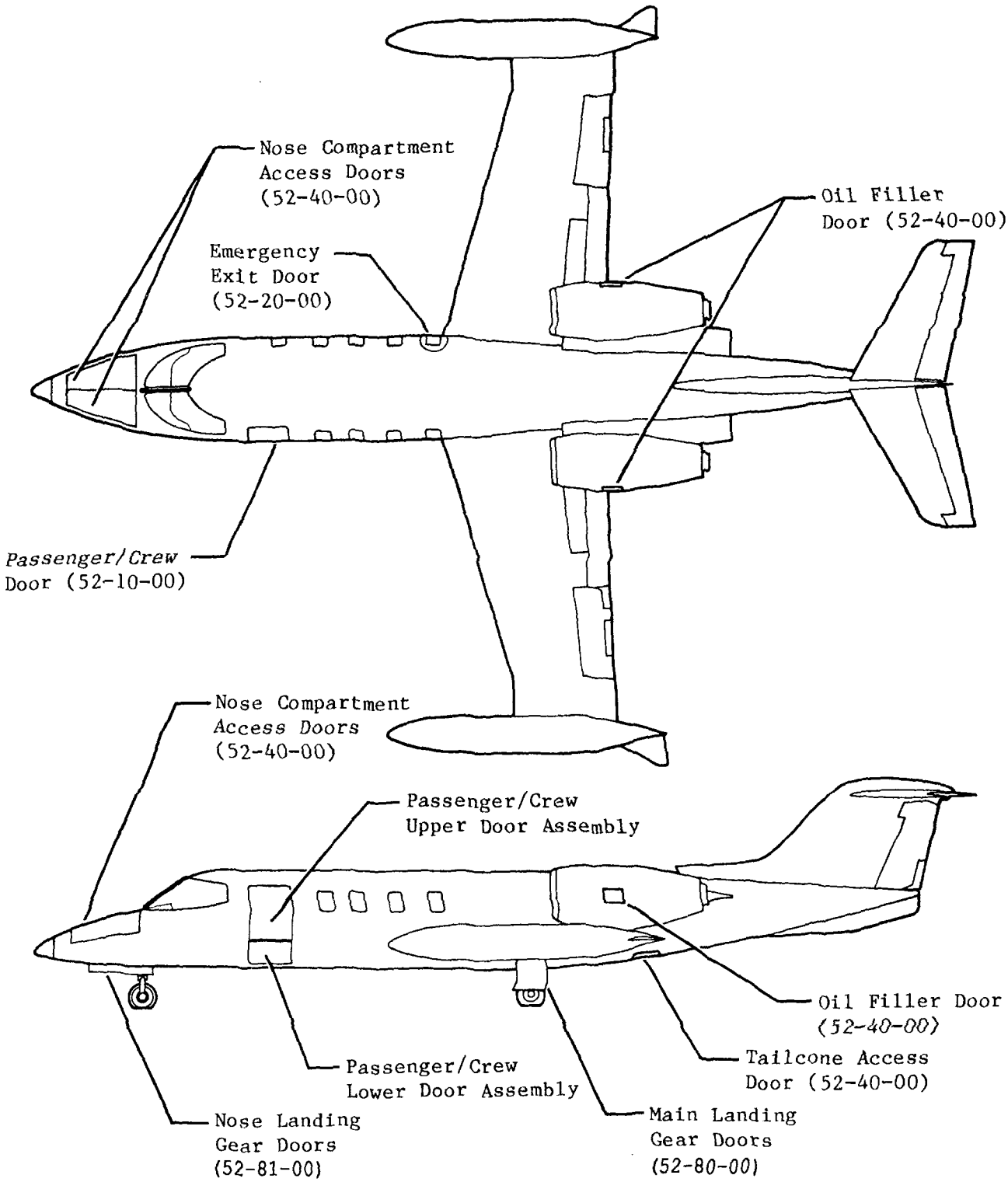
2. **Passenger/Crew Door**
   A. The passenger/crew door is located on the fuselage left side in the forward passenger compartment. The door consists of two major parts, the upper door assembly and the lower door assembly. The standard passenger/crew door is 24 inches wide. Some aircraft have an optional 36-inch passenger/crew door.

3. **Emergency Exit Door**
   A. The emergency exit door is located on the fuselage right side in the aft passenger compartment. The door contains a window and can be opened from inside or outside the aircraft. The door moves inward into the cabin when released.

4. **Service Doors**
   A. The tailcone access door is located on the bottom of the fuselage aft of frame 26. The door is hinged and allows access to the batteries, electrical components, fuel filters, refrigeration equipment, fire extinguisher bottles, and hydraulic components.
   B. The nose compartment access doors are located on top of the fuselage forward of the windshield. The doors are completely removable and allow access to electronic equipment, oxygen bottle, emergency air bottle, and alcohol anti-ice tank.
   C. *On Aircraft equipped with a vertical fin mounted oxygen cylinder*, an oxygen service access door is located on the LH side of the dorsal inlet assembly.

5. **Door Warning System**
   A. The door warning system provides the crew with a visual indication when the passenger/crew door is not properly closed and latched.

6. **Landing Gear Doors**
   A. The landing gear doors enclose the landing gear when retracted during flight. The doors are hinged to the fuselage by piano-type hinges. The nose gear doors and outboard main gear doors are operated by mechanical linkage. The inboard gear doors are operated by hydraulic actuators.



Door Locator
Figure 1

PASSENGER/CREW DOOR - DESCRIPTION AND OPERATION

1. Description

A. The passenger/crew door is located on the fuselage left side in the forward passenger compartment. The door consists of an upper door assembly that forms a canopy when open and a lower door assembly with integral entrance steps.

B. The upper door assembly has two torsion bars to provide opening assistance. The torsion bars have an overcenter design to retain the upper door assembly in the open position.

C. The lower door assembly has cables at each end that are attached to spring-loaded takeup reels to aid closing and prevent damage to the door if it is inadvertently dropped. A safety catch holds the lower door assembly in place while the upper door assembly is being raised. Hinged arms provide travel limit for the lower door assembly. These arms are attached to a torsion bar to provide additional aid when closing the lower door assembly.

D. Each door assembly has a locking handle that, when rotated, drives a series of latch pins into the fuselage door frame structure and through interlocking arms that secure the door assemblies together. When locked, the door assembly becomes a rigid structural member. A 28 vdc actuator in the lower door assembly operates hook(s) that pull the doors together against the door opening perimeter seal. This must be done before the latch pins will engage into the fuselage door frame structure. The hook (s) must be released after the latch pins are engaged or the DOOR Warning Annunciator will remain illuminated.

E. Inspection windows are provided in the door upholstery for visual inspection of latch pin operation. Indicators are painted on the latch pin linkages and align with indicators on the door structure when the pins are properly engaged.

2. Operation

A. The passenger/crew door is opened from the outside by inserting a key into the key lock and rotating it. When the key is rotated, it energizes the actuator and releases the door hook(s). The exterior latch handle is then lifted and rotated clockwise to release the latch pins. Raise the upper door and rotate the lower door locking handle to the open position. This releases the latch pins in the lower door. Release the lower door safety catch and carefully extend the lower door to the full open position.

B. To open the passenger/crew door from the inside, lift the latch handle in the armrest portion of the upper door to release the latch pins. Push the upper door to the full open position. Rotate the lower door locking handle to the open position, releasing the latch pins in the lower door. Release the lower door safety catch and, using the cable knob, carefully extend the lower door assembly.

C. The passenger/crew door is closed from the outside by raising the lower door until the safety catch is engaged and rotating locking handle to the locked position. With the upper door lock handle in the open position, carefully lower upper door. Insert key in keylock and rotate. This energizes the hook actuator and draws the doors against their seals. Rotate upper door handle to the locked position. The door hook(s) must be released prior to flight.

D. To close the passenger/crew door from the inside, raise the lower door, using the cable knob, until safety catch engages. Rotate the lower door locking handle to the locked position. Close upper door ensuring that the locking handle is in the up position. Operate the actuator switch on the lower door to pull the doors against their seals, then rotate upper door locking handle to the locked position. Operate actuator switch to disengage door hooks. This must be done prior to flight.

E. The door hook(s) may be manually disengaged if a malfunction occurs and the hook(s) will not disengage. To manually disengage door hook(s), peel back carpet on aft lower door step and snap out access cover. Slip ratchet over shaft and rotate shaft. The ratchet is located on the copilot's seat back.

PASSENGER/CREW DOOR - MAINTENANCE PRACTICES

1. Removal/Installation

WARNING: A 12.5 PSIG CABIN PROOF PRESSURE TEST SHALL BE PERFORMED AFTER INSTALLATION OF A DOOR OR BOTH DOORS HAS BEEN COMPLETED. AN INSTALLED DOOR IS CONSIDERED UNPROVEN UNTIL CABIN PROOF PRESSURE TESTED.

A. Removal of Upper Door (See Figure 201.)
   (1) Insert key in keylock and rotate key 180° CW to unlock door. Unlatch and open door.

WARNING: REMOVE TORQUE ARM LINK ASSEMBLIES WITH CARE WHILE TORQUE ARM IS UNDER LOAD. DISCONNECTING TORSION BAR WITHOUT POSITIVE CONTROL CAN RESULT IN PERSONAL INJURY AND/OR DAMAGE TO THE AIRCRAFT.

CAUTION: FULL WEIGHT OF DOOR WILL BE ON DOOR PROP WITH TORSION BAR DISCONNECTED.

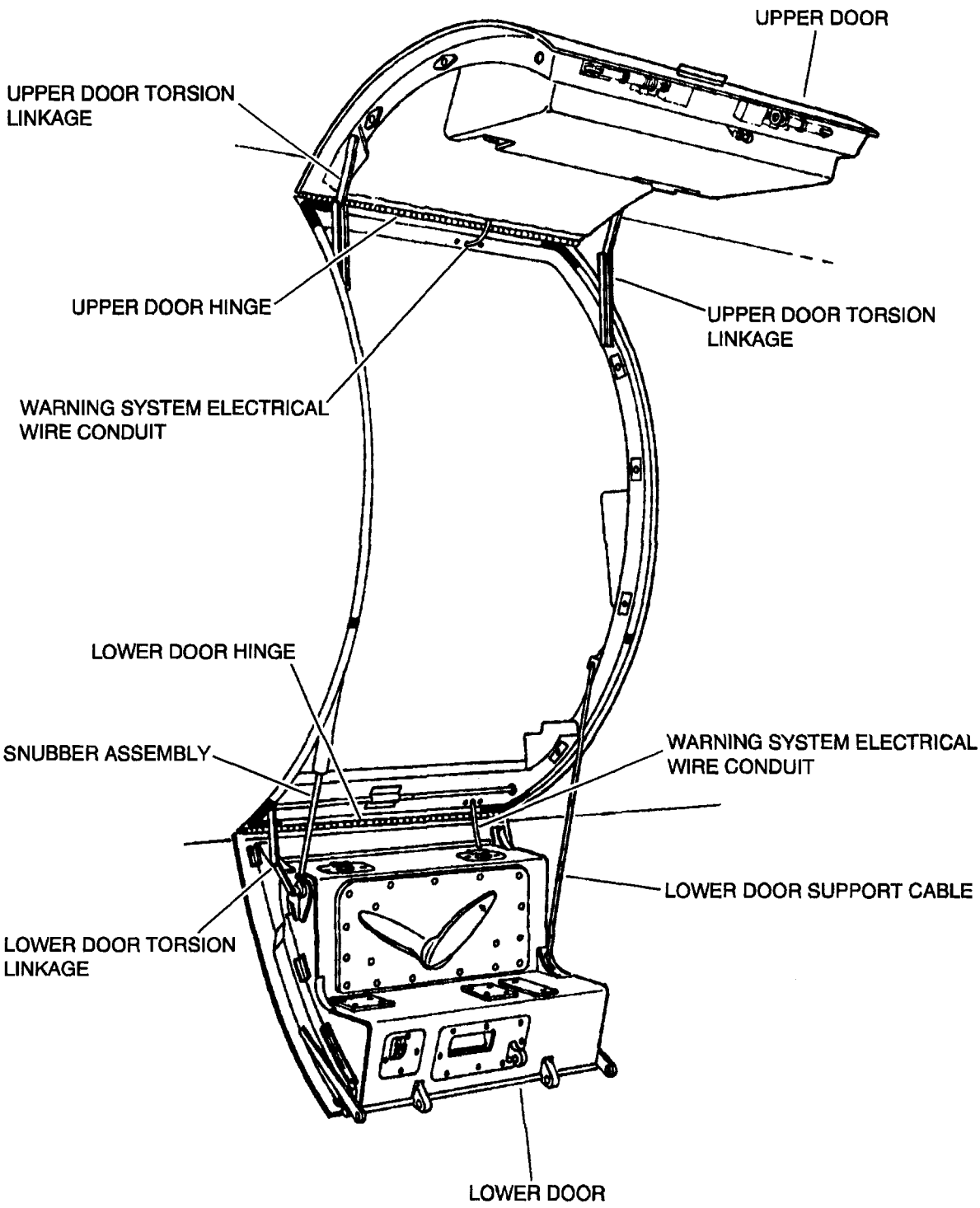
   (2) Disconnect torsion bar and door link assemblies and support door. (Refer to 52-12-01, Removal/Installation.)
   (3) Pull headliner away from top of door frame far enough to reveal door warning system wire splices. Identify and disconnect wires.
   (4) Remove attaching parts and filler at aft end of hinge pin.
   (5) Remove rain seal. (Refer to 52-10-02, Removal/Installation.)
   (6) Make sure door is safely supported and remove hinge pin.
   (7) Lift door away from aircraft and store in a protected area.

B. Installation of Upper Door (See Figure 201.)
   (1) Carefully lift door into place on aircraft. Align hinge half on door with hinge half on fuselage and install hinge pin.
   (2) Install filler and secure with attaching parts.
   (3) Align and secure torsion linkage to door. (Refer to 52-12-01, Removal/Installation.)
   (4) Identify and connect electrical wiring.
   (5) With electrical power on, open and close door at least three times. Door must open and close without interference. Door warning lights must illuminate when door is unlatched and extinguish when door is latched.
   (6) Install partially removed headliner.
   (7) Install rain seal. (Refer to 52-10-02, Removal/Installation.)
   (8) Perform appropriate cabin proof pressure test. (Refer to Chapter 53.)

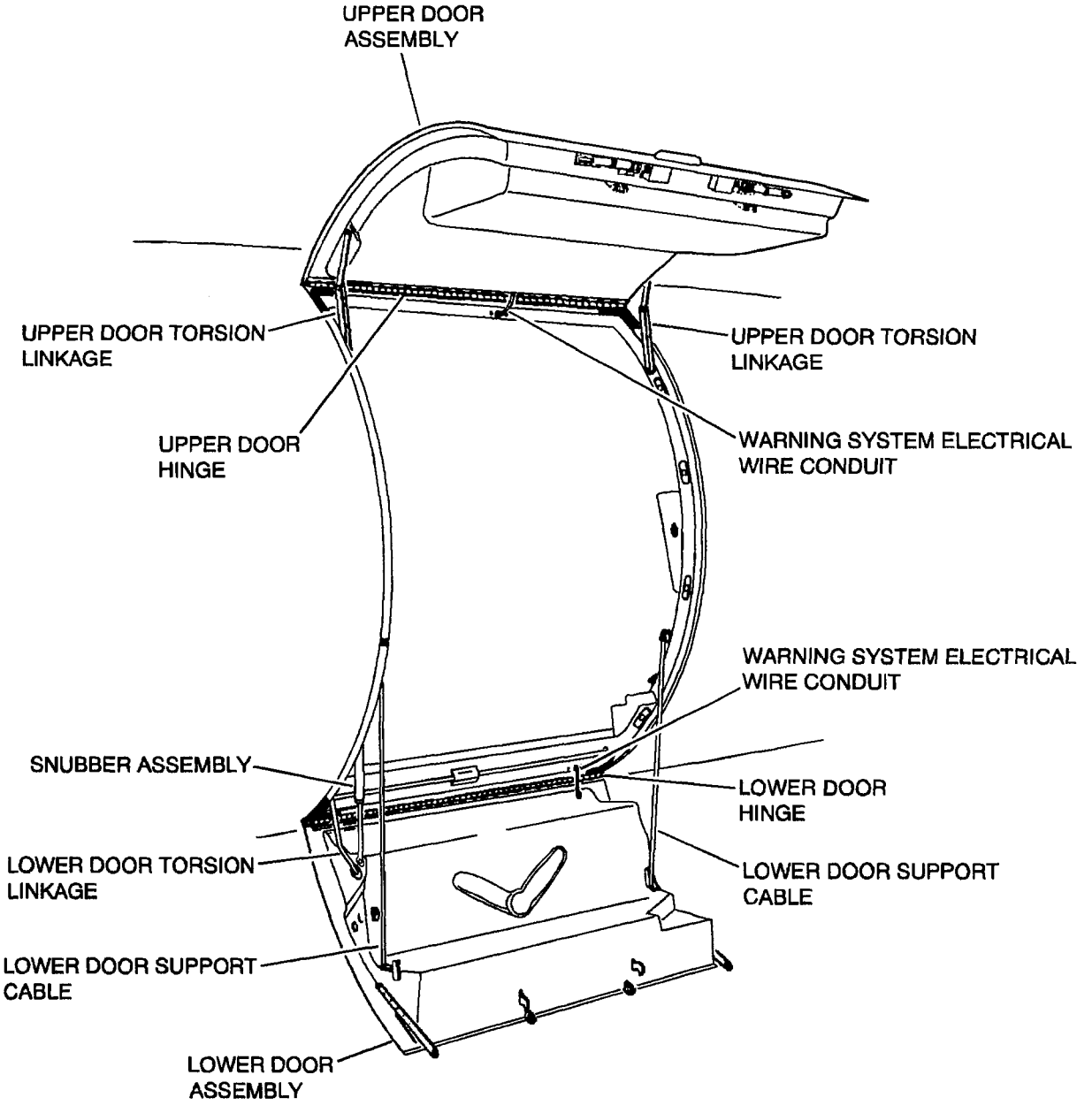
C. Removal of Lower Door (See Figure 201.)
   (1) Insert key in upper door keylock and rotate key 180° CW to unlock.
   (2) Unlatch and open upper and lower doors.
   (3) Provide a support for door.
   (4) Disconnect lower door support cables from door frame.
   (5) Disconnect damper cable from door frame by removing attaching parts.

WARNING: REMOVE TORQUE ARM LINK ASSEMBLIES WITH EXTREME CARE WHILE TORQUE ARM IS UNDER LOAD. DISCONNECTING TORSION BAR WITHOUT POSITIVE CONTROL CAN RESULT IN PERSONAL INJURY AND/OR DAMAGE TO THE AIRCRAFT.

   (6) Disconnect torsion bar and link assembly. (Refer to 52-11-01, Removal/Installation.)



Passenger/Crew Door Installation
Figure 201 (Sheet 1 of 2)



Passenger/Crew Door Installation
Figure 201 (Sheet 2 of 2)

EFFECTIVITY: AIRCRAFT WITH 36-INCH DOOR

(7) Remove attaching parts and filler to gain access to hinge pin.
(8) Make sure door is safely supported and remove hinge pin.
(9) Lift door away from aircraft and store in a protected area.

D. Installation of Lower Door (See Figure 201.)
(1) Carefully lift door into place on fuselage. Align hinge half on door with hinge half on fuselage. Install hinge pin and place a support under door.
(2) Install filler and secure with attaching parts.
(3) Connect torsion bar and link assembly. (Refer to 52-11-01, Removal/Installation.)
(4) Connect damper cable to door frame. Secure with attaching parts.
(5) Connect door support cables to door frame using attaching parts.
(6) With electrical power on, open and close door at least three times. Door must operate without interference. Door warning lights must illuminate when door is unlatched and extinguish when door is latched.
(7) Install previously removed panels and upholstery.
(8) Perform appropriate cabin proof pressure test. (Refer to Chapter 53.)

PASSENGER/CREW DOOR SEALS - MAINTENANCE PRACTICES

1. **Repairs**
   A. Replacement of Upper Door Assembly Rain Seal (See Figure 201.)
      (1) Acquire necessary tools and equipment.

NOTE: Equivalent substitutes may be used in lieu of the following:

NAME	PART NUMBER	MANUFACTURER	USE
Solvent Cleaner (MEK)		Commercially Available	Cleaning.
Cotton Cloth, Clean, White, and Lint-Free		Commercially Available	Cleaning and drying.
Adhesive	EC-776	3M Co. St. Paul, MN	Bonding seal.

      (2) Open passenger/crew door and remove door panel from upper door assembly.
      (3) Remove rain seal and clean all remaining adhesive from door and door frame.
      (4) Wipe area dry with a clean, dry cloth. Do not allow cleaning solvent to air dry as a residue will remain on the surface.
      (5) Mark a line on door frame and door where edge of new seal will be located.
      (6) Apply a 0.25 inch [0.64 cm] wide strip of adhesive on door frame and door inside of locating line.
      (7) Apply a 0.25 inch [0.64 cm] wide strip of adhesive to mating surface of rain seal.
      (8) Allow adhesive to air dry until adhesive will stick but not transfer to knuckle.
      (9) Match mating surfaces of seal, door, and door frame and press firmly into place.
      (10) Replace door panel.
   B. Replacement of Door Frame Seal (See Figure 201.)
      (1) Acquire necessary tools and equipment.

NOTE: Equivalent substitutes may be used in lieu of the following:

NAME	PART NUMBER	MANUFACTURER	USE
Adhesive, Class V	Refer to Chapter 20.		Secure door seal.
Twist Drill	#16	Commercially Available	Enlarging holes in aircraft structure if required.
Solvent Cleaner (MEK)		Commercially Available	Cleaning.
Cotton Cloth, Clean, White, and Lint-Free		Commercially Available	Cleaning and drying.
Hole Cutting Tool	3170013-002	Bombardier Aerospace Learjet Wichita, KS	Cutting holes in seal.
Drill Motor		Commercially Available	Cutting or enlarging holes.

(2) Open passenger/crew door. Remove upholstery as required to gain access to seal pull through tabs.

NOTE: During the following procedure, size #30 (0.128 inch [0.325 cm] diameter) holes in door frame may be enlarged to size #16 (0.177 inch [0.450 cm] diameter) so that pull through tabs can be worked into door frame from the outside. Otherwise, some sections of inner skin must be drilled off to gain access to pull through tabs.

(3) Mark where splice in seal is located on forward and aft door frame.
(4) Remove door seal and clean all traces of adhesive from door frame.
(5) Wipe area dry with a clean, dry cloth. Do not allow cleaning solvent to air dry as a residue will remain on the surface.
(6) Apply adhesive and install four corner seals. (Refer to Chapter 20.) Ensure that pull through tabs on corner seals are fully engaged into holes.
(7) Position top seal so that pull through tabs align with holes in door frame and ends overlap shoulder of corner seals. Mark and trim top seal so that ends will butt corner seal shoulders.
(8) Apply adhesive and install top seal. Ensure that pull through tabs fully engage holes and corner seal plugs are fully inserted.

NOTE: Do not apply adhesive to corner seal plugs. Apply adhesive to the inside of the seal to be slipped over the plug. This will eliminate hard spots in the seal.

(9) Position bottom seal so that pull through tabs align with holes in door frame and ends overlap shoulder of corner seals. Mark and trim bottom seal so that ends will butt corner seal shoulders.
(10) Apply adhesive and install bottom seal. Ensure that pull through tabs are fully engaged into holes in door frame and that corner seal plugs are fully inserted.

NOTE: Do not apply adhesive to corner seal plugs. Apply adhesive to the inside of the seal to be slipped over the plug. This will eliminate hard spots in the seal.

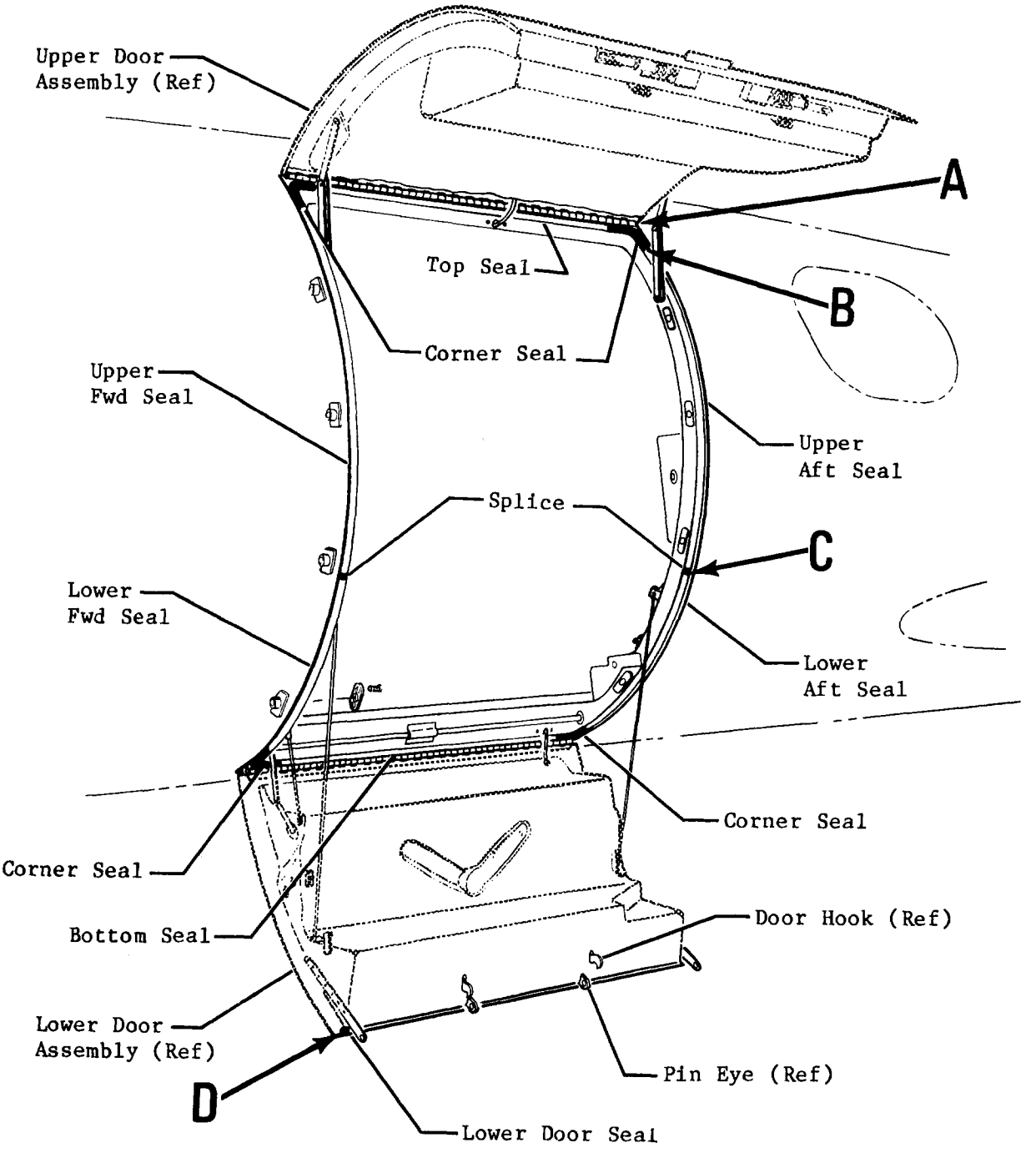
(11) Position upper aft seal so that pull through tabs align with holes in door frame and ends overlap splice mark and corner seal shoulder. Mark and trim upper aft seal so that one end will butt corner seal shoulder and other end matches splice mark.
(12) Apply adhesive and install upper aft seal. Ensure that pull through tabs are fully engaged into holes and that corner seal plug is fully inserted.

NOTE: Do not apply adhesive to corner seal plug. Apply adhesive to the inside of the seal to be slipped over the plug. This will eliminate hard spots in the seal.

(13) Position lower aft seal so that pull through tabs align with holes in door frame and ends overlap upper aft seal and corner seal. Mark and trim lower aft seal so that one end will butt with corner seal shoulder and other end will butt with upper aft seal.
(14) Mark the center of splice plug. Apply adhesive to inside of upper aft seal and insert splice plug halfway into upper aft seal. Apply adhesive inside of lower aft seal and slip over other half of splice plug so that it butts against upper aft seal.
(15) Apply adhesive and install lower aft seal. Ensure that seal butts corner seal shoulder and that upper and lower aft seals butt. Ensure that pull through tube tabs fully engage holes.

NOTE: Do not apply adhesive to corner seal plug. Apply adhesive to the inside of the seal to be slipped over the plug. This will eliminate hard spots in the seal.

(16) Position the upper forward seal so that pull through tabs align with holes in door frame and ends overlap splice mark and corner seal shoulder. Mark and trim upper forward seal so that one end will butt corner seal shoulder and other end matches splice mark.

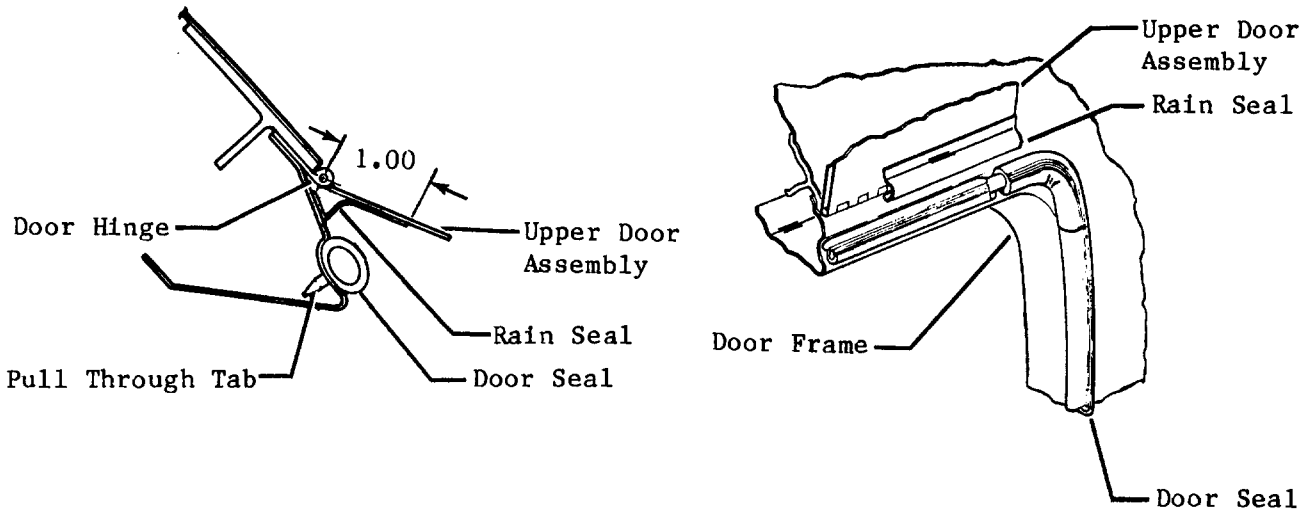


NOTE: 36 inch door shown. Seal installation typical for 24 inch door.

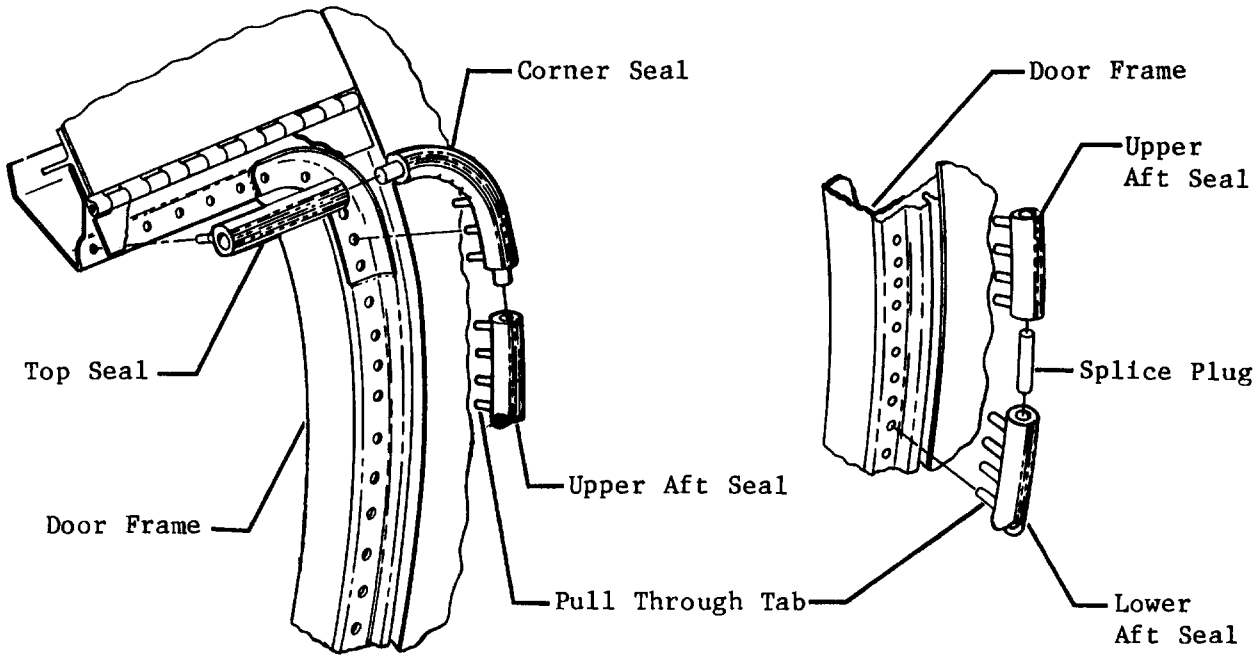
2-19C

Passenger/Crew Door Seal Replacement
Figure 201 (Sheet 1 of 3)

EFFECTIVITY: NOTED



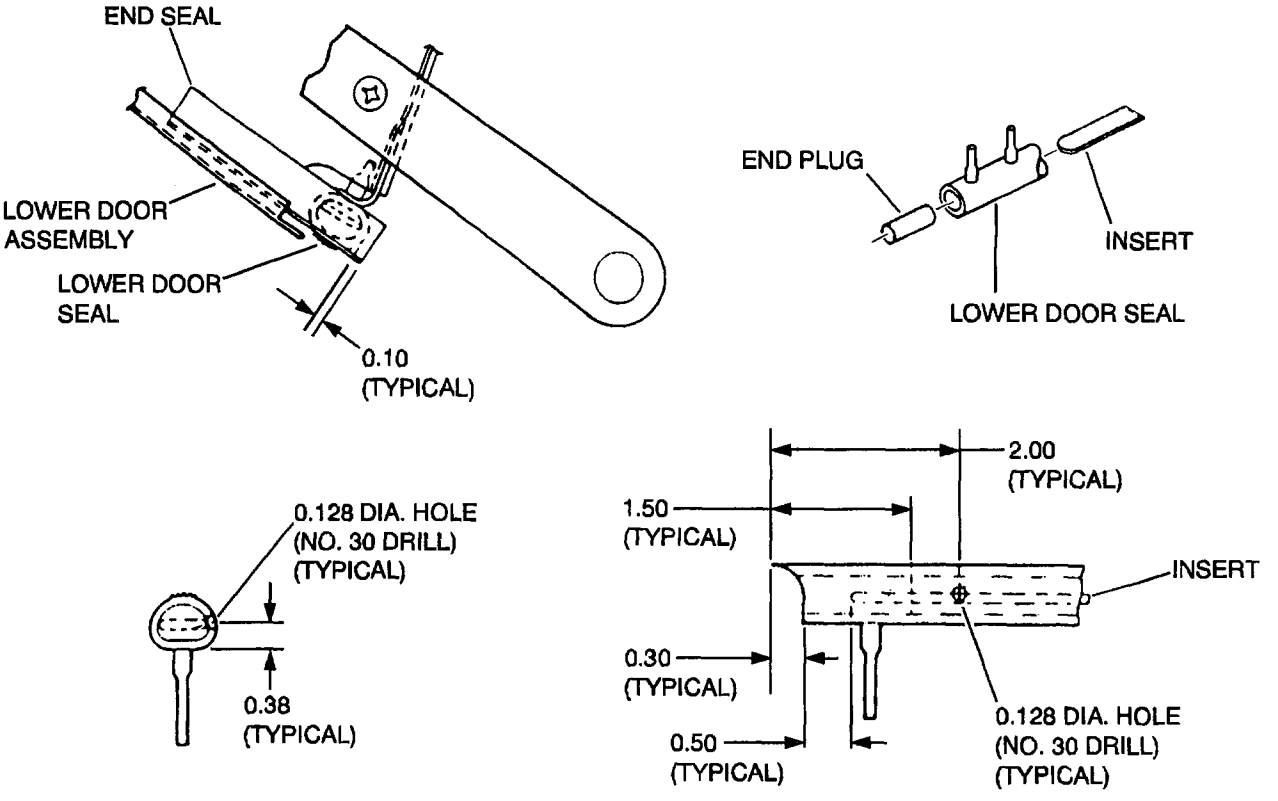
Detail A



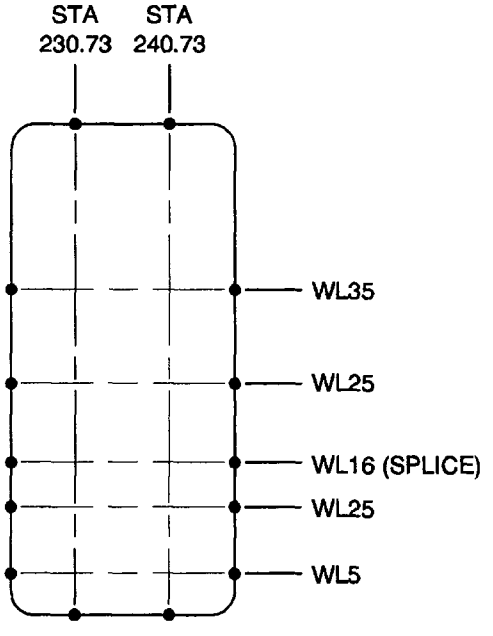
Detail B

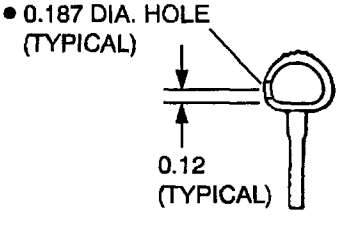
Detail C

Passenger/Crew Door Seal Replacement
Figure 201 (Sheet 2 of 3)



Detail D





NOTE: WATER LINE AND STATION LOCATION FOR HOLES IS ±0.50 INCH. ALL DIMENSIONS ARE IN INCHES

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Passenger/Crew Door Seal Replacement
Figure 201 (Sheet 3 of 3)

(17) Apply adhesive and install upper forward seal. Ensure that pull through tabs are fully engaged into holes and corner seal plug is fully inserted.

NOTE: Do not apply adhesive to corner seal plug. Apply adhesive to the inside of the seal to be slipped over the plug. This will eliminate hard spots in the seal.

(18) Position lower forward seal so that pull through tabs align with holes in door frame so that one end will butt corner seal shoulder and other end butts upper forward seal.
(19) Mark center of splice plug. Apply adhesive to inside of upper forward seal and insert splice plug halfway into upper forward seal. Apply adhesive inside of lower forward seal and slip over other half of splice plug so that it butts against upper aft seal.
(20) Apply adhesive and install lower forward seal. Ensure that half of splice plug is in each seal and that seals butt and lower forward seals butts corner seal shoulder. Ensure that pull through tabs fully engage holes.

NOTE: Do not apply adhesive to corner seal plug. Apply adhesive to the inside of the seal to be slipped over the plug. This will eliminate hard spots in the seal.

(21) Allow adhesive to cure. (Refer to Chapter 20.)
(22) Locate and, with hole cutting tool chucked into a drill motor, cut holes in seals as shown.

NOTE: Remove excess adhesive from seal joints prior to closing door.

(23) Perform Cabin Leak Test. (Refer to Chapter 21.)

C. Replacement of Lower Door Assembly Seal (See Figure 201.)
(1) Acquire necessary tools and equipment.

NOTE: Equivalent substitutes may be used in lieu of the following:

NAME	PART NUMBER	MANUFACTURER	USE
Adhesive, Class V	Refer to Chapter 20.		Secure door seal.
Petroleum Jelly	AN-P-51	Commercially Available	Lubricant.
Solvent Cleaner (MEK)		Commercially Available	Cleaning.
Cotton Cloth, Clean, White, and Lint-Free		Commercially Available	Cleaning and drying.
Hole Cutting Tool	3170013-002	Bombardier Aerospace Learjet Wichita, KS	Cutting holes in seal.
Drill Motor		Commercially Available	Cutting holes.

(2) Open passenger/crew door.
(3) Remove seal from lower door assembly. Cut seal and remove metal insert from inside seal. Retain metal insert for reinstallation. Remove end seals from lower door.
(4) Solvent clean all traces of old adhesive from door.
(5) Wipe area dry with a clean, dry cloth. Do not allow cleaning solvent to air dry as a residue will remain on the surface.

(6) Remove access covers on lower step and remove insulation from inside of step as required to gain access to pull through tab holes.
(7) Position lower door seal so that pull through tabs align with holes and ends overlap door. Apply adhesive and install seal. (Refer to Chapter 20.) Ensure that pull through tabs fully engage holes.
(8) Raise lower door until lower door seal touches seal around door frame. Mark and trim lower door seal forward and aft ends so that it fits inside seal around door frame when door is shut.
(9) Locate and, with hole cutting tool chucked into drill motor, cut two holes in seal as shown.
(10) Apply petroleum jelly to metal insert and slide insert inside of seal and position so that cutouts in insert match lower door latch pin eyes.
(11) Apply adhesive to inside of seal ends. Cut end plugs 1.50 inches long and insert into lower door seal.

NOTE: Do not apply adhesive to plug. Apply adhesive to the inside of seal. This will eliminate hard spots in the seal.

The extra length of plug, when forced into the end of the seal, secures the metal insert and keeps it from rotating.

(12) Apply adhesive to end seals, locate and install as shown.
(13) Remove excess adhesive.
(14) Allow adhesive to cure prior to closing door. (Refer to Chapter 20.)
(15) Perform cabin leak test. (Refer to Chapter 21.)

D. Repairing Seals

NOTE: Repair only seals with cracks, cuts, abrasions, or tears of less than 50% of seal bulb cross sectional area and longitudinal crack lengths of less than two (2) inches [5.08 cm].

(1) Acquire necessary tools and equipment.

NOTE: Equivalent substitutes may be used in lieu of the following:

NAME	PART NUMBER	MANUFACTURER	USE
Silicone Rubber Adhesive Class V	RTV 154 or RTV 157	Refer to 20-11-00.	Seal repairing.
Cleaning Solvent (MEK)		Commercially Available	Cleaning.
Cotton Cloth, Clean, White, and Lint-Free		Commercially Available	Cleaning and drying.

(2) Clean defective seal area using a clean cloth dampened with cleaning solvent.
(3) Wipe area dry with a clean, dry cloth. Do not allow cleaning solvent to air dry as a residue will remain on the surface.
(4) Brush silicone rubber adhesive into crack, cut, abrasion, or tear. (Refer to Chapter 20.)
(5) Smooth adhesive over repaired surface to a uniform thickness not to exceed 0.02 inch [0.4 mm].
(6) Allow adhesive to cure to a dry, rubbery consistency before closing door. (Refer to Chapter 20.)

LOWER DOOR ASSEMBLY TORSION BAR - MAINTENANCE PRACTICES

1. Removal/Installation

A. Remove Lower Door Assembly Torsion Bar (See figure 201.)

(1) Insert key in keylock and rotate key 180° CW to unlock passenger/crew door. Unlatch and open both upper and lower door assemblies.

(2) Remove interior cabinets, passenger seats, upholstery, carpet, and floorboards as required to gain access to aft bearing at frame 12 (24-inch doors) or frame 13 (36-inch doors).

(3) Place a cushioned support under lower door assembly.

NOTE: Ensure that cushioned support is firm and covered with a soft, non-abrasive material so that the lower door assembly's exterior surface shall not be scratched when resting on support.

(4) Fabricate a torque bar tool to assist in applying or releasing static torque from torsion bar during assembly and disassembly. (See figure 202.)

(5) Place torque bar tool on torsion bar link. Close and secure torque bar slide lock.

WARNING: THE TORSION BAR MUST BE ASSEMBLED AND DISASSEMBLED WITH EXTREME CARE. APPLYING OR RELEASING STATIC TORQUE WITHOUT POSITIVE CONTROL CAN RESULT IN PERSONAL INJURY AND/OR DAMAGE TO THE AIRCRAFT.

(6) While maintaining a steady downward pressure on torsion bar link (with torque bar tool), remove attaching parts securing torsion bar link to snubber link.

(7) Slowly and carefully raise torque bar tool until static torque on torsion bar is completely dissipated.

(8) Loosen torque bar slide lock and remove torque bar tool from torsion bar link.

(9) Drill out rivets securing support brackets and spacers and remove from aircraft.

(10) Remove screws securing aft bearing to frame 12 (24-inch doors) or frame 13 (36-inch doors) and remove from aircraft.

(11) Slide torsion bar towards frame 12 (24-inch doors) or frame 13 (36-inch doors) so that forward end of torsion bar is removed from forward bearing at frame 10. Holding forward end of torsion bar at a slight outboard angle from fuselage, slide torsion bar forward out of frame 12 or frame 13 and remove from aircraft.

B. Install Lower Door Assembly Torsion Bar (See figure 201.)

(1) Holding forward end of torsion bar at a slight outboard angle from fuselage, point and slide aft end of torsion bar into fuselage at frame 12 (24-inch doors) or frame 13 (36-inch doors).

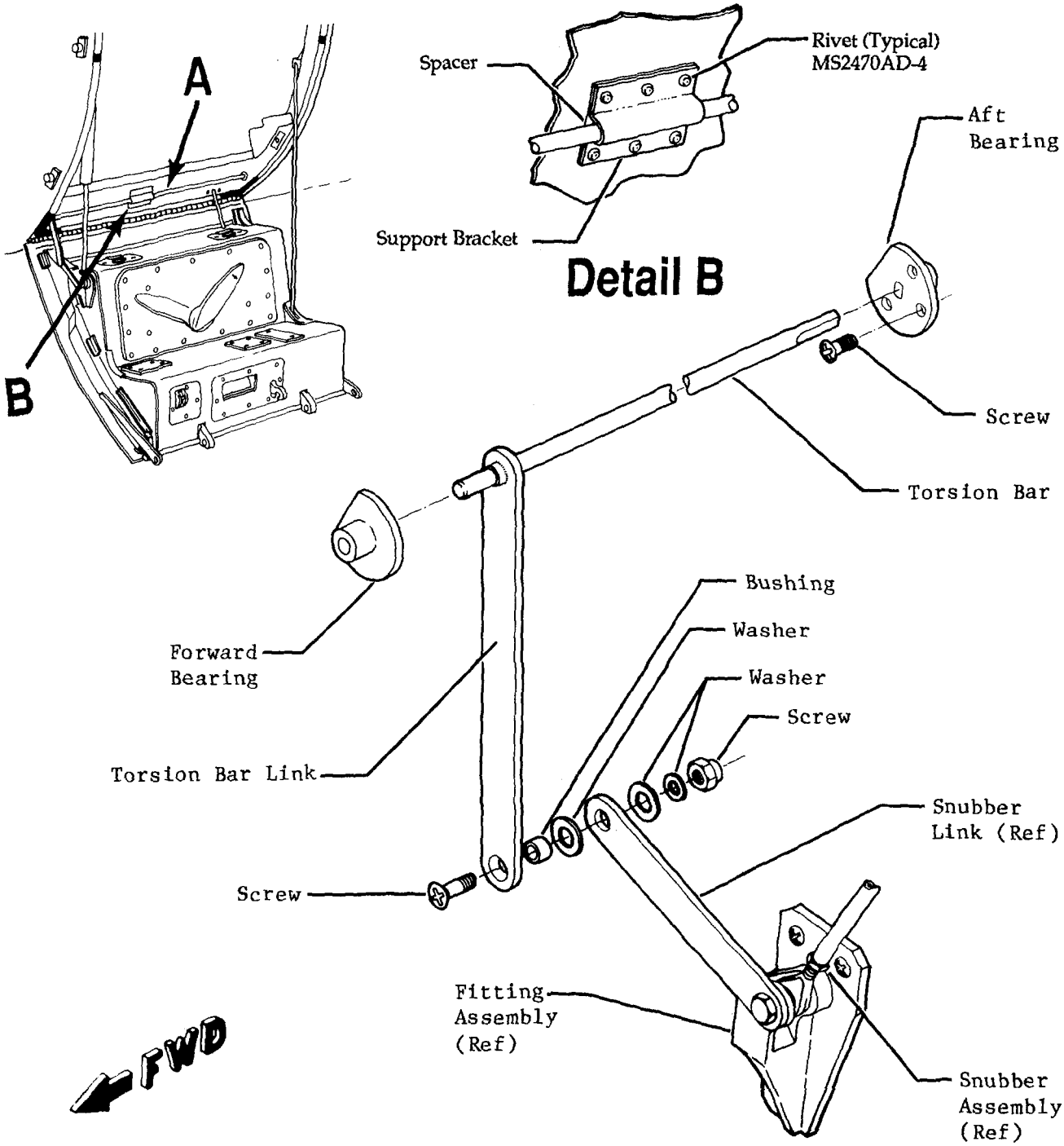
(2) Position torsion bar parallel to fuselage, slide forward end of torsion bar into forward bearing at frame 10.

(3) Holding torsion bar link in an upright position, slide aft bearing (aft of frame 12 for 24-inch doors or aft of frame 13 for 36-inch doors) onto aft end of torsion bar and secure with attaching screws.

(4) Position spacers and support brackets in position on torsion bar and fuselage and secure with blind rivets.

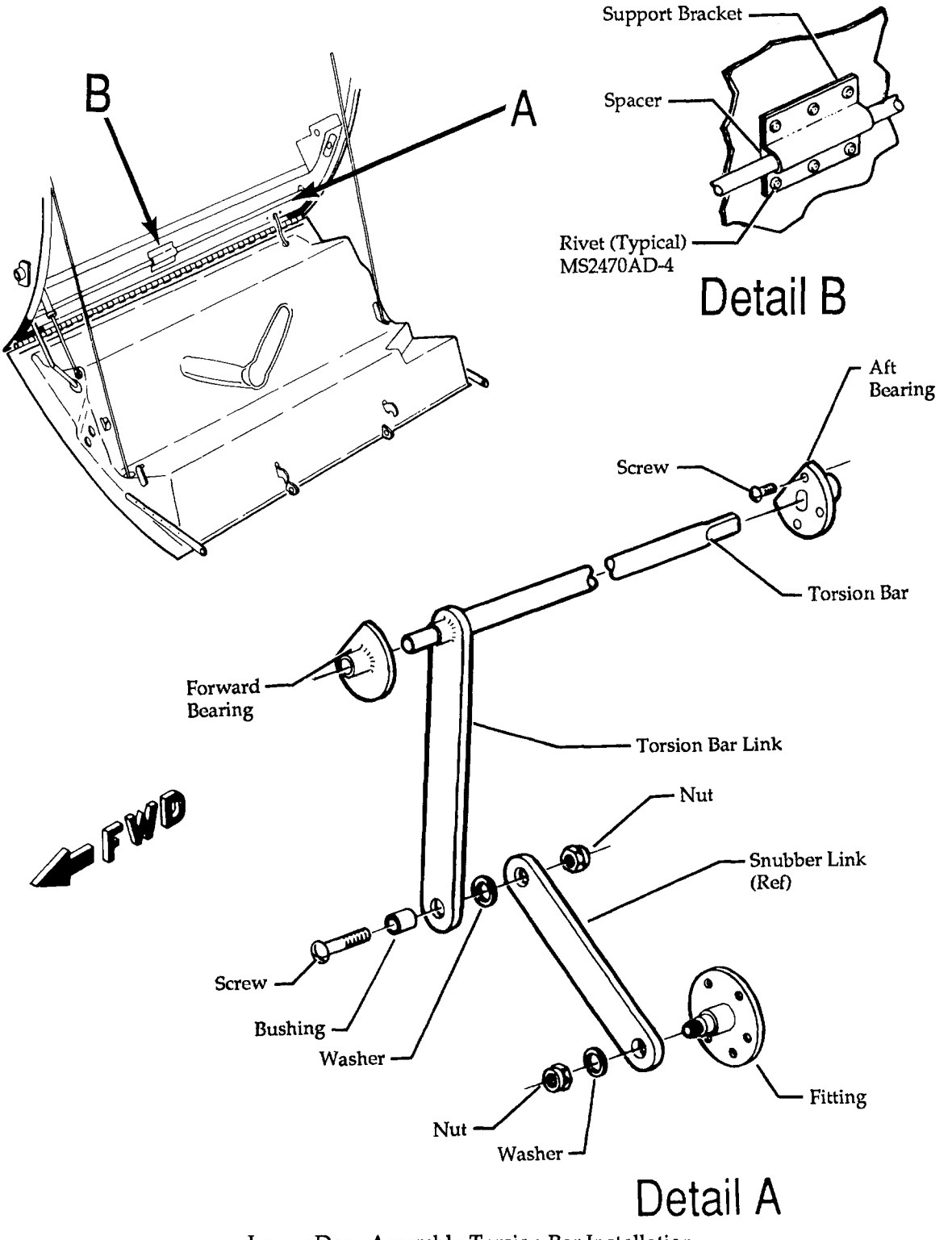
(5) Place torque bar tool on torsion bar link, close and secure torque bar slide lock.

WARNING: THE TORSION BAR MUST BE ASSEMBLED AND DISASSEMBLED WITH EXTREME CARE. APPLYING OR RELEASING STATIC TORQUE WITHOUT POSITIVE CONTROL CAN RESULT IN PERSONAL INJURY AND/OR DAMAGE TO THE AIRCRAFT.

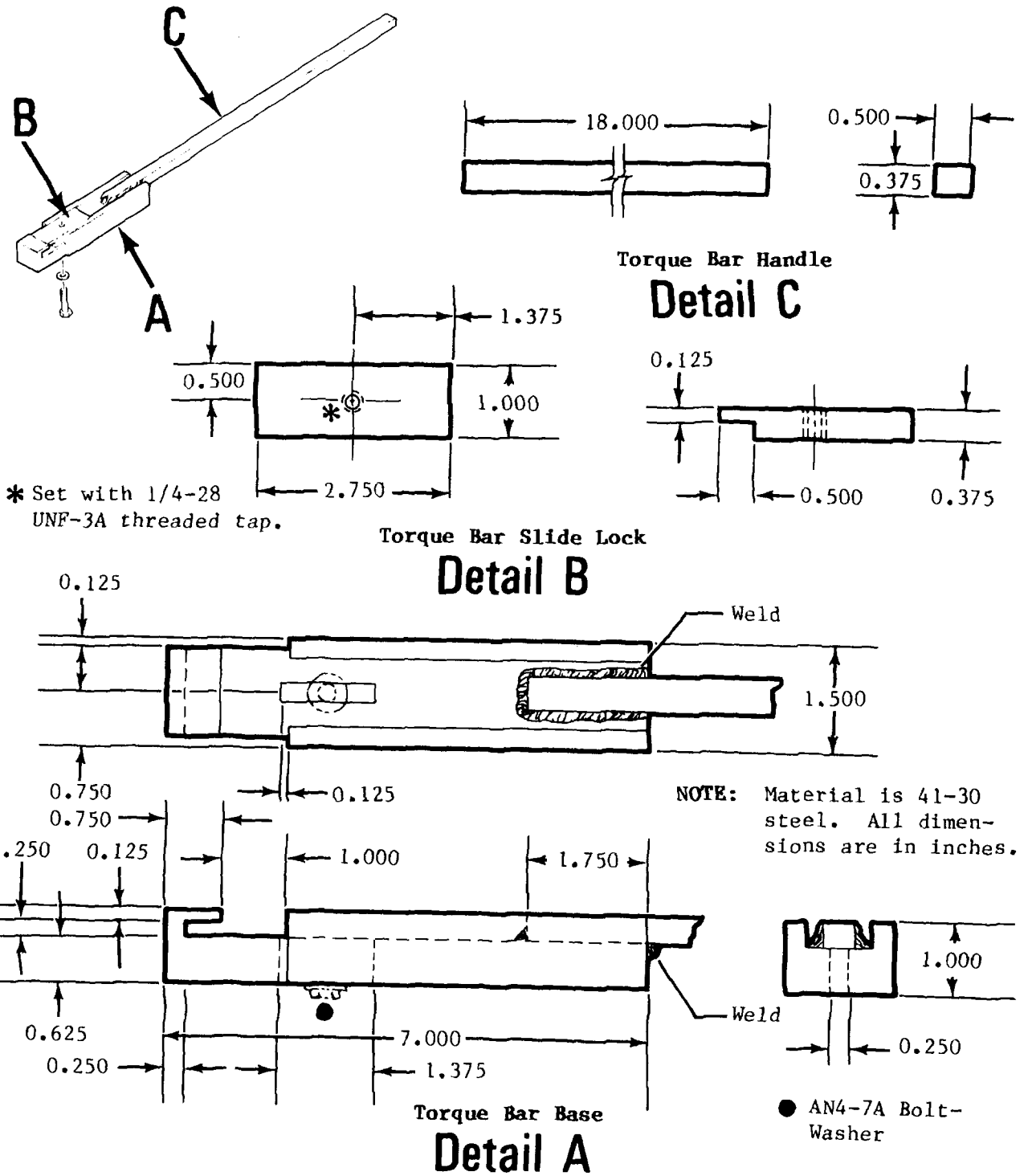


Detail A

Lower Door Assembly Torsion Bar Installation
Figure 201 (Sheet 1 of 2)



Lower Door Assembly Torsion Bar Installation
Figure 201 (Sheet 2 of 2)



Torque Bar Tool Fabrication
Figure 202

(6) Slowly and carefully pull downward on torque bar tool until torsion bar link is mated with snubber link.
(7) Secure torsion bar link to snubber link with attaching parts.

NOTE: Do not attempt to adjust static torque on the torsion bar. The torsion bar is not adjustable. Static torque is determined by the material selected to make the torsion bar and by corresponding placement of both forward and aft bearings.

(8) Loosen torque bar slide lock and remove torque bar tool from torsion bar link.
(9) Touch up paint on lower door assembly and fuselage as required. (Refer to Chapter 20.)
(10) Install previously removed floorboards, carpets, upholstery, cabinets, and passenger seats.
(11) Restore aircraft to normal.
(12) Close and lock passenger/crew door.

LOWER DOOR LATCH MECHANISM — MAINTENANCE PRACTICES

1. Removal/Installation

A. Remove Lower Door Latch Mechanism (See figure 201.)

(1) Open cabin doors.
(2) Remove upholstery from lower door.
(3) Remove attaching screws securing pan assembly to door structure.

NOTE: As pan assembly is removed the spring will be released from handle shaft.

(4) Remove pan assembly sufficiently to gain access to spring. Hold spring, remove pan assembly from door.
(5) Remove cotter pin and clevis pin securing eyebolt to bellcrank. Remove tube assembly with lock pin attached from door.

NOTE: As the aft tube assembly is removed, spring, spring retainers, and spacers will be released.

(6) Remove spring pin and bushing from handle shaft.
(7) Remove handle assembly from pan assembly.
(8) Remove cotter pin from clevis pin.
(9) Remove clevis pin and remove handle from handle shaft.
(10) Inspect all clevis pins, bushings, and eyebolts for serviceability. Replace defective parts as necessary.

B. Install Lower Door Latch Mechanism (See figure 201.)

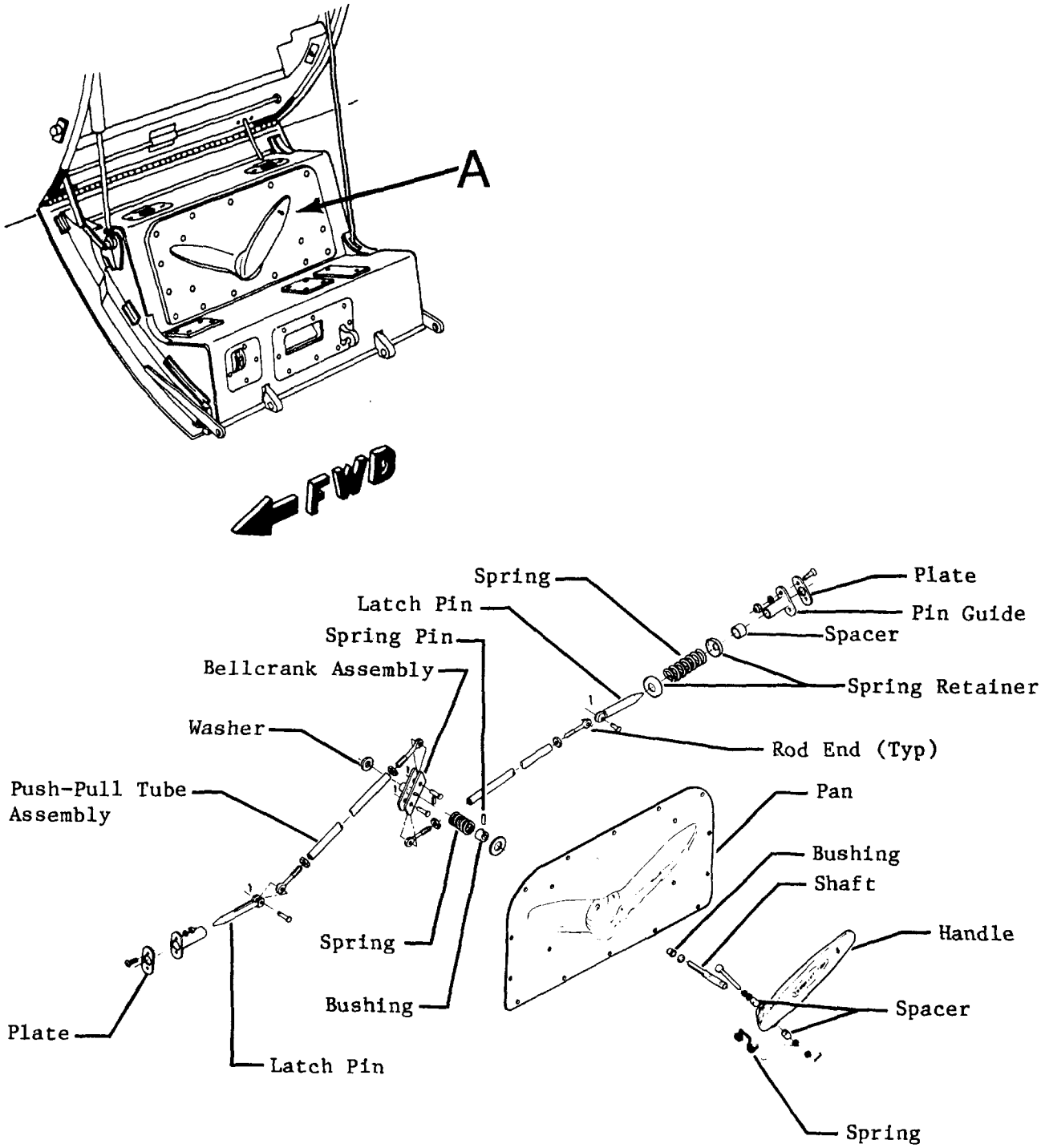
(1) Assemble handle on handle shaft and secure with clevis pin.
(2) Position washer and oilite bushing on handle shaft. Insert handle shaft thru pan assembly. Assure that oilite bushing is properly seated.
(3) Install washer and bushing on handle shaft. Secure with spring pin.
(4) Assemble spacer, spring retainers, and spring on aft lock pin and position lock pin in to guide assembly.
(5) Connect eyebolt to bellcrank using clevis pin. Secure with cotter pin.
(6) Position washer and bellcrank on bracket.
(7) Position spring on handle shaft and position pan assembly on door. Turn door handle slightly to help handle shaft to engage in bellcrank.
(8) Secure pan assembly to door.
(9) Check latch mechanism adjustment. (Refer to Adjustment/Test, this section.)
(10) Install previously removed upholstery.
(11) Check operation of door warning system as follows:
(a) Set Battery Switches on.
(b) Ensure that passenger/crew door is closed and latched and that door hook is disengaged.
(c) Verify that DOOR warning annunciator is not illuminated.
(d) Set Battery Switches off.

2. Adjustment/Test

A. Adjust Lower Door Latch Mechanism (See figure 201.)

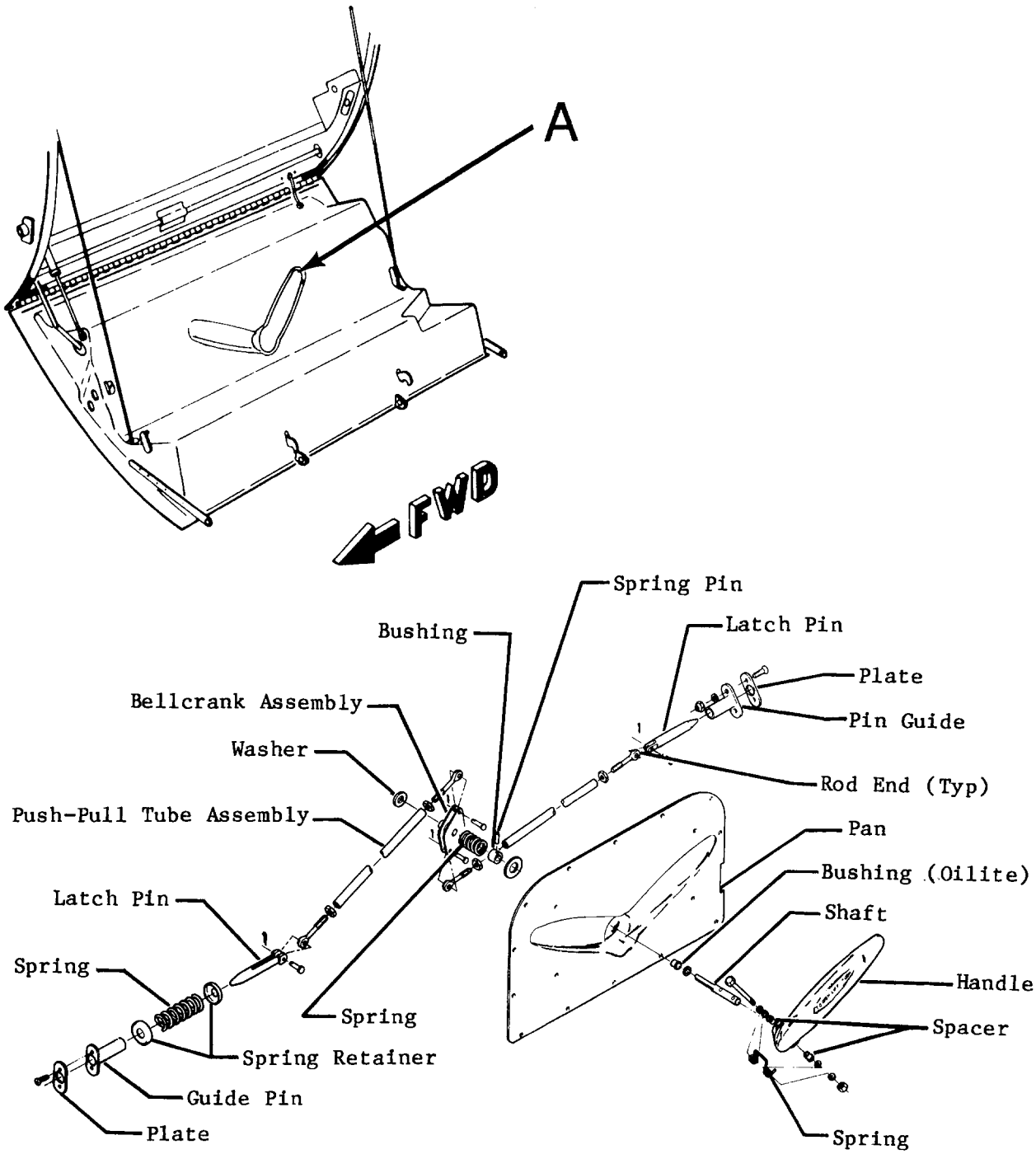
NOTE: The following procedure is applicable to both the 24-inch and 36-inch door.

(1) Position door handle to the closed position (pins extended).
(2) Check that latch pins are extended 0.85 inch (24-inch door) or 1.35 inch (36-inch door).
(3) If adjustment is required, remove upholstery and access panels as necessary to gain access to push-pull tubes.



Detail A

Lower Door Latch Mechanism Installation
Figure 201 (Sheet 1 of 2)



Detail A

Lower Door Latch Mechanism Installation
Figure 201 (Sheet 2 of 2)

(4) Disconnect rod end from latch pin. Remove safety wire from rod end and push-pull tube.
(5) Loosen jamnut and adjust rod end as required to obtain proper measurement.
(6) Tighten jamnut and safety wire.
(7) If any adjustments were made to door pins, door latch pin microswitches shall be checked. (Refer to 52-70-00.)
(8) Install access covers and upholstery.

LOWER DOOR CABLE REEL — MAINTENANCE PRACTICES

1. Removal/Installation

A. Removal of Lower Door Cable Reel (Executive Door) (See Figure 201.)

(1) Open lower door.
(2) Remove upholstery from lower door.
(3) Remove lower door pan assembly. (Refer to 52-11-02.)
(4) Raise lower door up and hold in position on door frame. This will allow cable reel to take up cable slack.
(5) On *Aircraft 35-002 thru 35-675; 36-002 thru 36-063*, while holding cable securely, remove spring pin and knob from cable.
(6) On *Aircraft 35-676 and Subsequent; 36-064 and Subsequent*, while holding cable securely, remove cable guide pulley fitting, pulley and attaching parts from fitting on fuselage.
(7) On *Aircraft 35-002 thru 35-675; 36-002 thru 36-063*, slowly release cable allowing cable reel to completely unwind.
(8) On *Aircraft 35-676 and Subsequent; 36-064 and Subsequent*, slowly release cable and fitting to the first pulley on door. To completely unwind cable, remove cable end from cable reel and slowly allow cable reel to unwind.
(9) Remove cable guard, cable stop and cable guard pins.
(10) *On Aircraft 35-002 thru 35-675; 36-002 thru 36-063,* remove cable end from cable reel.
(11) Note position of cable reel and remove attaching parts and cable reel from door.
(12) Unthread cable from door.
(13) Perform Inspection of Lower Door Cable for Fraying and Other Damage. (Refer to Inspection/Check, this section.)

B. Installation of Lower Door Cable Reel (Executive Door) (See Figure 201.)

(1) Install cable reel on door structure and secure with attaching parts.

NOTE: Ensure cable reel is in its correct position. Clip on cable reel shall be away from door structure.

(2) Thread cable in door. On *Aircraft 35-676 and Subsequent; 36-064 and Subsequent*, thread cable through cable guide pulley fitting before threading in door.

CAUTION: DO NOT ALLOW CABLE REEL TO UNWIND FREELY.

(3) Wind cable reel counterclockwise to the full wound position.
(4) Holding cable reel in the wound position, attach cable to clip.
(5) Slowly allow cable reel to unwind taking up slack in cable.
(6) Raise lower door. On *Aircraft 35-002 thru 35-675; 36-002 thru 36-063*, thread cable through eyebolt and install cable knob. On *Aircraft 35-676 and Subsequent; 36-064 and Subsequent*, secure cable guide pulley fitting and pulley to fitting on fuselage of aircraft with attaching parts.
(7) Slowly lower door while observing operation of cable reel.
(8) Position lower door 87° to 90° to horizontal plane of door hinge.
(9) Position cable stop on door structure so that cable does not rub stop and that cable ball touches the cable stop. Move cable stop 1 to 2 serrations forward to shorten cable travel. Secure stop.
(10) Install cable guard and cable guard pins.
(11) Check lower door cable rigging. (Refer to Lower Door Cable and Reel Rigging, this section.)
(12) Install lower door pan assembly. (Refer to 52-11-02.)
(13) Install lower door upholstery.

C. Removal of Lower Door Cable Reels (Cargo Door) (See Figures 202 and 203.)

NOTE: Procedures for forward and aft cable handle installations are identical except as noted.

(1) Open lower door.
(2) Remove upholstery from lower door.
(3) Remove lower door pan assembly. (Refer to 52-11-02.)
(4) Raise lower door up and hold in position on door frame. This will allow cable reels to take up cable slack.
(5) On *Aircraft 35-002 thru 35-675; 36-002 thru 36-063*, while holding cable securely, remove spring pin and knob from cable.
(6) On *Aircraft 35-676 and Subsequent; 36-064 and Subsequent*, while holding cable securely, remove cable guide pulley fitting, pulley and attaching parts from fitting on fuselage.
(7) On *Aircraft 35-002 thru 35-675; 36-002 thru 36-063*, slowly release cable, allowing cable reel to completely unwind.
(8) On *Aircraft 35-676 and Subsequent; 36-064 and Subsequent*, slowly release cable and fitting to the first pulley on door. To completely unwind reel, remove cable end from cable reel clip and slowly allow reel to unwind.
(9) While holding cable securely, remove attaching parts connecting other cable to fuselage.
(10) Slowly release cable, allowing cable reel to completely unwind.
(11) Remove cable guards, cable stops and cable guard pins.
(12) *On Aircraft 35-002 thru 35-675; 36-002 thru 36-063*, remove handle cable assembly end from cable reel clip.
(13) Note position of cable reels and remove attaching parts and cable reels from door.
(14) Unthread cables from door. On *Aircraft with aft handles*, door pulley assembly closest to handle must be loosened to allow cable to be removed.
(15) Perform Inspection of Lower Door Cable for Fraying and Other Damage. (Refer to Inspection/Check, this section.)

D. Installation of Lower Door Cable Reel (Cargo Door) (See Figures 202 and 203.)

(1) Install cable reels on door structure and secure with attaching parts.

NOTE: Ensure cable reels are in their correct position. Clip on cable reel shall be away from door structure.

(2) Thread cables in door. On *Aircraft 35-676 and Subsequent; 36-064 and Subsequent*, thread cable through cable guide pulley fitting before threading in door.
(3) On *Aircraft with aft handles*, tighten door pulley assembly closest to handle.

CAUTION: DO NOT ALLOW CABLE REEL TO UNWIND FREELY.

(4) Wind cable reel for cable without the handle counterclockwise to the full wound position.
(5) Holding cable reel in the wound position, attach cable to clip.
(6) Slowly allow cable reel to unwind taking up slack in cable.

NOTE: Insert bolt in end of cable assembly so cable will not unthread through door while opposite cable is being attached.

(7) Wind cable reel for cable with the handle counterclockwise to the full wound position.
(8) Holding cable reel in the wound position, attach cable to clip.
(9) Slowly allow cable reel to unwind taking up slack in cable.
(10) Raise lower door. *On Aircraft 35-002 thru 35-675; 36-002 thru 36-063*, thread cable for handle through eyebolt and install cable knob. *On Aircraft 35-676 and Subsequent; 36-064 and Subsequent*, secure cable guide pulley fitting and pulley to fitting on fuselage of aircraft with attaching parts.
(11) Secure cable opposite handle assembly to fuselage with attaching parts.

(12) Slowly lower door while observing operation of cable reel.
(13) Position lower door 87° to 90° to horizontal plane of door hinge.
(14) Position cable stops on door structure so that cables do not rub stop and that cable balls touches the cable stops. Move cable stops 1 to 2 serrations forward to shorten cable travel. Secure stops.
(15) Install cable guards and cable guard pins.
(16) Check lower door cable rigging. (Refer to Lower Door Cable and Reel Rigging, this section.)
(17) Install lower door pan assembly. (Refer to 52-11-02.)
(18) Install lower door upholstery.

2. Adjustment/Test

A. Lower Door Cable and Reel Rigging (See Figures 201, 202 and 203.)

NOTE: During normal use, the lower door snubber and cable should accept a load simultaneously. This will prevent damage to the door hinge due to twisting.

When adjusting cargo door, both cable assemblies are adjusted at the same time using the following procedures.

(1) Remove upholstery from lower door assembly.
(2) Remove door handle and pan from door to gain access to cable installation. (Refer to 52-11-03.)
(3) Remove attaching parts and cable stop from door bracket assembly.
(4) Support cabin door so that step tread is 87° to 90° to horizontal plane of door hinge.
(5) Place a light load on door (push down lightly with hand) to see if door snubber has bottomed out.
(6) With no load on door, install cable stop where it contacts the swagged ball on the cable.

NOTE: The cable stop may be rotated 180° if more adjustment is needed.

(7) Raise door slightly and move cable stop 1 or 2 serrations in direction to shorten cable travel. This will compensate for cable stretch.

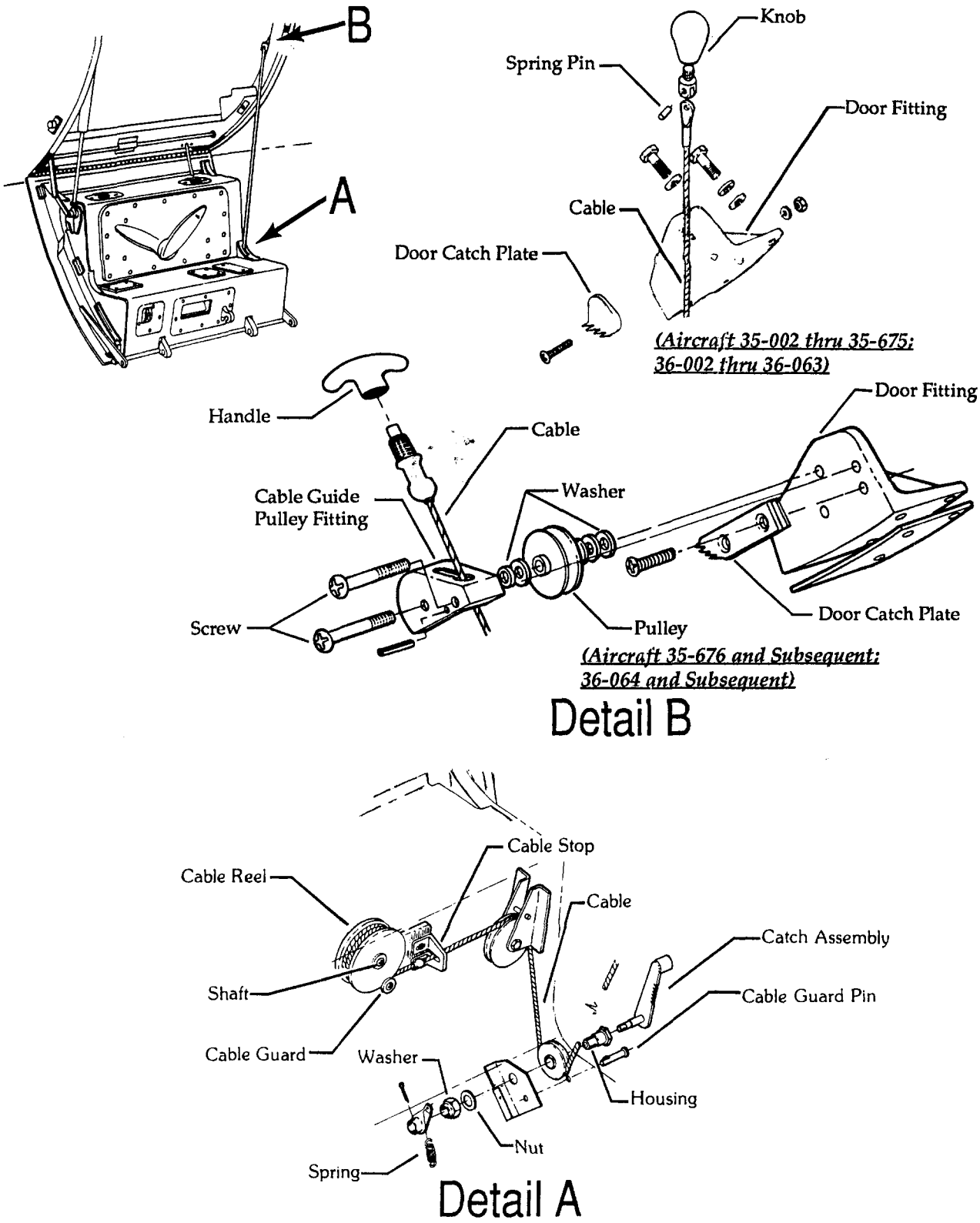
NOTE: The door snubber shall not bottom out when cable has reached its maximum stretch.

(8) Apply a load to door and check that deflection of forward and aft corners are equal. If necessary, repeat step (7).
(9) Install pan and door handle and secure with attaching parts.
(10) Install upholstery.

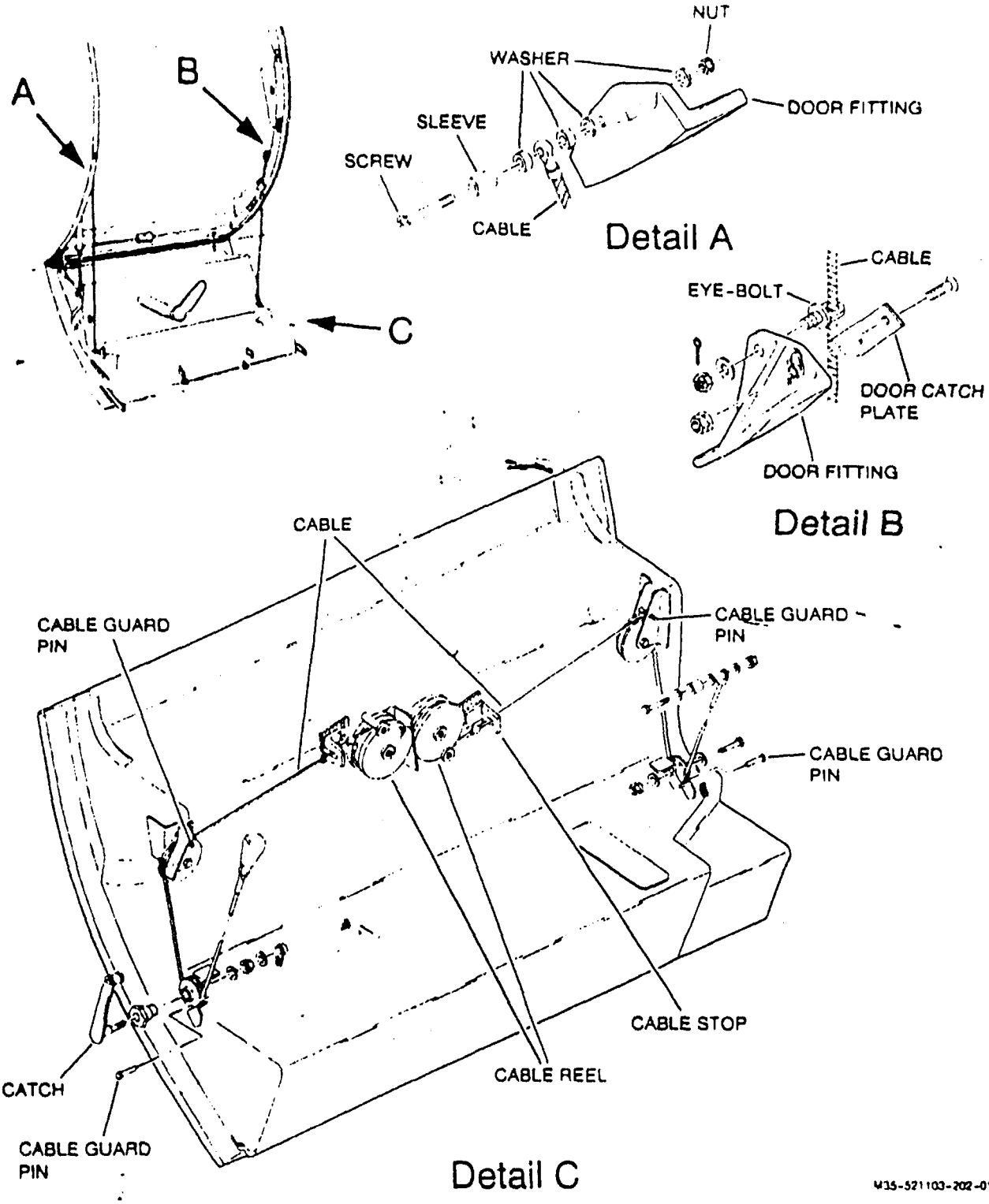
3. Inspection/Check

NOTE: Perform inspection of lower door cable for fraying and other damage in accordance with the current inspection interval specified in Chapter 5.

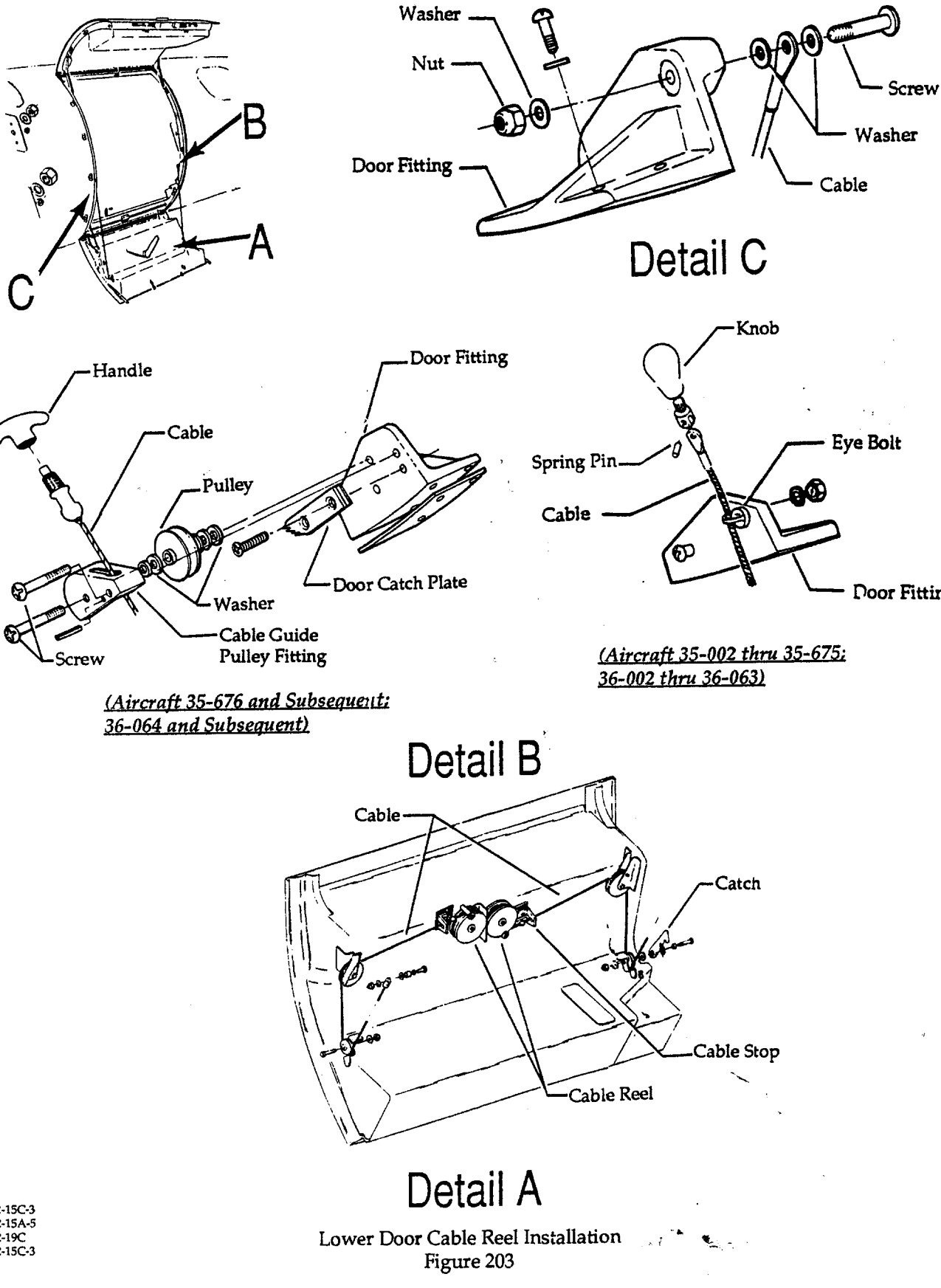
A. Inspection of Lower Door Cable for Fraying and Other Damage (See Figures 201, 202, and 203.)
(1) Open the lower door.
(2) Remove upholstery and panels as required.
(3) Examine cable for fraying and other damage such as crushed, pinched, and worn areas.
(4) Replace a cable found with fraying and other damage such as crushed, pinched, and worn areas. (Refer to Removal/Installation, this section.)
(5) Install panels and upholstery that were removed.



Lower Door Cable Reel Installation
Figure 201



Lower Door Cable Reel Installation
Figure 202



2-15C-3
2-15A-5
2-19C
2-15C-3

Lower Door Cable Reel Installation
Figure 203

EFFECTIVITY: 36-INCH DOOR WITH AFT HANDLE

LOWER DOOR HOOK MECHANISM - MAINTENANCE PRACTICES

1. Removal/Installation

A. Removal of Lower Door Hook Mechanism (24-Inch Door) (See Figure 201.)

(1) Open lower door.
(2) Remove upholstery from lower door.
(3) Pull DOOR ACTR circuit breaker.
(4) Remove door actuator access cover.
(5) Remove door actuator. (Refer to 52-11-05.)
(6) Remove attaching parts and switch striker from eccentric.
(7) Remove attaching parts securing retainer to eccentric. On *Aircraft 35-672 and Subsequent; 36-064 and Subsequent and prior aircraft modified by SB 35/36-52-6 "Modification of Lower Cabin Door Hook Mechanism"*, remove plate, spacer, retention plate and attaching parts from eccentric.
(8) Remove eccentric from bearing blocks.
(9) Remove retention plate and attaching parts from eccentric.
(10) Remove hook from eccentric.

NOTE: Check condition of needle bearings in bearing blocks and door hook. Replace bearing if necessary.

B. Installation of Lower Door Hook Mechanism (24-Inch Door) (See Figure 201.)

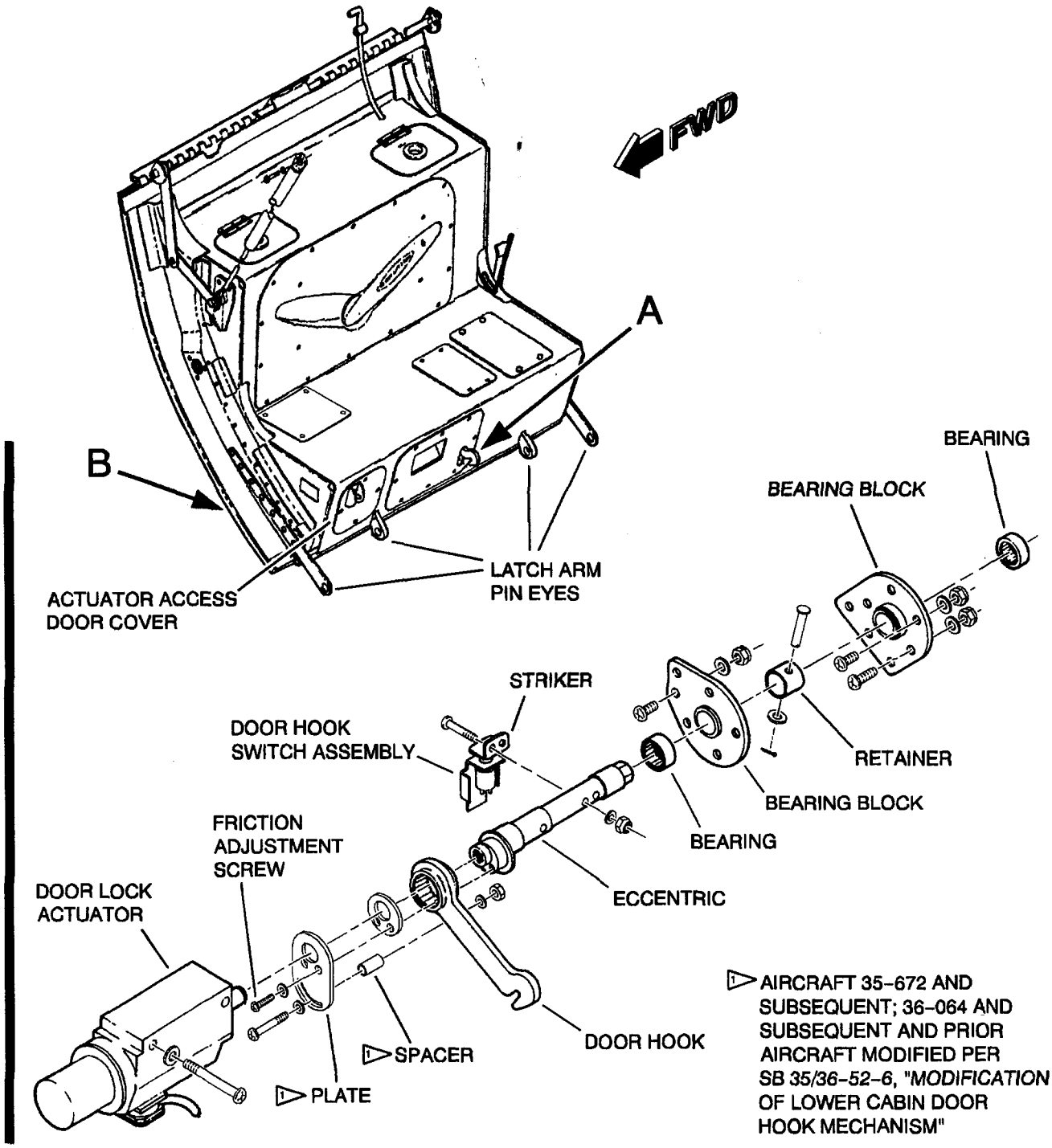
(1) Position door hook on eccentric and secure with retention plate and attaching parts. On *Aircraft 35-672 and Subsequent; 36-064 and Subsequent and prior aircraft modified per SB 35/36-52-6, "Modification of Lower Cabin Door Hook Mechanism,"* secure with plate, retention plate, spacer and attaching parts. Do not safety wire at this time.
(2) Insert eccentric through first bearing block and position retainer on eccentric.
(3) Slide eccentric and retainer through second bearing block. Secure retainer to eccentric with clevis pin.
(4) Secure switch striker to eccentric with attaching parts.
(5) Install door actuator. (Refer to 52-11-05.)
(6) Depress DOOR ACTR circuit breaker.
(7) Check adjustment of lower door hook mechanism. (Refer to Adjustment/Test, this section.)

C. Removal of Lower Door Hook Mechanism (36-Inch Door) (See Figure 202.)

(1) Open lower door.
(2) Remove upholstery from lower door.
(3) Pull DOOR ACTR circuit breaker.
(4) Remove door actuator access covers and access cover on tread.
(5) For hook closest to actuator perform the following steps:
  (a) Remove door actuator. (Refer to 52-11-05.)
  (b) Remove attaching parts securing plug to torque tube.
  (c) Remove eccentric and torque tube from bearing blocks.
  (d) Remove attaching parts and plug from eccentric.
  (e) Remove retention plate and attaching parts from eccentric. On *Aircraft 35-672 and Subsequent; 36-064 and Subsequent and prior aircraft modified by SB 35/36-52-6 "Modification of Lower Cabin Door Hook Mechanism"*, remove plate, spacer, retention plate and attaching parts from eccentric.
  (f) Remove hook from eccentric.

NOTE: Check condition of needle bearings in bearing blocks and door hook. Replace bearing if necessary.

(6) For hook furthest from actuator perform the following steps:
  (a) Remove attaching parts securing plug to torque tube.
  (b) Remove eccentric and plug from bearing block.

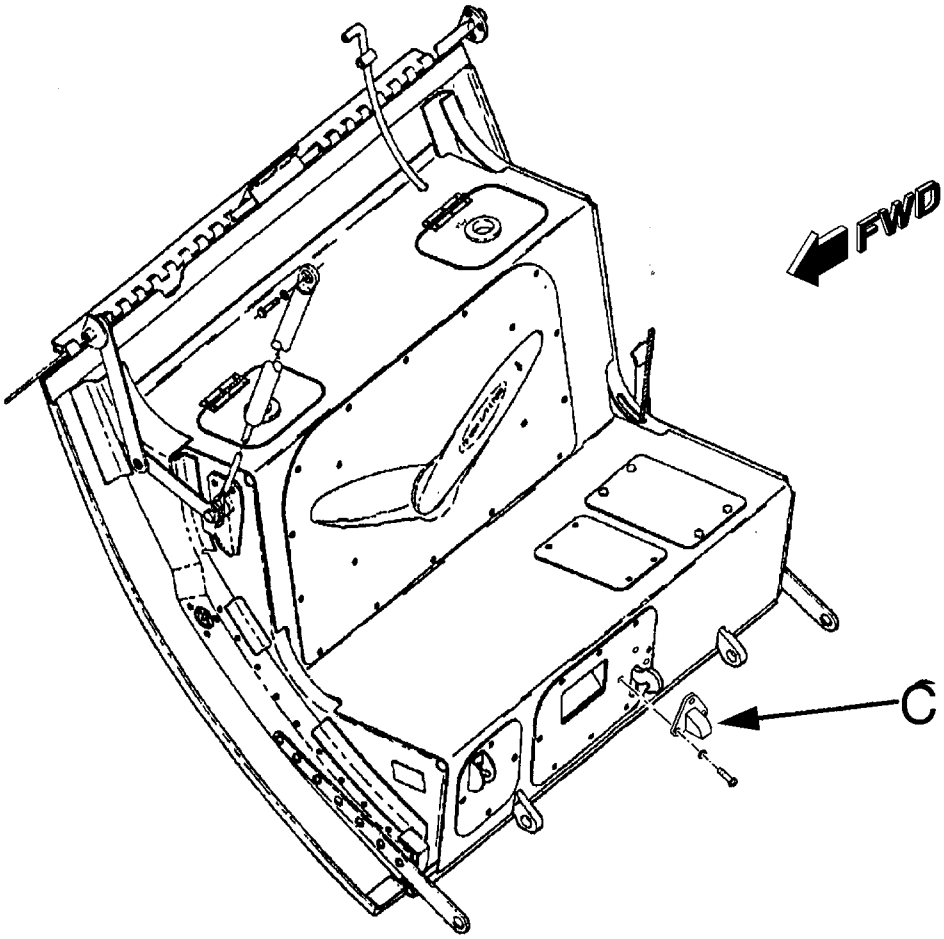


Detail A

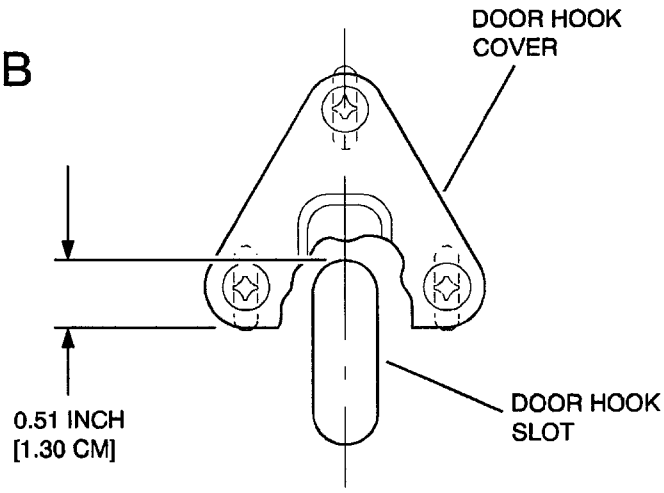
M35-521104-201-01

Door Hook Mechanism Installation
Figure 201 (Sheet 1 of 2)

EFFECTIVITY: AIRCRAFT WITH 24-INCH DOOR



Detail B

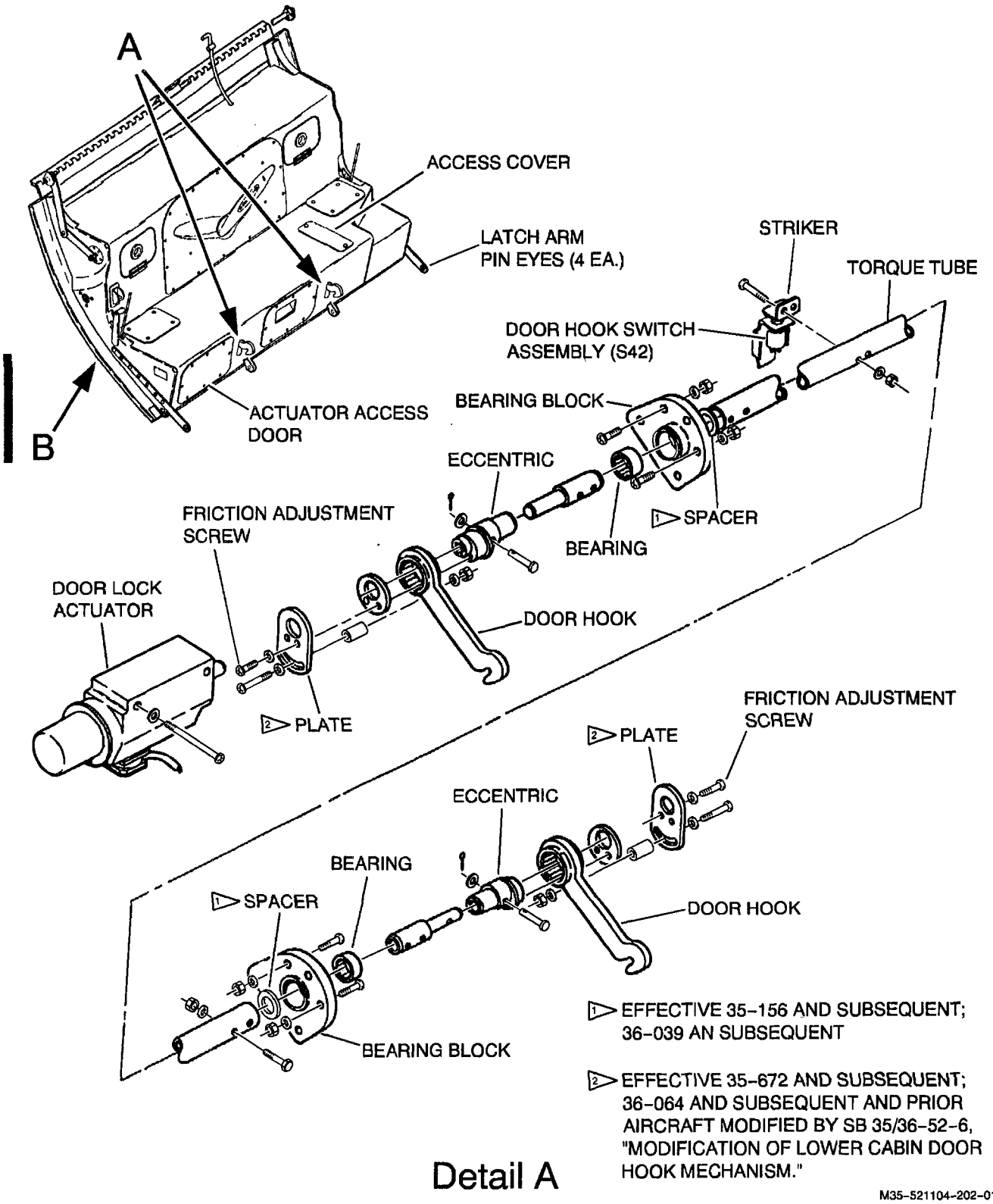


DOOR HOOK COVER ALIGNMENT

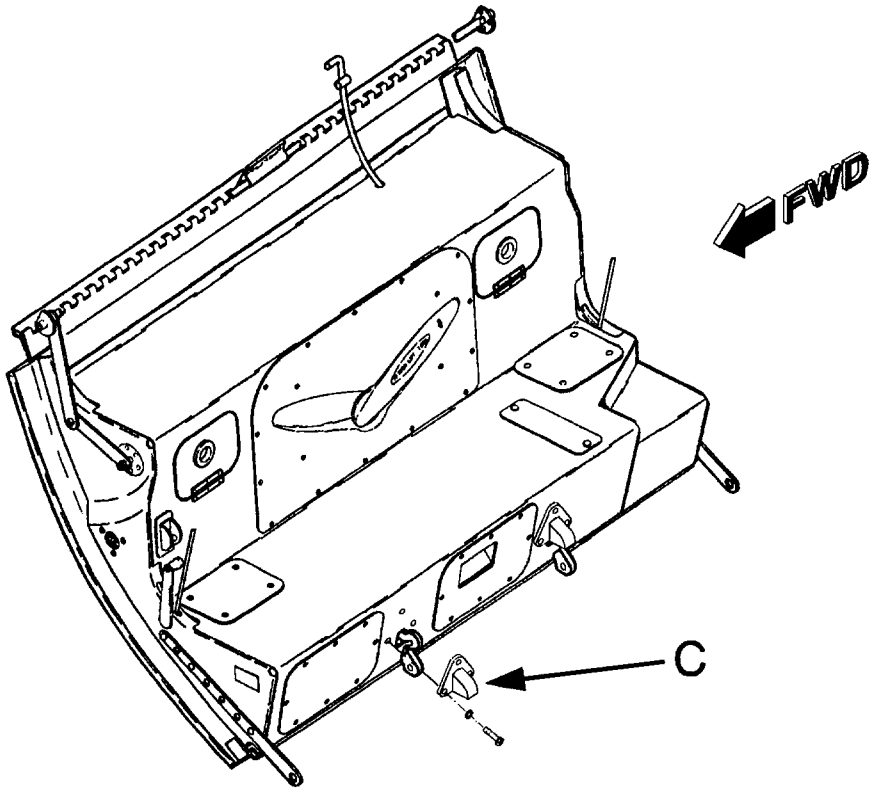
Detail C

M35-521104-201-02

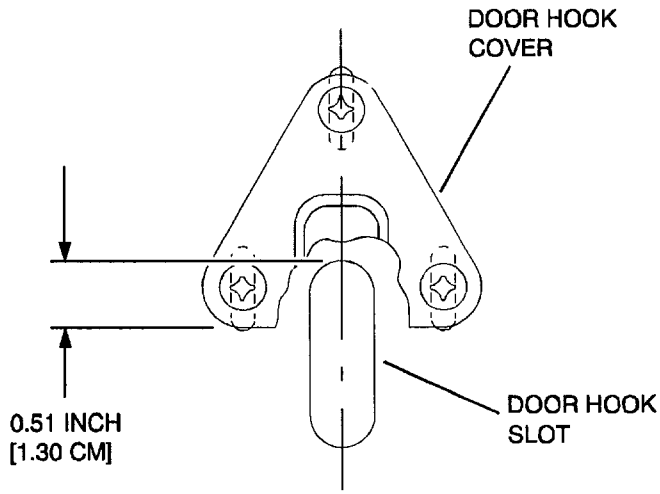
Door Hook Mechanism Installation
Figure 201 (Sheet 2 of 2)



Door Hook Mechanism Installation
Figure 202 (Sheet 1 of 2)



Detail B



DOOR HOOK COVER ALIGNMENT

Detail C

M35-521104-202-02

Door Hook Mechanism Installation
Figure 202 (Sheet 2 of 2)

(c) Remove attaching parts and plug from bearing block.
(d) Remove retention plate and attaching parts from eccentric. On *Aircraft 35-672 and Subsequent; 36-064 and Subsequent and prior aircraft modified by SB 35/36-52-6 "Modification of Lower Cabin Door Hook Mechanism"*, remove plate, spacer, retention plate and attaching parts from eccentric.
(e) Remove hook from eccentric.

NOTE: Check condition of needle bearings in bearing blocks and door hook. Replace bearing if necessary.

D. Installation of Lower Door Hook Mechanism (36-Inch Door) (See Figure 202.)
(1) For hook closest to actuator perform the following steps:
(a) Position door hook on eccentric and secure with retention plate and attaching parts. On *Aircraft 35-672 and Subsequent; 36-064 and Subsequent and prior aircraft modified per SB 35/36-52-6, "Modification of Lower Cabin Door Hook Mechanism,"* secure with plate, retention plate, spacer and attaching parts. Do not safetywire at this time.
(b) Position plug in eccentric and secure with attaching parts.
(c) Slide eccentric and plug through bearing block. Secure plug to torque tube with attaching parts.
(d) Install door actuator. (Refer to 52-11-05.)
(e) Depress DOOR ACTR circuit breaker.
(2) For hook furthest from actuator perform the following steps:
(a) Position door hook on eccentric and secure with retention plate and attaching parts. On *Aircraft 35-672 and Subsequent; 36-064 and Subsequent and prior aircraft modified per SB 35/36-52-6, "Modification of Lower Cabin Door Hook Mechanism,"* secure with plate, retention plate, spacer, and attaching parts. Do not safetywire at this time.
(b) Position plug in eccentric and secure with attaching parts.
(c) Slide eccentric and plug through bearing block. Secure plug to torque tube with attaching parts.
(3) Check adjustment of lower door hook mechanism. (Refer to Adjustment/Test, this section.)

2. Adjustment/Test
A. Adjust Lower Door Hook Mechanism (See Figures 201 and 202.)

NOTE: Adjustment for single hook in Executive Door Installation and two hooks in Cargo Door Installation are identical except as noted.

(1) Open passenger/crew door, remove upholstery, as required, and remove access covers.
(2) On *Aircraft with a 36-inch door modified per SB 35/36-52-11, "Installation of Lower Cabin Door Hook Covers"*, remove door hook covers.

NOTE: On *Aircraft with a 24-inch door modified per SB 35/36-52-11, "Installation of Lower Cabin Door Hook Covers"*, hook cover is removed with actuator access cover.

(3) Make sure DOOR ACTR circuit breaker is depressed.
(4) Hold Door Switch (S40) to locked position until door hook, eccentric, and actuator shaft are rotated to the locked position.
(5) Remove attaching bolts from actuator and slide actuator forward to disengage from eccentric.
(6) Open DOOR ACTR circuit breaker, to remove power from actuator, and disconnect actuator electrical connector.

(7) Remove screws, outboard attach angle, and actuator from door.

NOTE: If a replacement actuator is to be installed, disconnect existing actuator wiring from door switch and connect new actuator wiring. On *Aircraft 35-061 and Subsequent and 36-018 and Subsequent*, disconnect actuator electrical plug. Hold door switch to lock position and allow new actuator to rotate to fully locked position.

(8) Rotate eccentric so that its lobe is positioned directly opposite of door hook position. Remove access panel on door tread. Attach wrench to hex to hold eccentric in this position.
(9) Cut and remove safety wire from friction adjustment screws. Temporarily install access cover and push hook down to bottom of door slot. On *Aircraft with 36-inch door*, it is not necessary to temporarily install access cover.
(10) Remove access cover.
(11) On *Aircraft 35-672 and Subsequent; 36-064 and Subsequent and prior aircraft modified per SB 35/36-52-6, "Modification of Lower Cabin Door Hook Mechanism"*, loosen spacer attaching parts to allow spacer to move easily.
(12) Attach a spring scale to throat of hook. Pull on spring scale, while torquing friction adjustment screws, until a 6 to 8 pound force is required to rotate hook.
(13) Safety wire friction adjustment screws.
(14) Connect actuator electrical connector and depress DOOR ACTR circuit breaker to provide power to actuator.
(15) Hold Door Switch (S40) to the locked position and make sure that actuator shaft rotates to maximum locked position.
(16) Place actuator flush with and against inboard attach angle and slide actuator shaft into eccentric. Back side of actuator shall be held flat against inboard attach angle during installation. Tilting actuator will cause mismatching of shaft to eccentric; thereby, causing actuator to cycle continuously when locked.

NOTE: Do not adjust electrical limit switches on actuator as internal damage will result.

(17) Secure actuator with attaching bolts and install outboard attach angle. Hold Door Switch (S40) to the open position and make sure that actuator shaft rotates to maximum unlocked position.
(18) On *Aircraft 35-672 and Subsequent; 36-064 and Subsequent and prior aircraft modified per SB 35/36-52-6, "Modification of Lower Cabin Door Hook Mechanism"*, adjust spacer to retain hook at top of hook slot. A 0.20 inch [0.51 cm] maximum hook freeplay (measured at end of hook) is permissible.
(19) Close passenger/crew door and hold door switch in the locked position. Actuator operation will stop when door hook engages upper door assembly latch and pulls upper door assembly firmly into place.
(20) Hold door switch to open position and open passenger/crew door. Install all access covers and upholstery.
(21) On *Aircraft with a 36-inch door modified per SB 35/36-52-11, "Installation of Lower Cabin Door Hook Covers"*, install door hook covers.

NOTE: On *Aircraft with a 24-inch door modified per SB 35/36-52-11, "Installation of Lower Cabin Door Hook Covers"*, hook cover is installed with actuator access cover.

(22) Check operation of door warning system as follows:
(a) Set Battery Switches on.
(b) Make sure that passenger/crew door is closed and latched and that door hook is disengaged.
(c) Verify that DOOR warning annunciator is not illuminated.
(d) Set Battery Switches off.

LOWER DOOR LOCK ACTUATOR — MAINTENANCE PRACTICES

1. Removal/Installation

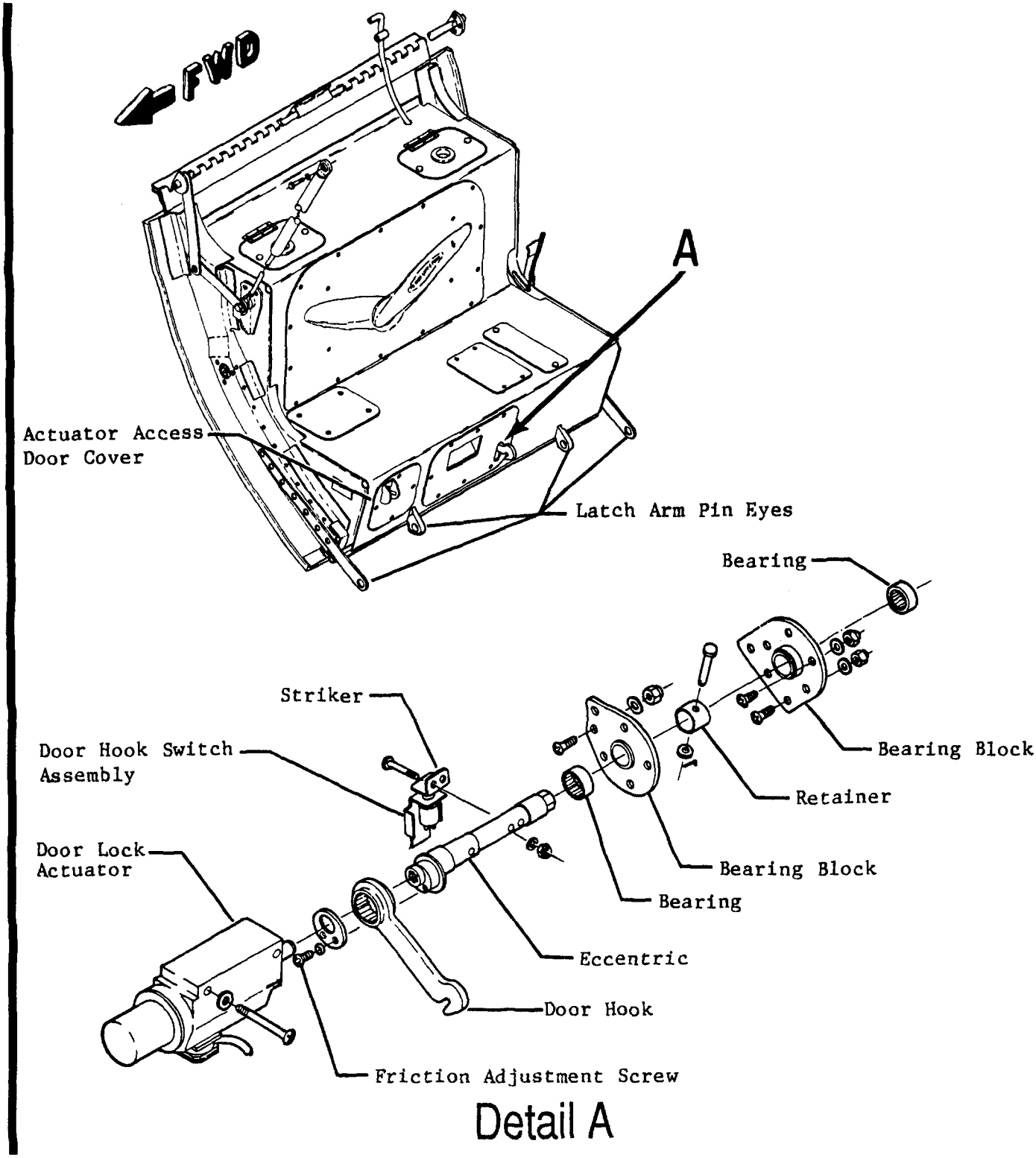
A. Removal of Lower Door Lock Actuator (See Figure 201.)

(1) Open lower door.
(2) Remove upholstery from lower door.
(3) Remove access cover and gain access to door lock actuator.
(4) Hold Door Switch (S40) to the locked position until actuator stops. Pull DOOR ACTR circuit breaker and disconnect electrical connector from actuator.
(5) Remove attaching parts securing actuator to door. Slide actuator forward until disengaged from eccentric.
(6) Remove attaching parts securing attach angle to door structure. Remove attach angle and actuator from door.

B. Installation of Lower Door Lock Actuator (See Figure 201.)

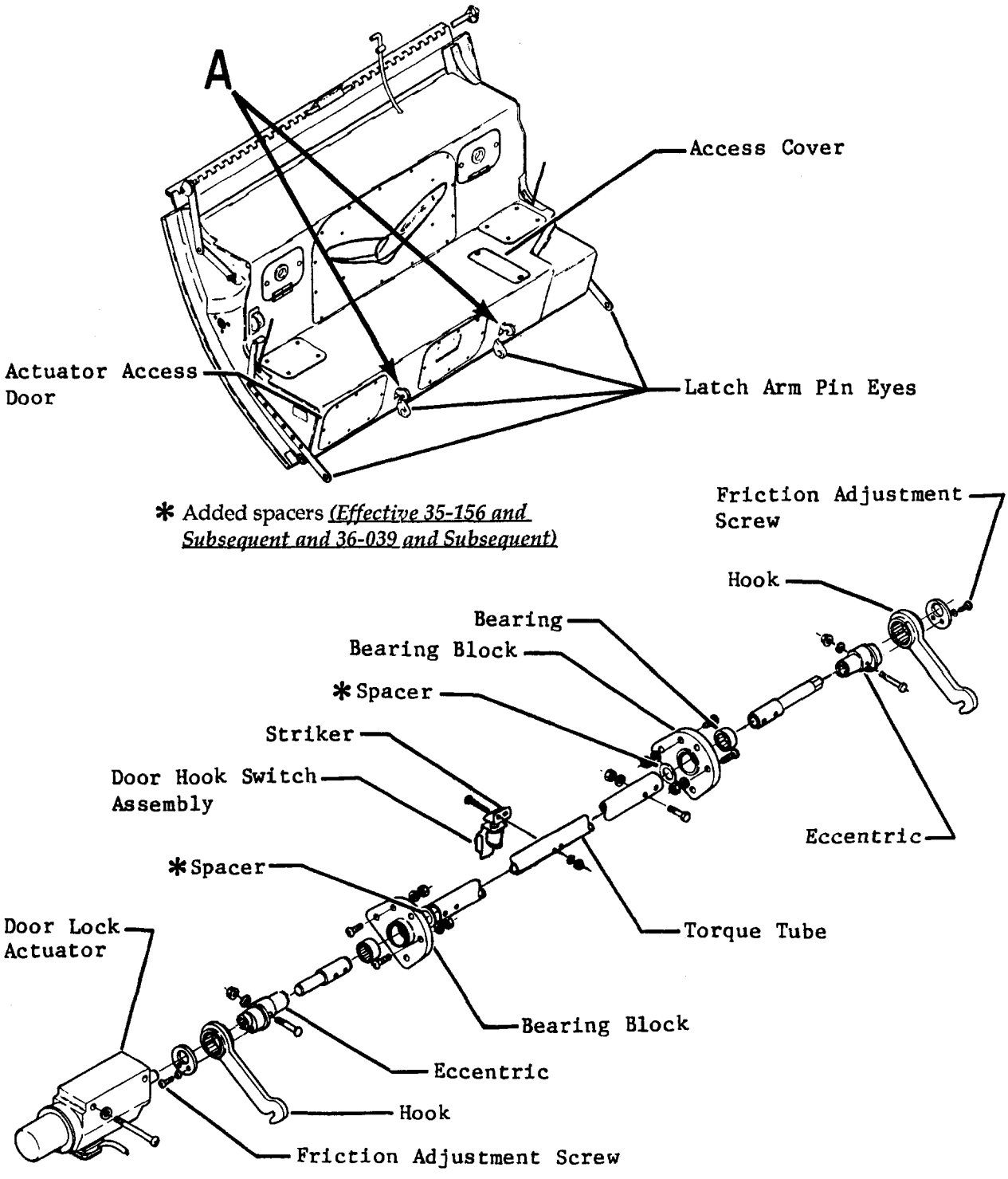
NOTE: If door actuator limit switches require adjustment, refer to Rotary Actuator Repair Manual, Publication No. TM6314.

(1) Position actuator in door against attach angle. Connect electrical connector to actuator.
(2) Ensure that eccentric lobe is directly opposite the door hook.
(3) Hold Door Switch (S40) to the locked position until actuator stops.
(4) Holding actuator flat against attach angle, slide actuator aft and engage eccentric.
(5) Install remaining attach angle and secure attach angle and actuator.
(6) Check operation of actuator.
(7) Check operation of door warning system as follows:
(a) Set Battery Switches on.
(b) Ensure that passenger/crew door is closed and latched and that door hook is disengaged.
(c) Verify that DOOR warning annunciator is not illuminated.
(d) Set Battery Switches off.
(8) Install access cover and upholstery.



2-16C-1
2-15C-2

Lower Door Lock Actuator Installation
Figure 201 (Sheet 1 of 2)



Detail A

Lower Door Lock Actuator Installation
Figure 201 (Sheet 2 of 2)

2-74C
2-16C-2
2-16C

LOWER DOOR SNUBBER ASSEMBLY — MAINTENANCE PRACTICES

1. Removal/Installation

A. Remove Lower Door Snubber Assembly (See figure 201.)

(1) Disengage lower door torsion bar from door. (Refer to 52-11-01.)

NOTE: Perform only those steps in 52-11-01 necessary to relieve torsion bar tension.

(2) Remove attaching parts at upper and lower fittings and remove snubber from aircraft.

B. Install Lower Door Snubber Assembly (See figure 201.)

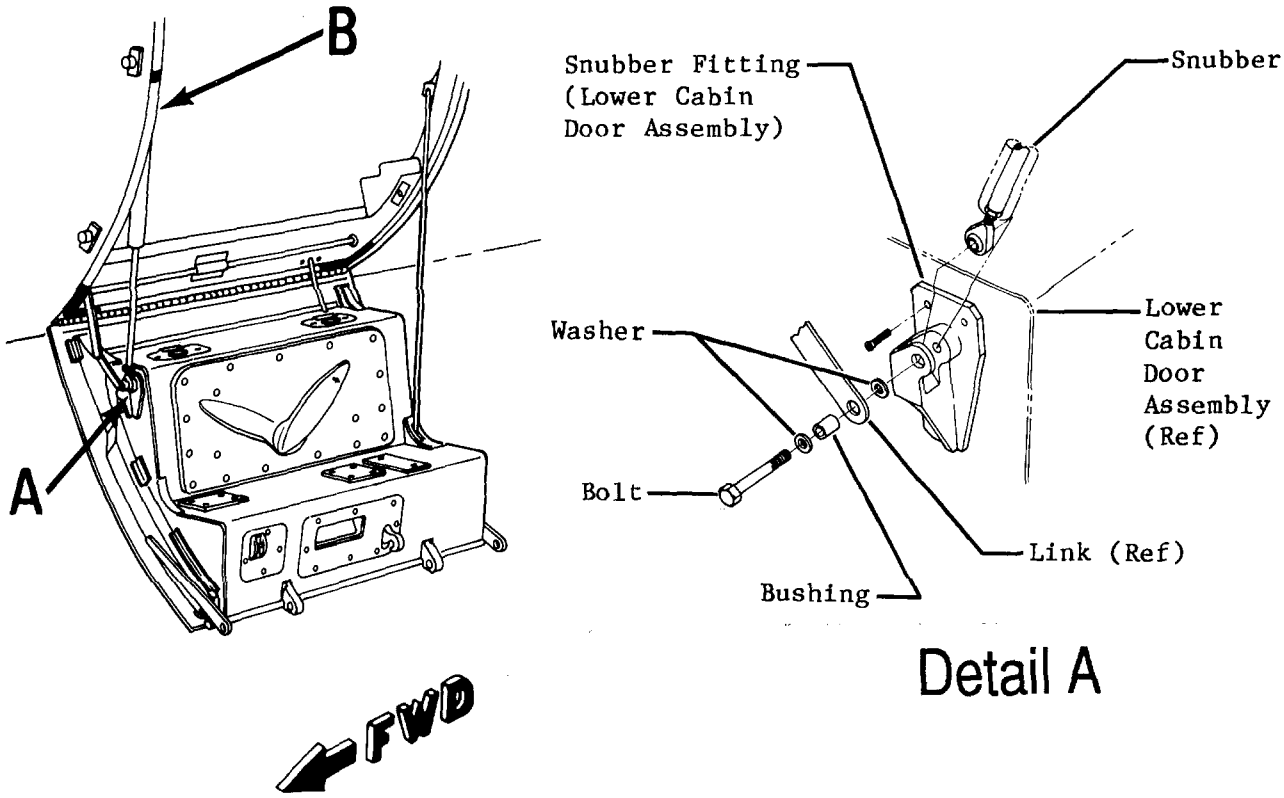
(1) Secure snubber to upper fitting.
(2) Adjust snubber rod end to mid-range of threaded portion.
(3) Attach lower end of snubber to fitting on door.
(4) Check lower door snubber adjustment. (Refer to Lower Door Snubber Adjustment, this section.)
(5) Connect lower door torsion bar. (Refer to 52-11-01.)

2. Adjustment/Test

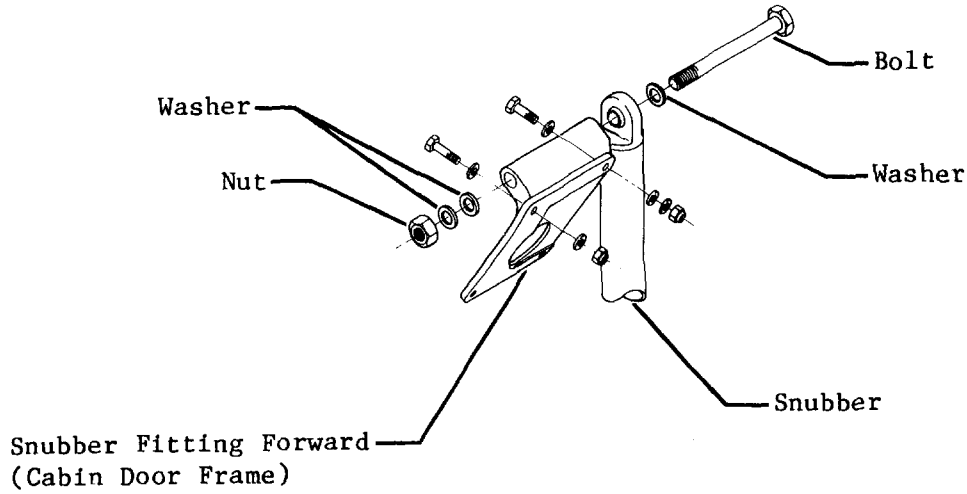
A. Lower Door Snubber Adjustment

(1) Open lower door until cable stop is contacted. Support door in this position.
(2) Pull down on snubber until bottomed. Position snubber on lower door fitting. Adjust rod end as required.
(3) Secure snubber to lower door fitting.
(4) Remove support, raise and lower door while checking that forward and aft edge of door deflection is approximately the same.

NOTE: The lower door cable may require adjustment if door opens beyond a maximum of 90°.



Detail A

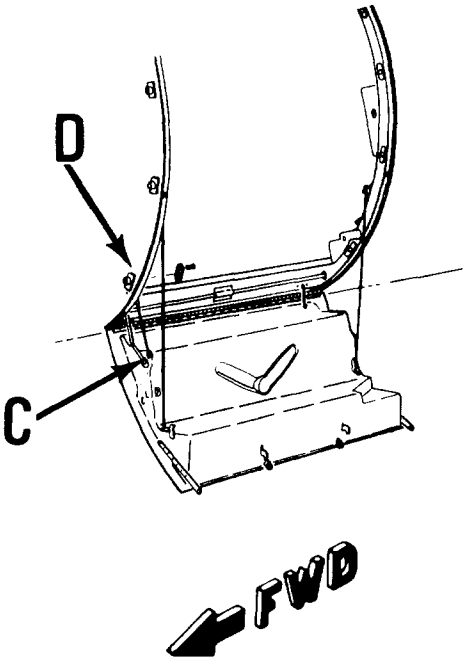


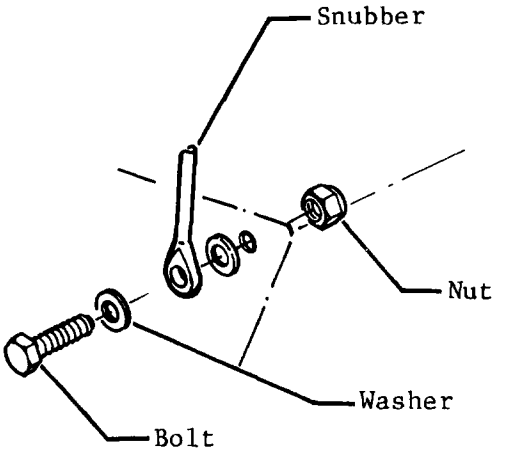
Detail B

2-19C-1

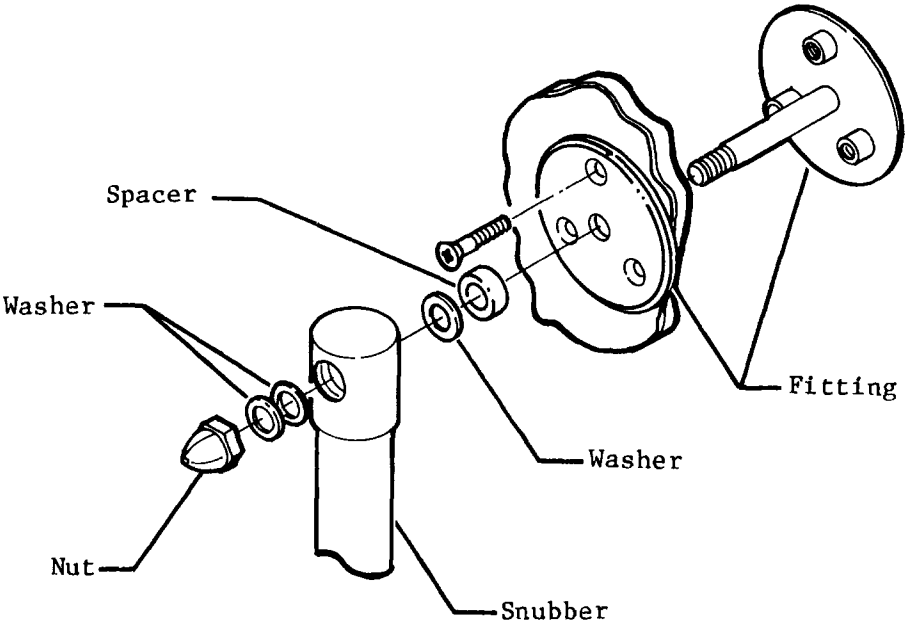
Lower Door Snubber Installation
Figure 201 (Sheet 1 of 2)

EFFECTIVITY: AIRCRAFT WITH 24-INCH DOOR





Detail C



(OPTIONAL 35-208 AND SUBSEQUENT, 36-041 AND SUBSEQUENT)

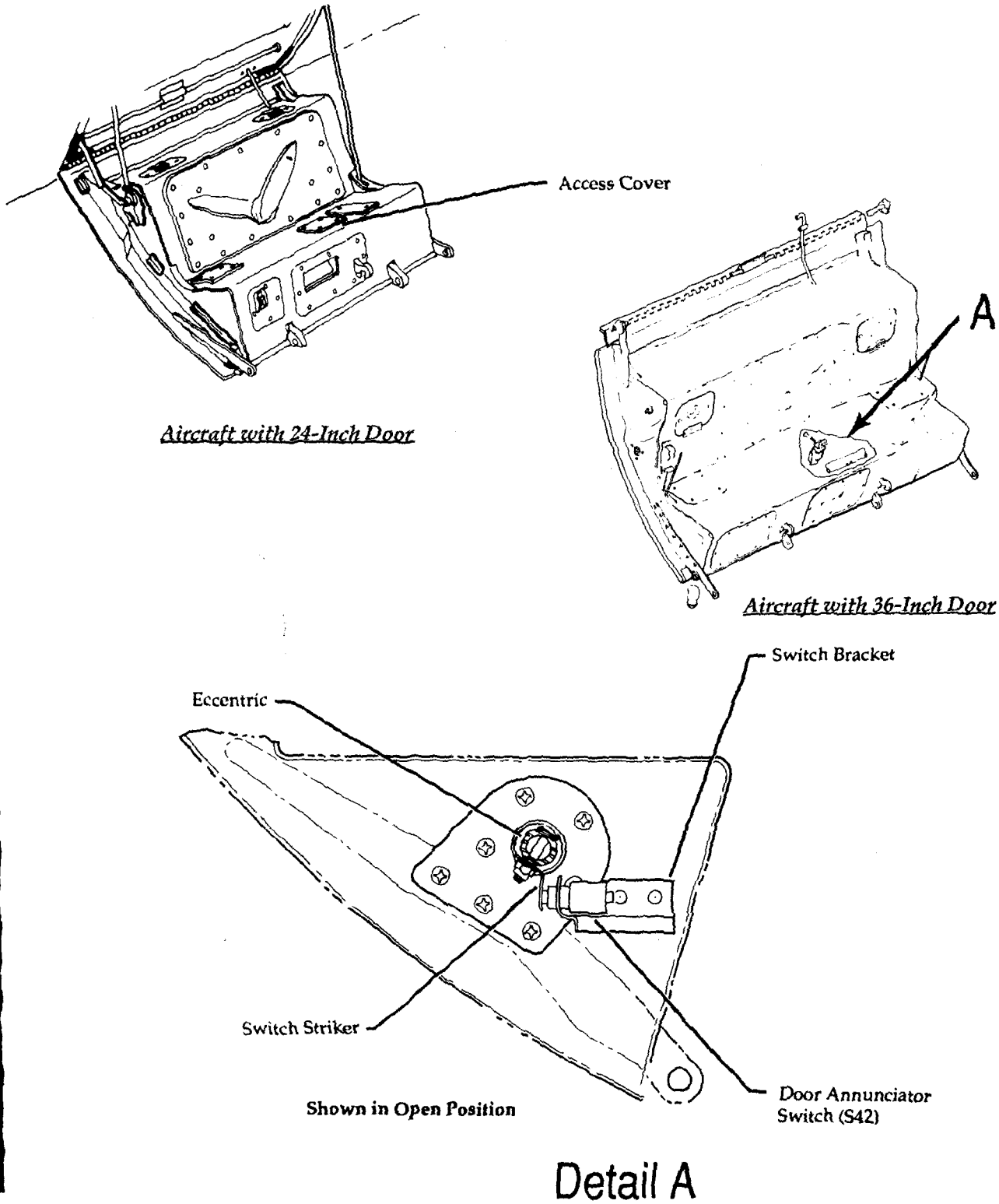
Detail D

DOOR HOOK SWITCH — MAINTENANCE PRACTICES

1. Removal/Installation

A. Remove Door Hook Switch (S42) (See figure 201.)
   (1) Open lower door.
   (2) Remove upholstery from lower door.
   (3) Remove access cover from lower door.
   (4) Pull DOOR ACTR circuit breaker and disconnect electrical wiring from switch.
   (5) Remove switch from bracket.

B. Install Door Hook Switch (S42) (See figure 201.)
   (1) Ensure that door actuator is rotated to open position.
   (2) Install switch on bracket. Adjust switch jamnuts until actuation occurs.
   (3) Adjust jamnuts one more full revolution to assure positive contact.
   (4) Secure switch and connect electrical wiring to switch.
   (5) Cycle actuator and check switch operation.
   (6) Check operation of door warning system as follows:
      (a) Set Battery Switches on.
      (b) Ensure that passenger/crew door is closed and latched and that door hook is disengaged.
      (c) Verify that DOOR warning annunciator is not illuminated.
      (d) Set Battery Switches off.



Door Hook Switch Installation
Figure 201

UPPER DOOR ASSEMBLY TORSION BAR - MAINTENANCE PRACTICES

1. Removal/Installation

A. Removal of Upper Door Assembly Torsion Bar (See Figure 201.)

(1) Acquire necessary tools and equipment.

NOTE: Equivalent substitutes may be used in lieu of the following:

NAME	PART NUMBER	MANUFACTURER	USE
Torque Bar Tool	3170018-1	Learjet Wichita, KS or Fabricated Locally (See Figure 202.)	Releasing static torque on upper torsion bar.

(2) Open upper door. Prop upper door in open position.
(3) Remove upholstery from upper door.
(4) Place torque bar tool on upper torsion bar link. Close and secure torque bar slide lock.
(5) While maintaining a steady downward pressure on upper torsion bar link (with torque bar tool), disconnect upper torsion bar link from lower torsion bar link.

CAUTION: WHEN STATIC TORQUE IS REMOVED FROM TORSION BAR, FULL WEIGHT OF DOOR WILL BE ON DOOR PROP.

(6) Slowly and carefully raise torque bar tool until static torque on torsion bar is completely dissipated.
(7) Loosen torque bar slide lock and remove torque bar tool from upper torsion bar link.
(8) On *Aircraft with 24-inch door*, proceed as follows:

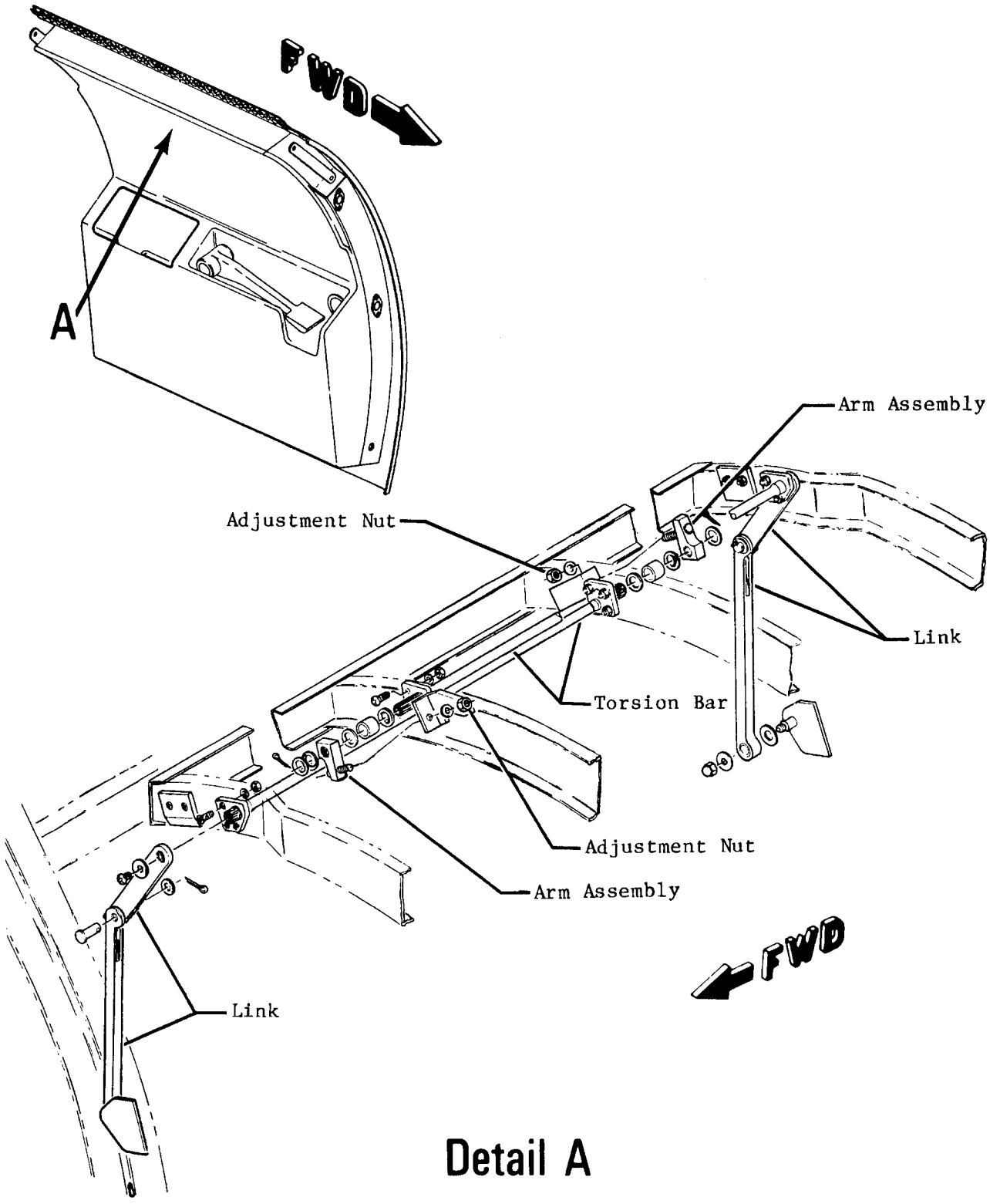
NOTE: The adjustment nuts and bolts are accessible through openings in the door inner skin.

(a) On *Aircraft not modified per SB 35/36-52-10, "Replacement of Upper Cabin Torsion Bar Arm Assemblies"*, loosen and remove adjustment nuts.
(b) On *Aircraft modified per SB 35/36-52-10, "Replacement of Upper Cabin Torsion Bar Arm Assemblies"*, loosen and remove adjustment bolts from torsion bar arm assembly.

(9) On *Aircraft with 36-inch door*, loosen and remove adjustment bolts from torsion bar arm assembly.

NOTE: The adjustment bolts are accessible through openings in the door inner skin.

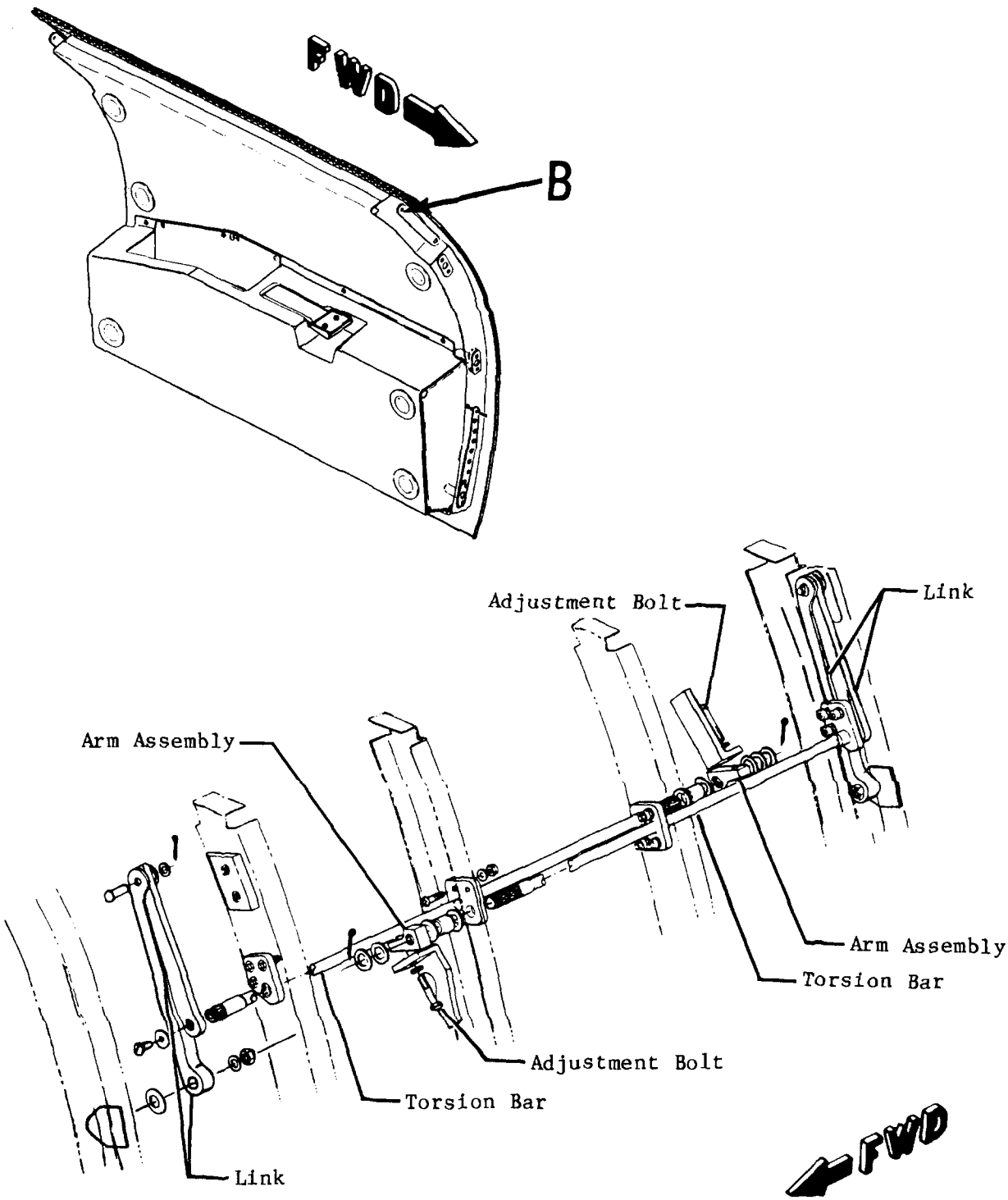
(10) Remove cotter pin and washers from end of torsion bar.
(11) Slowly pull torsion bar from door while catching arm assembly washers and spacers.
(12) Remove screw and washer securing upper torsion bar link to torsion bar.



Detail A

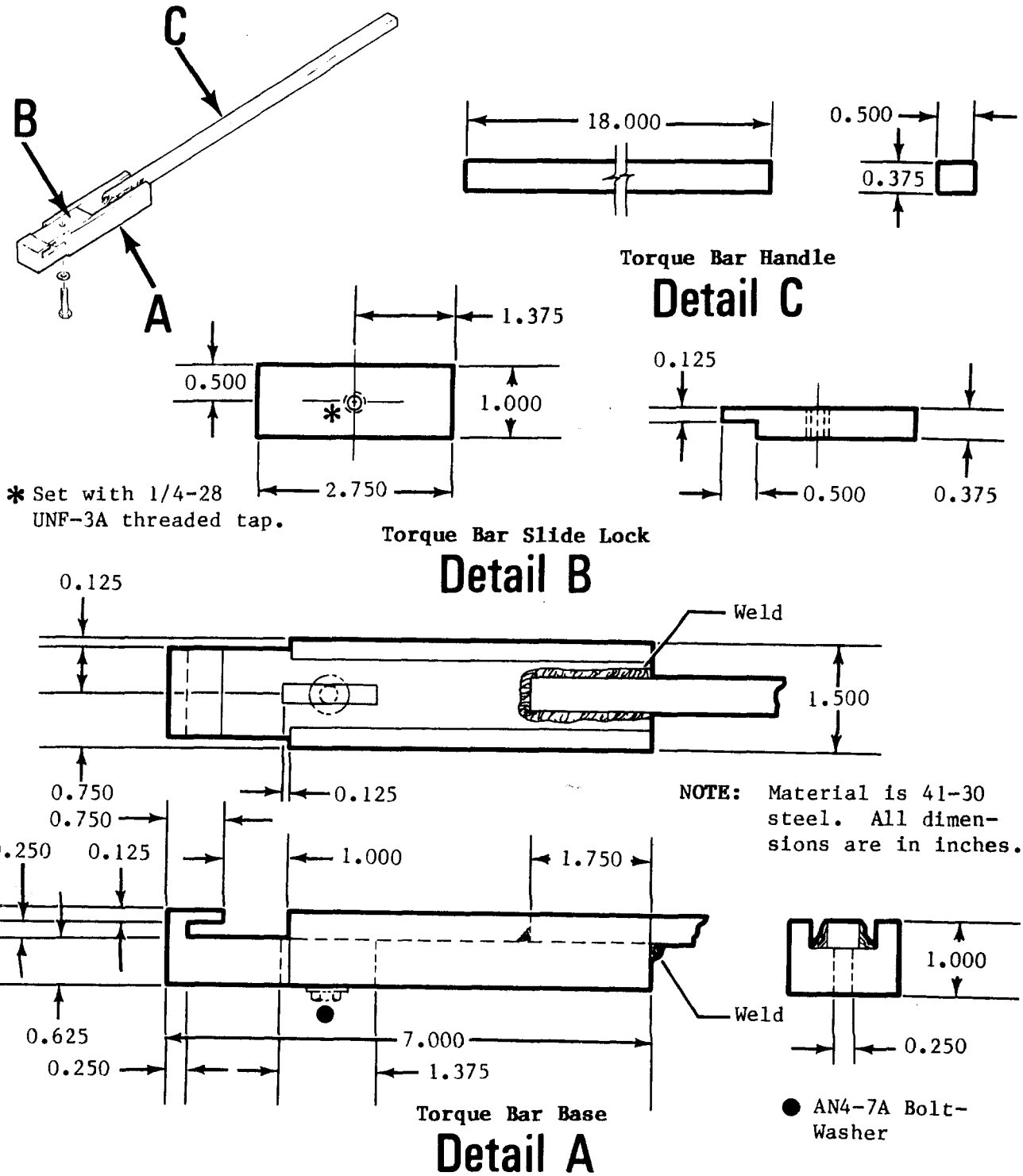
Upper Door Assembly Torsion Bar Installation
Figure 201 (Sheet 1 of 2)

EFFECTIVITY: AIRCRAFT WITH 24 INCH DOOR



Detail B

Upper Door Assembly Torsion Bar Installation
Figure 201 (Sheet 2 of 2)



Torque Bar Tool Fabrication
Figure 202

B. Installation of Upper Door Assembly Torsion Bar (See Figure 201.)
(1) Acquire necessary tools and equipment.

NOTE: Equivalent substitutes may be used in lieu of the following:

NAME	PART NUMBER	MANUFACTURER	USE
Torque Bar Tool	3170018-1	Learjet Wichita, KS or Fabricated Locally (See Figure 202.)	Applying static torque on upper torsion bar.

(2) Install upper torsion link on torsion bar.
(3) Insert torsion bar in bearing plate and push slowly into door. As torsion bar protrudes from second bearing plate, assemble washer, spacer, and washer on torsion bar.
(4) Assemble arm assembly, washers, and cotter pin on end of torsion bar.
(5) On *Aircraft with 24-inch door*, proceed as follows:
(a) On *Aircraft not modified per SB 35/36-52-10, "Replacement of Upper Cabin Torsion Bar Arm Assemblies"*, install washer and adjustment nut.
(b) On *Aircraft modified per SB 35/36-52-10, "Replacement of Upper Cabin Torsion Bar Arm Assemblies"*, install washer and adjustment bolt on torsion bar arm assembly.
(6) On *Aircraft with 36-inch door*, install washer and adjustment bolt on torsion bar arm assembly.
(7) Place torque bar tool on upper torsion bar link. Close and secure torque bar slide lock.

WARNING: THE TORSION BAR MUST BE ASSEMBLED AND DISASSEMBLED WITH EXTREME CARE. APPLYING OR RELEASING STATIC TORQUE WITHOUT POSITIVE CONTROL CAN RESULT IN PERSONAL INJURY AND/OR DAMAGE TO THE AIRCRAFT.

(8) Slowly and carefully push downward on torque bar tool until upper torsion bar link is mated with lower torsion bar link.
(9) Connect upper and lower torsion bar links.
(10) Loosen torque bar slide lock and remove torque bar tool from upper torsion bar link.
(11) Adjust torsion bar. (Refer to Adjustment/Test, this section.)
(12) Install previously removed upholstery.

2. Adjustment/Test

WARNING: WHEN ADJUSTING UPPER DOOR ASSEMBLY TORSION BARS, ENSURE THAT ALL PERSONNEL REMAIN CLEAR OF DOOR IN CASE OF INADVERTENT CLOSURE.

A. Adjust Upper Door Assembly Torsion Bars (See Figure 201.)
(1) Acquire necessary tools and equipment.

NOTE: Equivalent substitutes may be used in lieu of the following:

NAME	PART NUMBER	MANUFACTURER	USE
Weights		Commercially Available	Determining lifting torque on upper door torsion bars.

(2) Open passenger/crew door and remove upper door panel to gain access to torsion bars.
(3) Attach a weight on lower edge of upper door on its vertical centerline.
  (a) Use a 10 to 12 pound [4.5 to 5.4 kg] weight on a 24-inch door.
  (b) Use a 12 to 22 pound [5.4 to 10.0 kg] weight on a 36-inch door.
(4) On *Aircraft with 24-inch door*, proceed as follows:
  (a) On *Aircraft not modified per SB 35/36-52-10, "Replacement of Upper Cabin Torsion Bar Arm Assemblies"*, alternately torque adjustment nuts 1/2 turn until door remains open with the weight attached..
  (b) On *Aircraft modified per SB 35/36-52-10, "Replacement of Upper Cabin Torsion Bar Arm Assemblies"*, alternately torque adjustment bolts 1/2 turn until door remains open with the weight attached.
(5) On *Aircraft with 36-inch door*, alternately torque adjustment bolts 1/2 turn until door remains open with the weight attached.
(6) Close door and check for proper fit. No interference is permitted.
(7) If door does not fit properly, open door and adjust forward or aft torsion bar adjustment bolts or nuts until a proper fit is achieved as follows:
  (a) Increase torque in the forward torsion bar to adjust door forward.
  (b) Increase torque in the aft torsion bar to adjust door aft.
  (c) Make sure that differential torque is minimized.
  (d) If there is insufficient arm assembly travel to allow adjustment of torsion bar, remove torque from torsion bar and re-spline arm assembly on torsion bar as necessary to obtain the required travel.
(8) Make sure clearance exists between arm assemblies and adjacent torsion bar after adjustments are completed.
(9) On *Aircraft with 24-inch door modified per SB 35/36-52-10, "Replacement of Upper Cabin Torsion Bar Arm Assemblies"*, or *Aircraft with 36-inch door*, safety wire adjustment bolts.
(10) Install previously removed panels.

UPPER DOOR LATCH MECHANISM — MAINTENANCE PRACTICES

1. Removal/Installation

A. Removal of Upper Door Latch Mechanism (See Figure 201.)

(1) Open upper door.
(2) Remove upholstery from door.
(3) Remove attaching screws and inner handle from handle tube. Remove remaining screw from handle tube.
(4) Remove attaching screws and cover assembly from door.
(5) Drill out rivets and remove inner skin from door.
(6) Remove attaching parts and spring assembly.
(7) Remove attaching parts and bellcranks, push-pull tubes, and latch as required from door.
(8) Remove attaching and eyebolt from quadrant assembly.
(9) Pull outer handle cover from door.
(10) Remove quadrant assembly from door.
(11) Inspect all eyebolts, latch pins, and bearings. Replace defective parts.

B. Installation of Upper Door Latch Mechanism (See Figure 201.)

(1) Assemble spacers, O-ring, seal retainer, and thrust washer on shaft of outer handle cover.
(2) Position quadrant assembly in door and insert outer handle cover thru outer door opening and quadrant assembly.
(3) Install eyebolt securing outer handle cover to quadrant assembly.
(4) Install thrust washer, cover assembly, and inner handle.
(5) Install bellcranks at their appropriate location. Install safety wire.
(6) Install 0.1875 inch [0.4763 cm] diameter rigging pins in upper and lower bellcranks and quadrant assembly.
(7) Install push-pull tubes and latch pins.
(8) Assemble and install spring assembly.
(9) Temporarily install pan assembly and inner handle.
(10) Adjust latch mechanism. (Refer to Adjustment/Test, this section.)
(11) Perform Upper Cabin Door Handle Free Play Check. (Refer to Inspection/Check, this section.)
(12) Perform Door Handle Opening Force Check. (Refer to Inspection/Check, this section.)
(13) Remove inner handle and pan assembly.
(14) Install inner skin with appropriate size pop rivets.
(15) Install cover assembly and inner handle.
(16) Install upholstery on door.

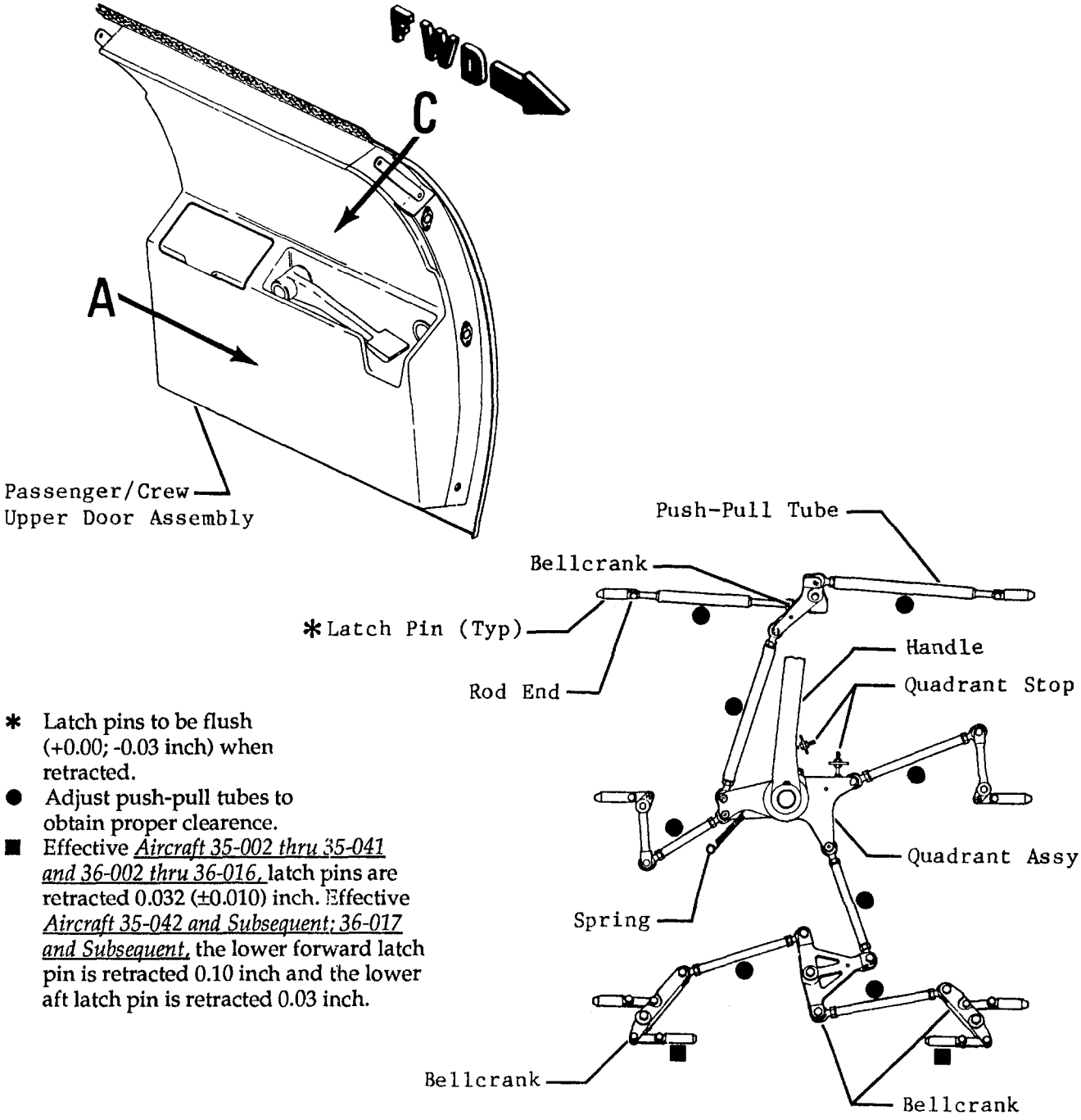
2. Adjustment/Test

A. Adjustment of Door Latch Pins

(1) Adjust Upper Door Assembly Latch Pins (36-Inch Door) (See Figure 201.)
(a) Remove upholstery and access covers as necessary to gain access to push-pull tubes.
(b) Position latch handle to the open position and ensure that two (2) upper and two (2) lower pins are retracted 0.20 inch [0.51 cm]. Ensure that both middle pins are retracted 0.45 inch [1.14 cm].

NOTE: Where guide pin plates are installed, measure from outer edge of plate. Where guide pin plates are not installed, measure from door structure.

(c) Position latch handle to the closed position and ensure that two (2) lowest pins are extended 0.75 inch [1.91 cm].
(d) If adjustment is required, disconnect rod end from latch pin or bellcrank. Remove safety wire from rod end and push-pull tube.



* Latch pins to be flush (+0.00; -0.03 inch) when retracted.

● Adjust push-pull tubes to obtain proper clearence.

■ Effective *Aircraft 35-002 thru 35-041 and 36-002 thru 36-016,* latch pins are retracted 0.032 (±0.010) inch. Effective *Aircraft 35-042 and Subsequent; 36-017 and Subsequent,* the lower forward latch pin is retracted 0.10 inch and the lower aft latch pin is retracted 0.03 inch.

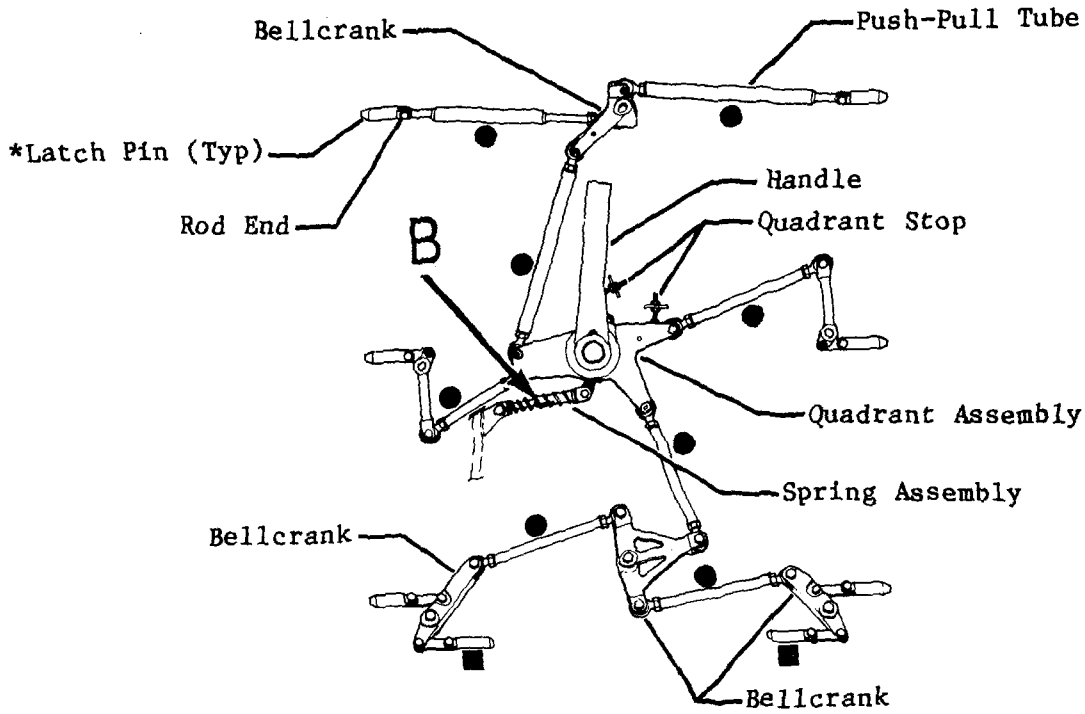
(35-002 thru 35-206; 36-002 thru 36-040)

Detail A

2-72A-3

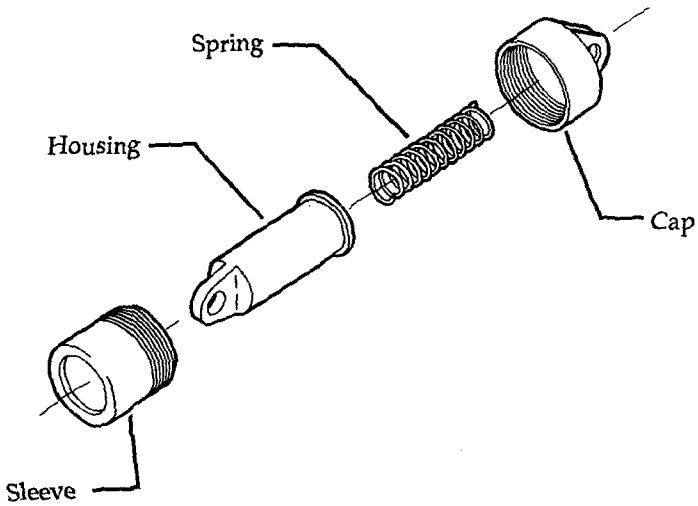
Upper Door Latch Mechanism Installation
Figure 201 (Sheet 1 of 5)

EFFECTIVITY: AIRCRAFT WITH 24-INCH DOOR

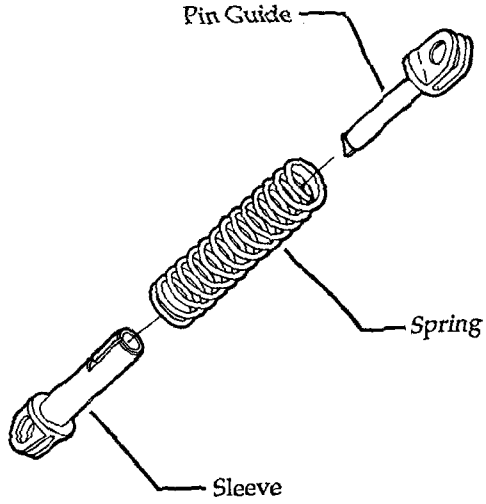


(35-207 and Subsequent; 36-041 and Subsequent)

Detail A



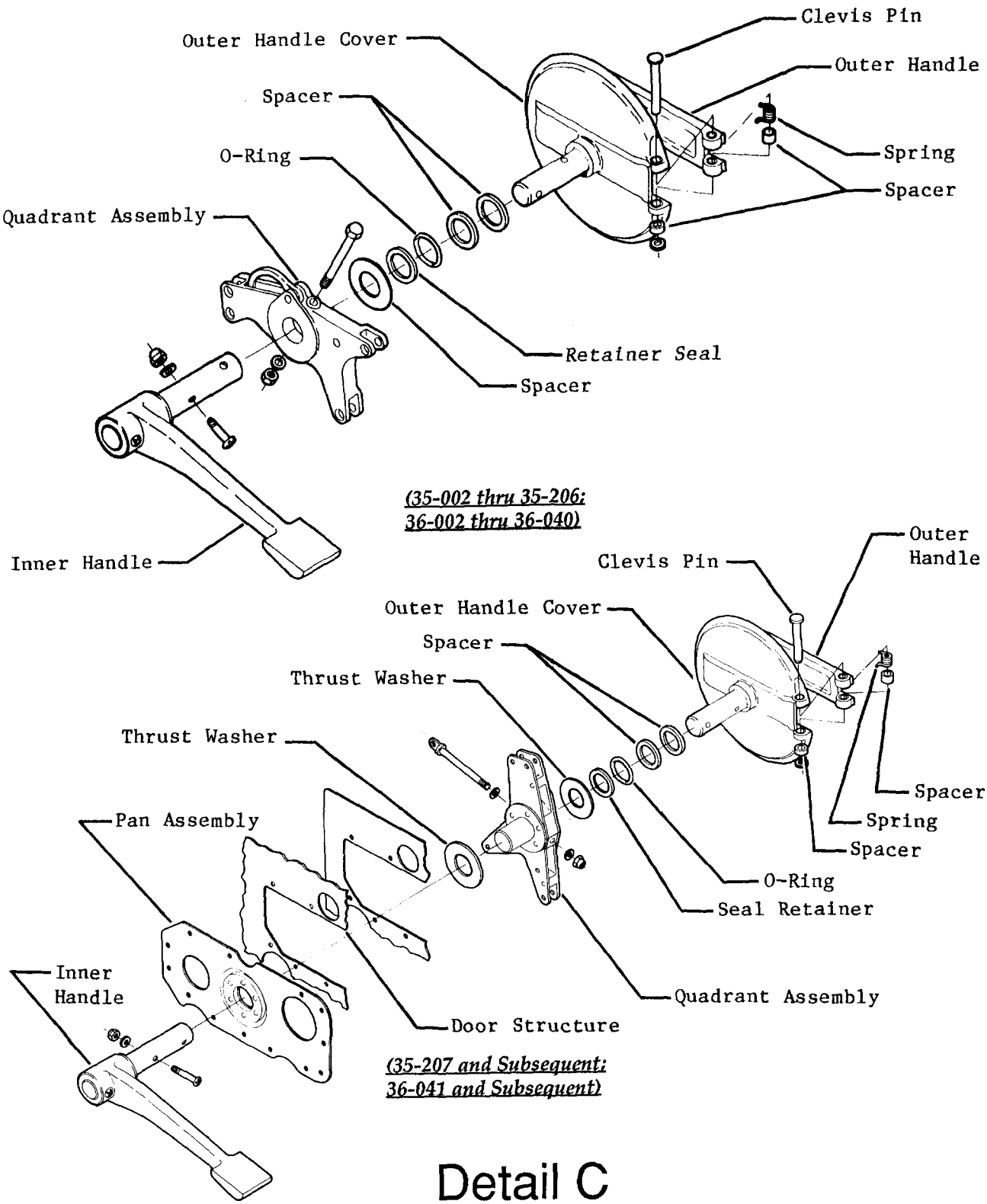
(35-207 thru 35-236; 36-041 thru 36-044)



(35-237 and Subsequent; 36-045 and Subsequent)

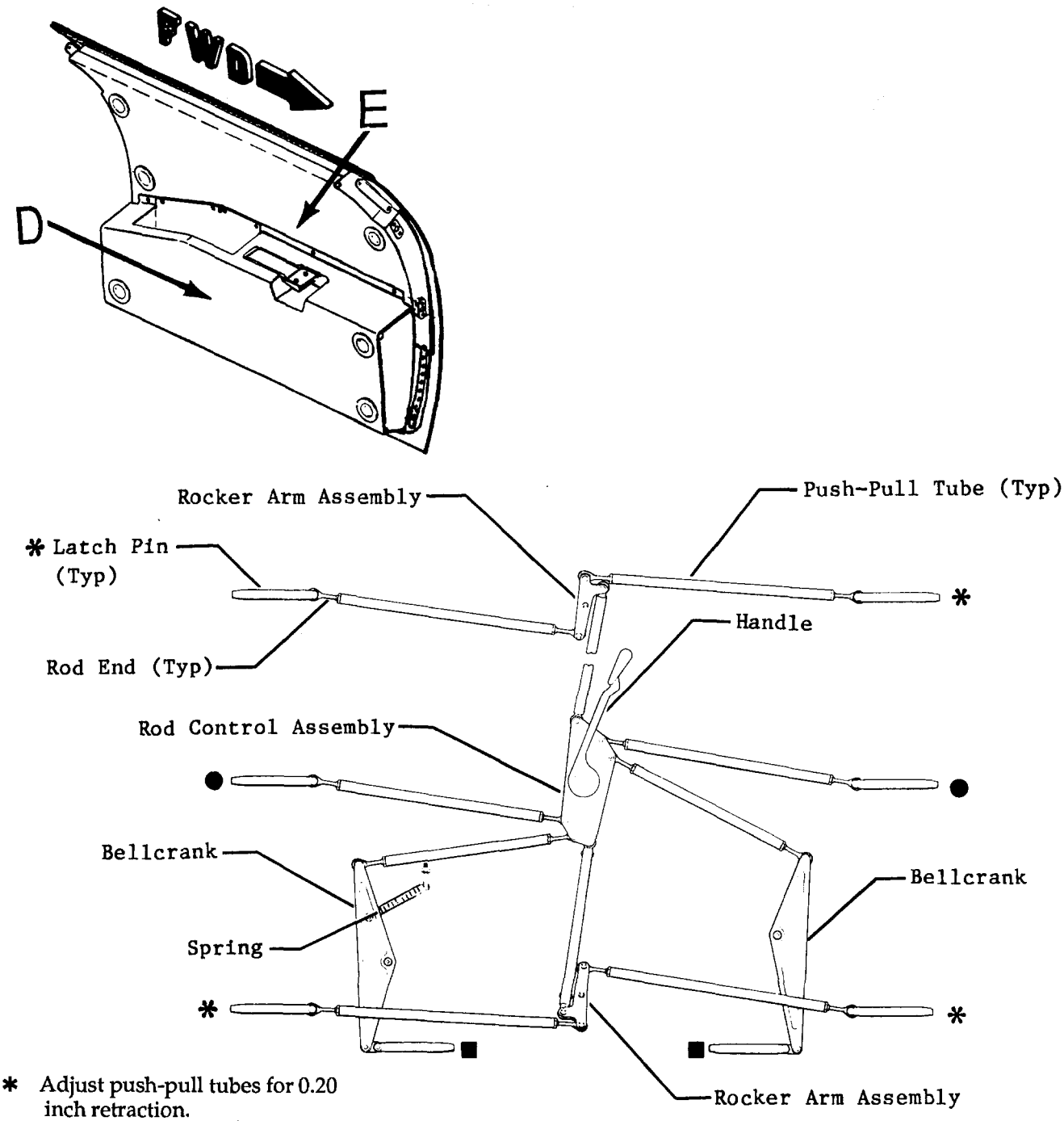
Detail B

Upper Door Latch Mechanism Installation
Figure 201 (Sheet 2 of 5)



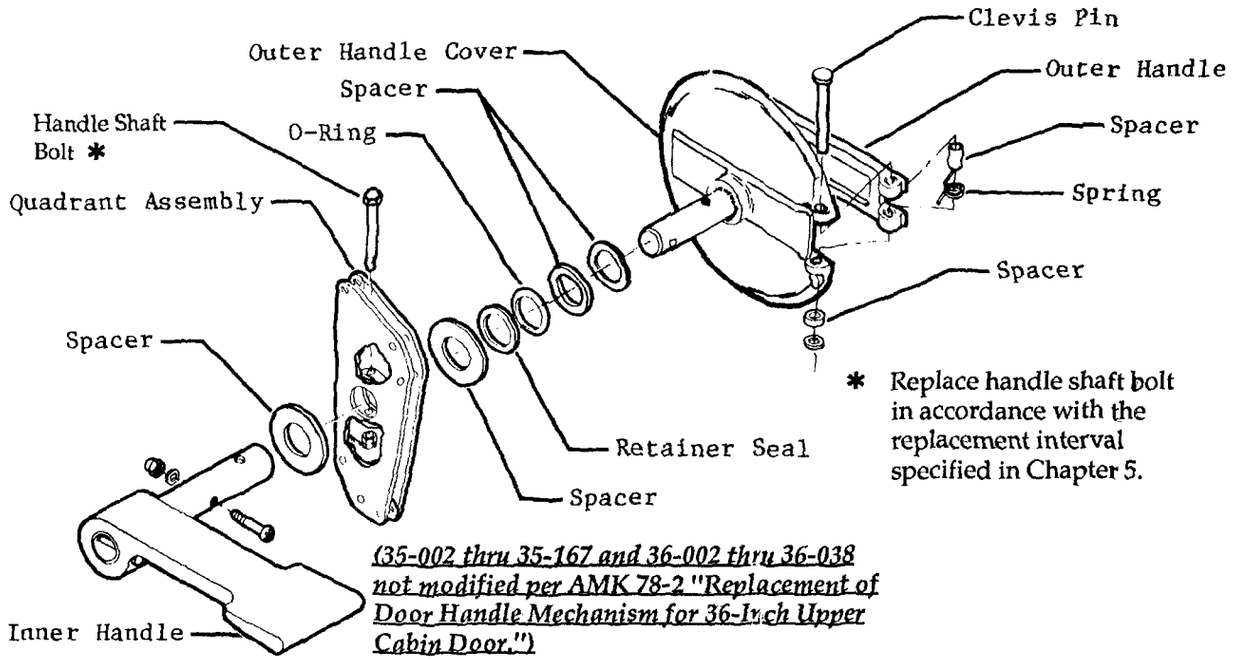
Detail C

Upper Door Latch Mechanism Installation
Figure 201 (Sheet 3 of 5)



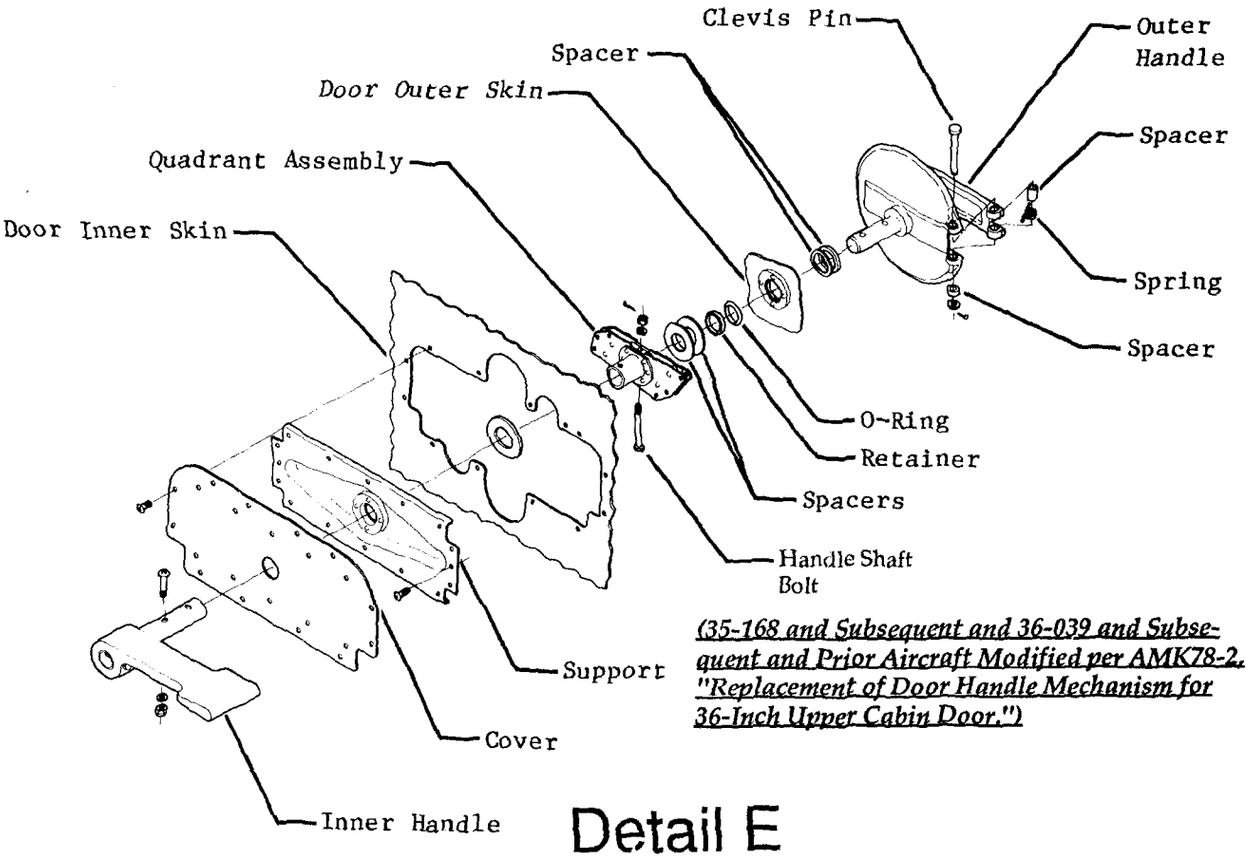
2-1C-4

Upper Door Latch Mechanism Installation
Figure 201 (Sheet 4 of 5)



* Replace handle shaft bolt in accordance with the replacement interval specified in Chapter 5.

(35-002 thru 35-167 and 36-002 thru 36-038 not modified per AMK 78-2 "Replacement of Door Handle Mechanism for 36-Inch Upper Cabin Door.")



(35-168 and Subsequent and 36-039 and Subsequent and Prior Aircraft Modified per AMK78-2, "Replacement of Door Handle Mechanism for 36-Inch Upper Cabin Door.")

Detail E

2-1C-4

Upper Door Latch Mechanism Installation
Figure 201 (Sheet 5 of 5)

EFFECTIVITY: AIRCRAFT WITH 36-INCH DOOR

(e) Loosen jamnut and adjust rod end as required to obtain necessary measurements.
(f) Tighten jamnut and safety wire. Apply loctite to nut. (Refer to Chapter 20.)
(g) If any adjustment was made to door pins, door latch pin microswitches shall be checked. (Refer to 52-70-00.)
(h) Install access covers and upholstery.

(2) Adjust Upper Door Assembly Latch Pins (24-Inch Door) (See Figure 201.)
(a) Remove upholstery and access panel as necessary to gain access to push-pull tubes.
(b) Position latch handle to the open position (against internal stop).
(c) Ensure that upper six (6) latch pins are flush with edge of door structure or pin guide plates.

NOTE: The upper latch pins may be retracted up to 0.03 inch [0.08 cm] when latch handle is in the open position, but any extension beyond edge of door structure or pin guide plates is unacceptable (0.00 inch [0.00 cm] extension tolerance).

(d) On *Aircraft 35-002 thru 35-041 and 36-002 thru 36-016*, ensure that two (2) lower latch pins (along lower edge of door) are retracted 0.032 (±0.010) inch [0.081 (±0.025) cm].
(e) On *Aircraft 35-042 thru 35-072 and 36-017 thru 36-020*, ensure that lower forward pin is retracted 0.10 inch [0.25 cm] and that lower aft pin is retracted 0.03 inch [0.08 cm]. On *Aircraft 35-073 and Subsequent and 36-021 and Subsequent*, check that both forward and aft pins are retracted 0.10 inch [0.25 cm].
(f) If adjustment is required, inner skin of door will have to be removed. Drill out rivets securing inner skin to door structure.
(g) Remove attaching parts securing rod ends to door latch pins. Remove safety wire from rod end and push-pull tube.
(h) Loosen jamnut and adjust rod as required to obtain necessary measurements.
(i) Tighten jamnut and safety wire.
(j) Install inner skin and secure with rivets (P/N CR2248-4-2).
(k) If any adjustments were made to door pins, door latch pin microswitches shall be checked. (Refer to 52-70-00.)
(l) Install access covers and upholstery.

3. Inspection/Check

A. Upper Cabin Door Handle Free Play Check (See Figure 201.)

NOTE: Perform inspection of Upper Cabin Door Handle and Rod Control Assembly Free Play Check in accordance with the current inspection interval specific in Chapter 5.

Two people will be required to complete this inspection.

(1) Acquire necessary tools and equipment.

NOTE: Equivalent substitutes may be used in lieu of the following:

NAME	PART NUMBER	MANUFACTURER	USE
Spring Scale		Commercially Available	Determining required force.

(2) Open upper and lower cabin doors.
(3) Remove inner upper door handle.
(4) Remove upper interior door upholstery to gain access to rod control (quadrant) assembly.
(5) Install inner upper door handle using only the outboard handle shaft bolt.

(6) Lower the upper door to make outer door handle more accessible and closed enough to cause pins to strike door frame.
(7) Set door handle to toward closed position until door pins are extended against door frame.
(8) Check door handle for movement.
  (a) Hold outside handle to keep it from moving (person on outside).
  (b) Apply 10.0 - 20.0 lbs [4.5 to 9.0 kg] of force toward the open position then closed position on inner door handle while checking door handle for any movement (person on inside).
(9) If movement is over 0.25 inch [0.64 cm] as measured at end of inner door handle, disassemble, inspect, and replace worn parts to eliminate excessive free play. (Refer to Removal/Installation, this section.)
  (a) Replace worn handle shaft bolt (quadrant assembly).
  (b) If bolt holes are over 0.199 inch [0.505 cm], replace worn part.
  (c) If parts were replaced, assemble upper door handle and install in upper door. (Refer to Removal/Installation, this section.)
(10) Remove outboard door handle shaft bolt.
(11) Repeat steps 3.A. (6) thru 3.A.(8).
(12) If movement is over 0.25 inch [0.64 cm] as measured at end of inner door handle, disassemble, inspect, and replace worn parts to eliminate excessive free play. (Refer to Removal/Installation, this section.)
  (a) Replace worn inner door handle shaft bolt.
  (b) If bolt holes are over 0.199 inch [0.505 cm], replace worn part.
  (c) If parts were replaced, assemble upper door handle and install in upper door. (Refer to Removal/Installation, this section.)
(13) Remove inner upper door handle.
(14) Install upholstery previously removed.
(15) Install inner upper door handle.

B. Door Handle Opening Force Check

NOTE: This check applies to inner and outer handles of upper cabin door.

(1) Acquire necessary tools and equipment.

NOTE: Equivalent substitutes may be used in lieu of the following:

NAME	PART NUMBER	MANUFACTURER	USE
Spring Scale		Commercially Available	Determining force.

(2) Attach spring scale to end of door handle.
(3) Pull spring scale and door handle toward door open position and note force required to retract door pins to open position.
(4) If maximum force to open door pins is greater than 32.0 pounds [14.5 kg], determine where binding may be occurring and make corrections. (Refer to Adjustment/Test, this section.)

EMERGENCY EXIT DOOR - DESCRIPTION AND OPERATION

1. Description
   A. The emergency exit door is opened from the inside by grasping the internal latch handle and pulling inboard. The emergency exit door is opened from the outside by pressing the portion of the external latch handle labeled PUSH, pulling down on the handle and pushing inward on the upper portion of the door.
   B. On *Aircraft 35-647 and Subsequent and 36-059 and Subsequent*, the emergency exit door contains bagged insulation. Refer to Chapter 25 for more information.
   C. Maintenance practices for the emergency exit door consist of an inspection/check, window removal and installation, and replacement of emergency exit door seals.
   D. When safety wiring latch mechanism, do not use an excessive amount of wire which could cause interference when opening the door in an emergency.
   E. When removing the emergency exit door for inspection or window replacement, the window closeout panel and headliner in that area must be removed.
   F. When installing new window, always use new fastener nuts. These nuts incorporate a break off torque limit which ensures that the nuts are correctly torqued.

EMERGENCY EXIT DOOR—MAINTENANCE PRACTICES

1. Removal/Installation

A. Removal of Emergency Exit Door (See Figure 201.)
(1) Remove headliner in area of emergency exit door and remove window closout panel attached to door.
(2) Pull interior latch handle until latch pins release.
(3) *On Aircraft 35-002 thru 35-264 except 35-228, 35-235, 35-238, and 35-253, and 36-002 thru 36-044,* remove sheared soft copper wire from external latch pins, tee support, and internal latch handle.
(4) Lift door until bottom lip on door clears trough on frame of aircraft.
(5) Remove door from aircraft.

B. Installation of Emergency Exit Door (See Figure 201.)
(1) Acquire necessary tools and equipment.

NOTE: Equivalent substitutes may be used in lieu of the following:

NAME	PART NUMBER	MANUFACTURER	USE
Safety Wire (Soft Copper)	MS20995CY20	Commercially Available	Safetying.

(2) Set new door in emergency exit door opening.
(3) While one person holds the new door from the inside of the aircraft, another person marks circumference of opening onto new door from outside the aircraft.
(4) Trim external skin of emergency exit door with a file to fit emergency exit door opening (0.040 inches [0.102 cm] minimum; 0.080 inches [0.203 cm] maximum tolerance.)
(5) Install Emergency Exit Door Seal on door (Refer to paragraph 3.B, this Section.)

NOTE: Allow seal adhesive to cure for 24 hours before installing door.

(6) With internal latch handle in the open position, position emergency exit door on fuselage then position latch handle to the closed position.

WARNING: USE MS20995CY20 SOFT COPPER WIRE TO SAFETY LATCH MECHANISM. DO NOT USE AN EXCESSIVE AMOUNT WHICH COULD CAUSE INTERFERENCE.

(7) *On Aircraft 35-002 thru 35-264 except 35-228, 35-235, 35-238, and 35-253, and 36-002 thru 36-044*, safety wire latch mechanism as shown.
(8) Perform cabin pressure test of aircraft. (Refer to Chapter 53.)
(9) Install window closeout panel and headliner.

2. Inspection/Check

A. Operational Check and Inspection of Emergency Exit Door (See Figure 201.)
(1) Acquire necessary tools and equipment.

NOTE: Equivalent substitutes may be used in lieu of the following:

NAME	PART NUMBER	MANUFACTURER	USE
Safety Wire (Soft Copper)	MS20995CY20	Commercially Available	Safetying.

(2) Remove headliner in area of emergency exit door and remove window closeout panel attached to door.
(3) Push on portion of exterior latch handle, labeled PUSH, until handle pops out.
(4) Pull external latch handle down observing freedom of movement.
(5) With a man stationed inside aircraft to catch the door, exert an inward force on upper portion of door and remove door.
(6) *On Aircraft 35-002 thru 35-264 except 35-228, 35-235, 35-238, and 35-253, and 36-002 thru 36-044*, remove sheared soft copper wire from external latch pins, tee support, and internal latch handle.
(7) Operate external and internal release mechanisms and check for freedom of movement.
(8) Inspect internal and external release mechanisms for corrosion and defective parts.
(9) Inspect seal around door for deterioration.
(10) Inspect window for scratches, cracks, or crazing.
(11) Inspect emergency exit placards for deterioration.
(12) Position external latch handle to the full locked position (flush with fuselage).
(13) With internal latch handle in the full open position, position emergency exit door into place.
(14) Position internal latch handle to the full locked position.

WARNING: USE MS20995CY20 SOFT COPPER WIRE TO SAFETY LATCH MECHANISM. DO NOT USE AN EXCESSIVE AMOUNT WHICH COULD CAUSE INTERFERENCE.

(15) *On Aircraft 35-002 thru 35-264 except 35-228, 35-235, 35-238, and 35-253, and 36-002 thru 36-044*, safety wire latch mechanism as shown. Ensure that safety wire ends are bent to prevent injury.
(16) Install window closeout panel and headliner.

3. Repairs

A. Replacement of Emergency Exit Door Window (See Figure 202.)
(1) Acquire necessary tools and equipment.

NOTE: Equivalent substitutes may be used in lieu of the following:

NAME	PART NUMBER	MANUFACTURER	USE
Safety Wire (Soft Copper)	MS20995CY20	Commercially Available	Safetying.
Sealant	Refer to Chapter 20.		Sealing.

(2) Remove headliner in area of emergency exit door and remove window closeout panel attached to door.
(3) Grasp internal latch handle and pull. Remove emergency exit door and place on a suitable work surface so new window will not be damaged.
(4) Remove screws from outer retainer perimeter.
(5) Using an Allen wrench to hold fastener stationary, remove fastener nuts using pliers or HiLock collar removal tool.
(6) Remove fasteners, retainer, and window from emergency exit door.
(7) Remove sealant from emergency exit door. (Refer to Chapter 20.)
(8) Apply faying surface seal on emergency exit door where old sealant was removed and allow to cure before proceeding with installation. (Refer to Chapter 20.)
(9) After sealant has cured, apply faying surface seal to window and a second faying surface seal to door. (Refer to Chapter 20.)
(10) Insert four fasteners through emergency exit door, evenly spaced. Install window and retainer over fasteners and tighten new fastener nuts finger tight.

NOTE: *On Aircraft 35-667 and Subsequent, and 36-064 and Subsequent*, emergency exit window retainer may be shimmed as required (maximum thickness of 0.050-inch) between window and retainer or between retainer and emergency exit door.

(11) Install remaining fasteners and new fastener nuts and tighten finger tight.
(12) Tighten fasteners in a clockwise sequence starting 12, 3, and 9 o'clock. Torque fastener nuts until hex portion breaks off.

NOTE: The fastener nuts incorporate a break off torque limit which assures that the fasteners will be correctly torqued when installed.

(13) Insert screws through retainer and tighten.
(14) *On Aircraft 35-002 thru 35-264 except 35-228, 35-235, 35-238, and 35-253, and 36-002 thru 36-044*, remove sheared safety wire from latch mechanism and handle.
(15) With internal latch handle in the open position, position emergency exit door on fuselage then position latch handle to the closed position.

WARNING: USE MS20995CY20 SOFT COPPER WIRE TO SAFETY LATCH MECHANISM. DO NOT USE AN EXCESSIVE AMOUNT WHICH COULD CAUSE INTERFERENCE.

(16) *On Aircraft 35-002 thru 35-264 except 35-228, 35-235, 35-238, and 35-253, and 36-002 thru 36-044*, safety wire latch mechanism as shown in Figure 201.

(17) Install window closeout panel and headliner.

B. Replacement of Emergency Exit Door Seal (See Figure 203.)

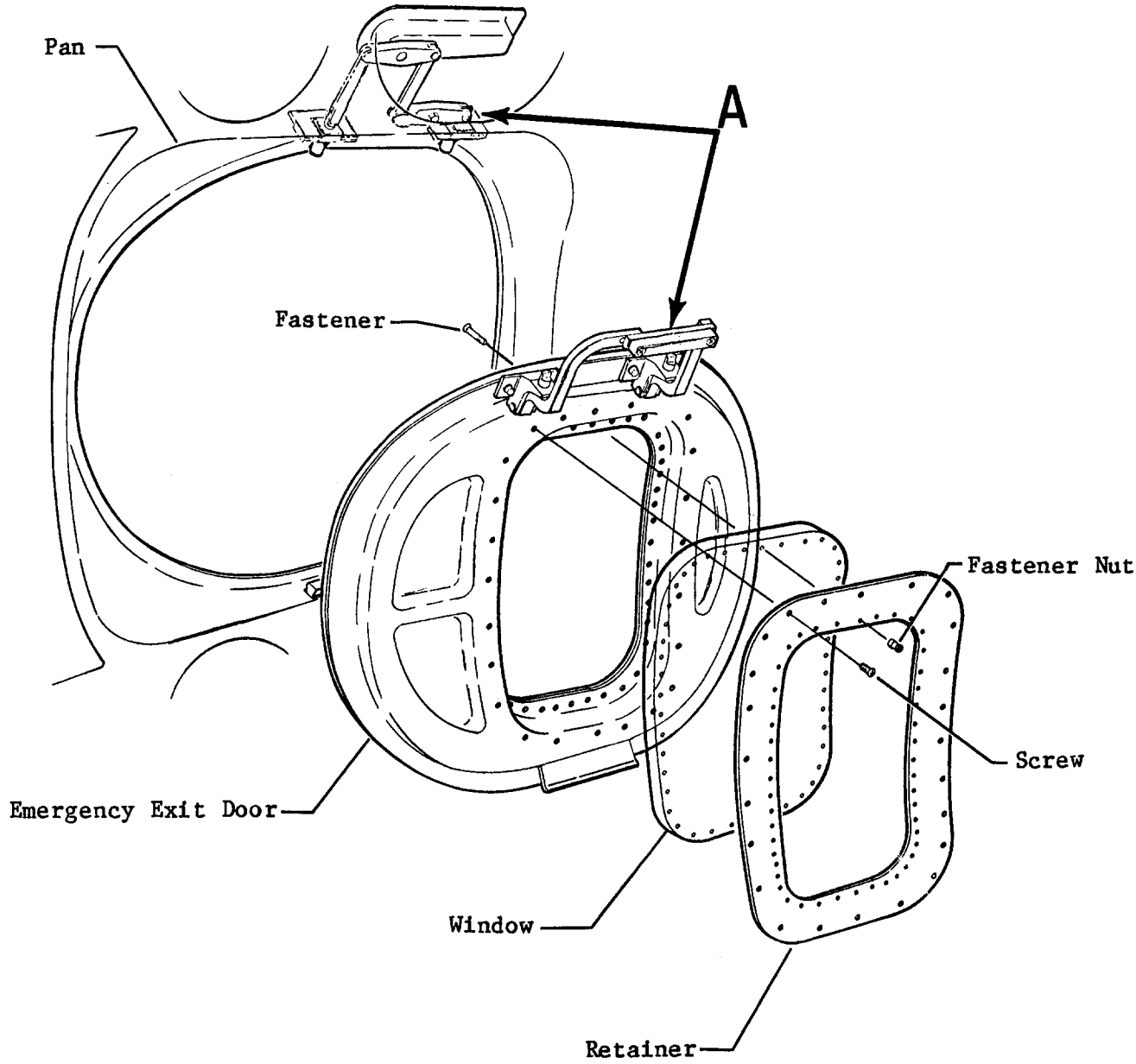
(1) Acquire necessary tools and equipment.

NOTE: Equivalent substitutes may be used in lieu of the following:

NAME	PART NUMBER	MANUFACTURER	USE
Solvent Cleaner	Refer to Chapter 20.	Commercially Available	Cleaning.
Cotton Cloth, Clean, White, and Lint-Free		Commercially Available	Cleaning and drying.
Adhesive	RTV-108	General Electric Waterford, NY	Sealing.
Sharpened Pin (0.125 Inch [0.318 cm] Diameter)		Manufactured Locally	Making holes in seal.

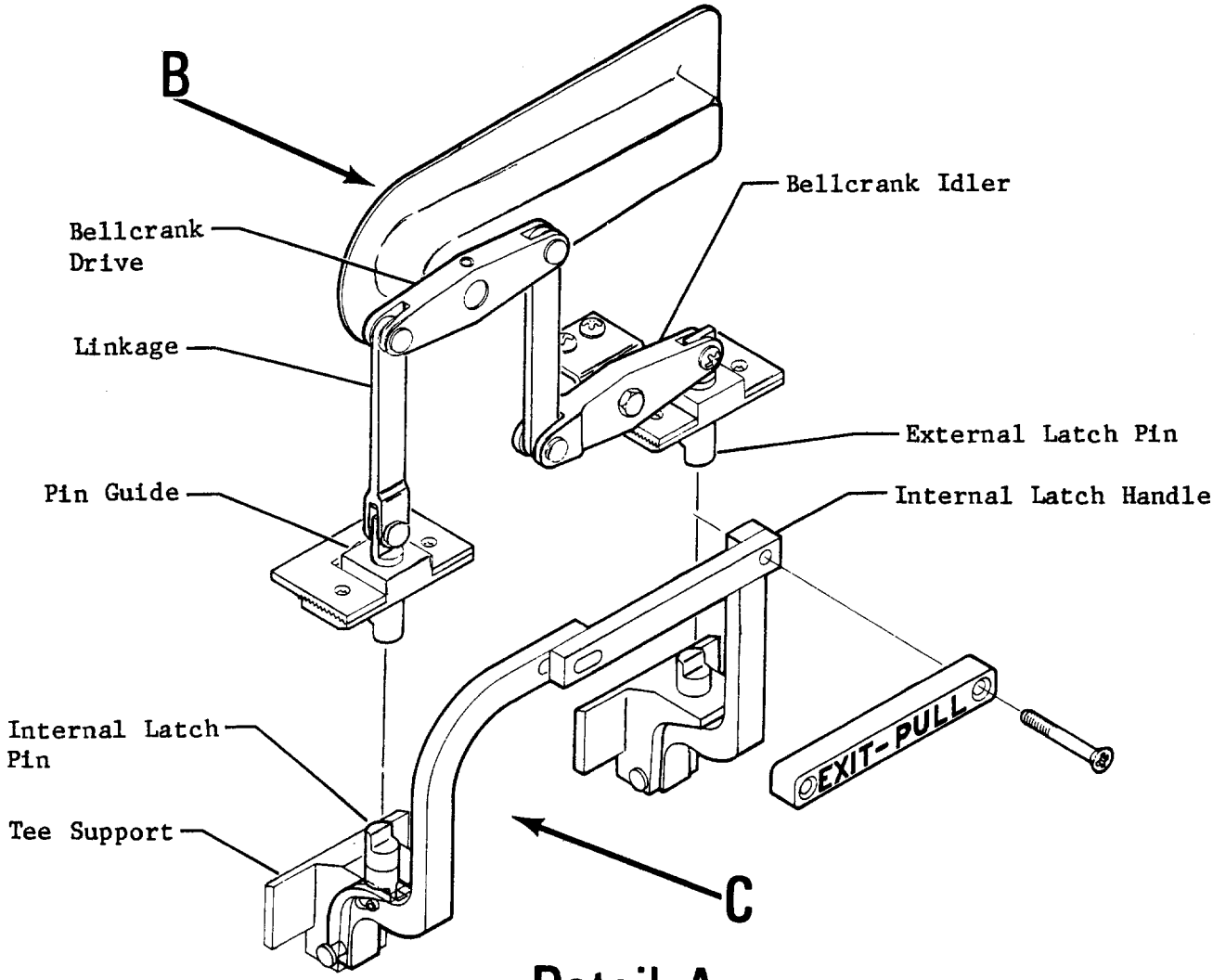
(2) Open and remove emergency exit door.
(3) Remove existing seal and with a clean cloth, dampened with solvent, clean all traces of adhesive from bonding area. Wipe area dry with clean, dry cloth.
(4) Spread a uniform layer of adhesive 10 to 20 mils thick on one of surfaces to be bonded.
(5) Install seal starting at top of emergency exit door.
(6) Use enough pressure to displace air but not so much that adhesive is forced out of joint. Maintain 10 mils thickness of adhesive.
(7) Cut off excess seal when reaching starting point at top of door.
(8) Add adhesive to end of seal and press the seal ends together while using enough pressure to press seal down onto door to displace air but not so much that adhesive is forced out of joint. Maintain 10 mils thickness of adhesive.
(9) Allow to cure 24 hours at room temperature.
(10) Drill 0.125 inch [0.318 cm] diameter holes in seals spaced on 6 inch [15.24 cm] centers using a sharpened pin chucked in an air motor.

NOTE: Drill holes as close to structure as possible on the inboard side of the door.

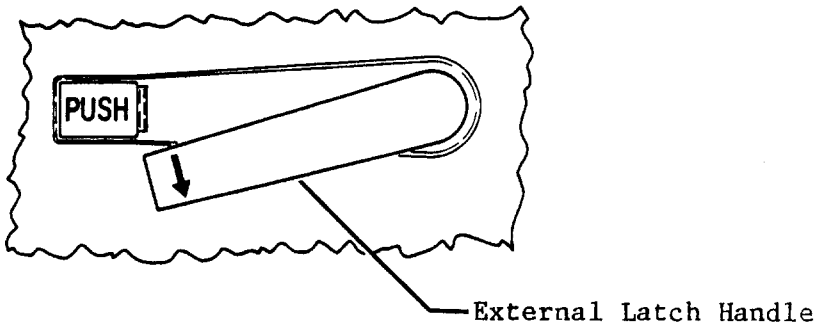


2-4C-10

Emergency Exit Door Inspection/Check
Figure 201 (Sheet 1 of 4)

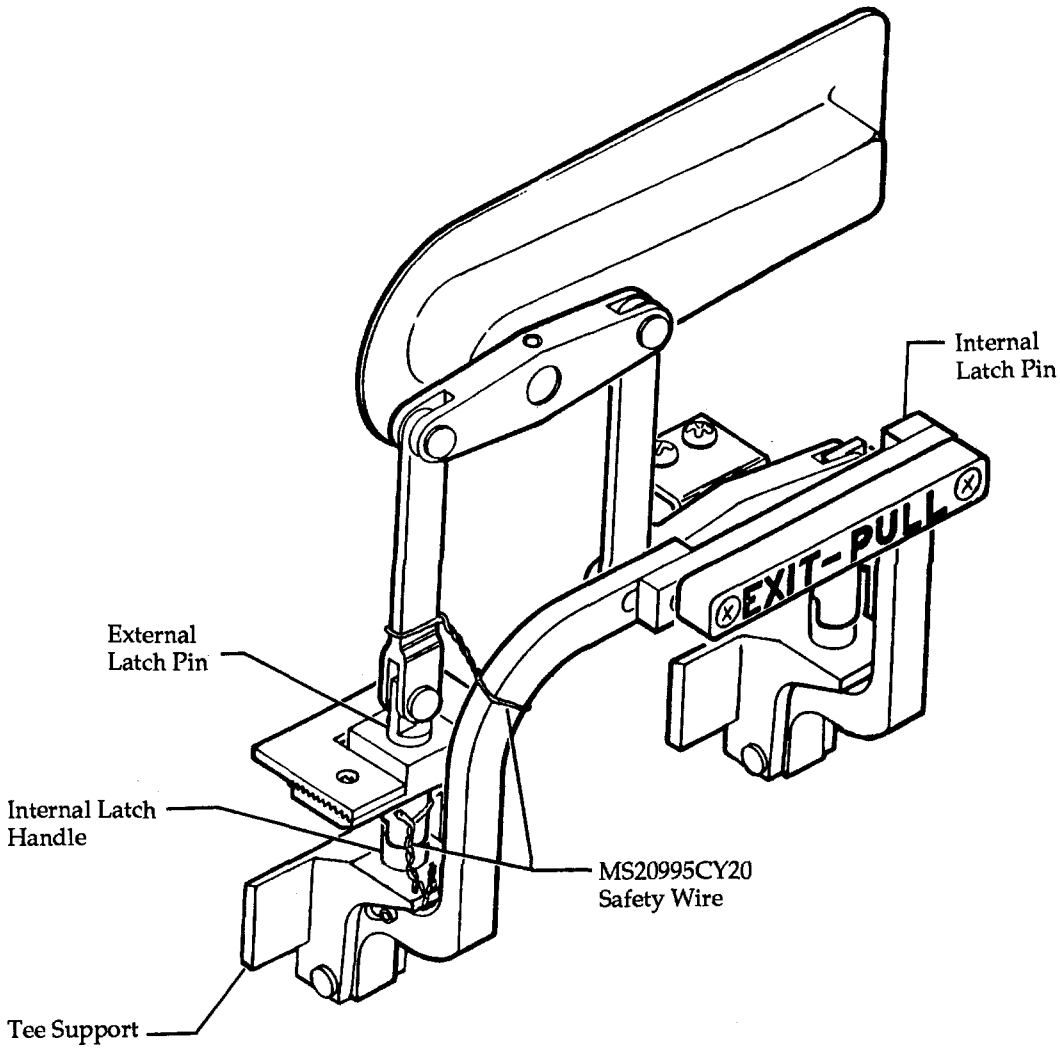


Detail A

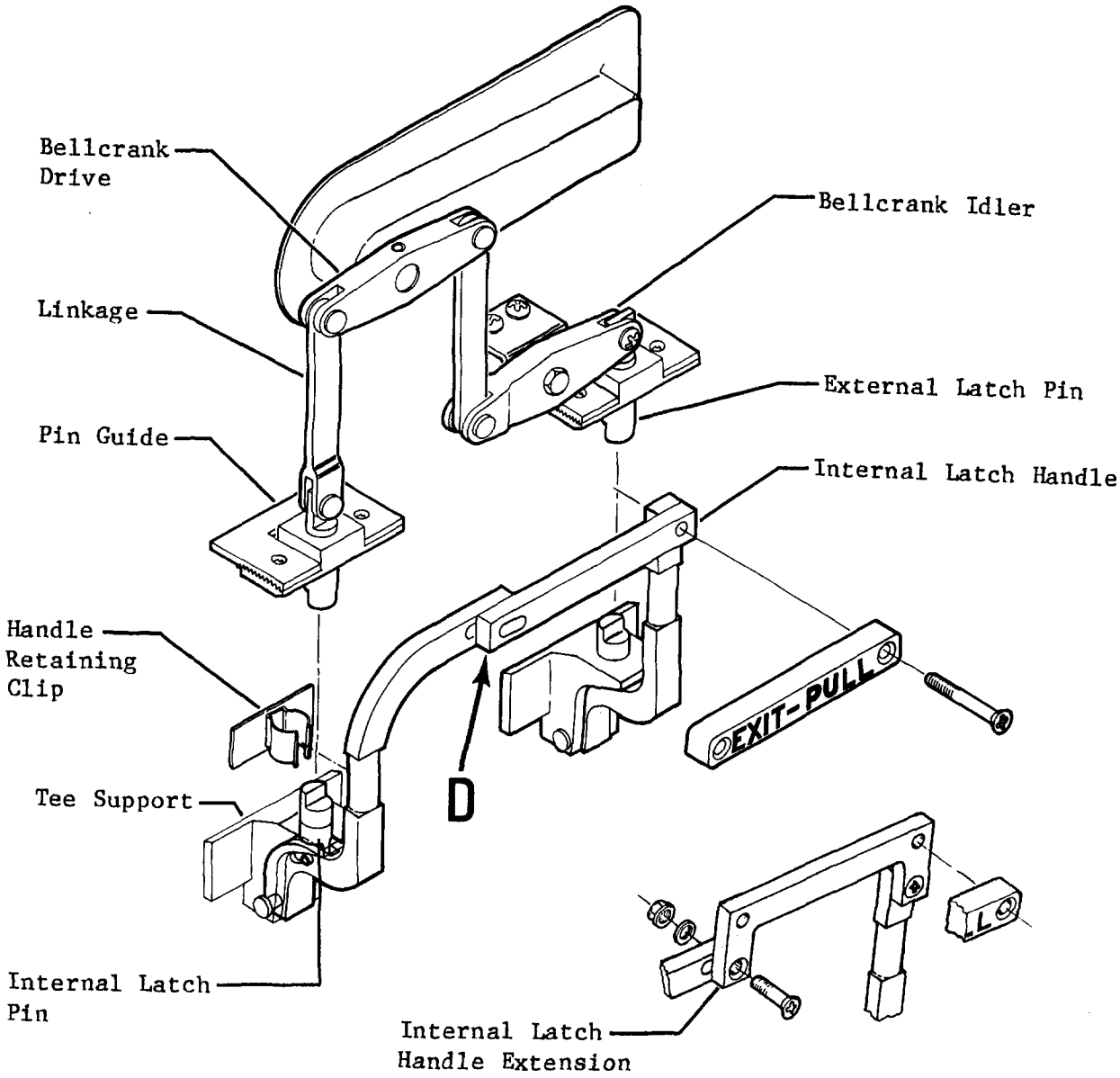


Detail B

Emergency Exit Door Inspection/Check
Figure 201 (Sheet 2 of 4)



Detail C

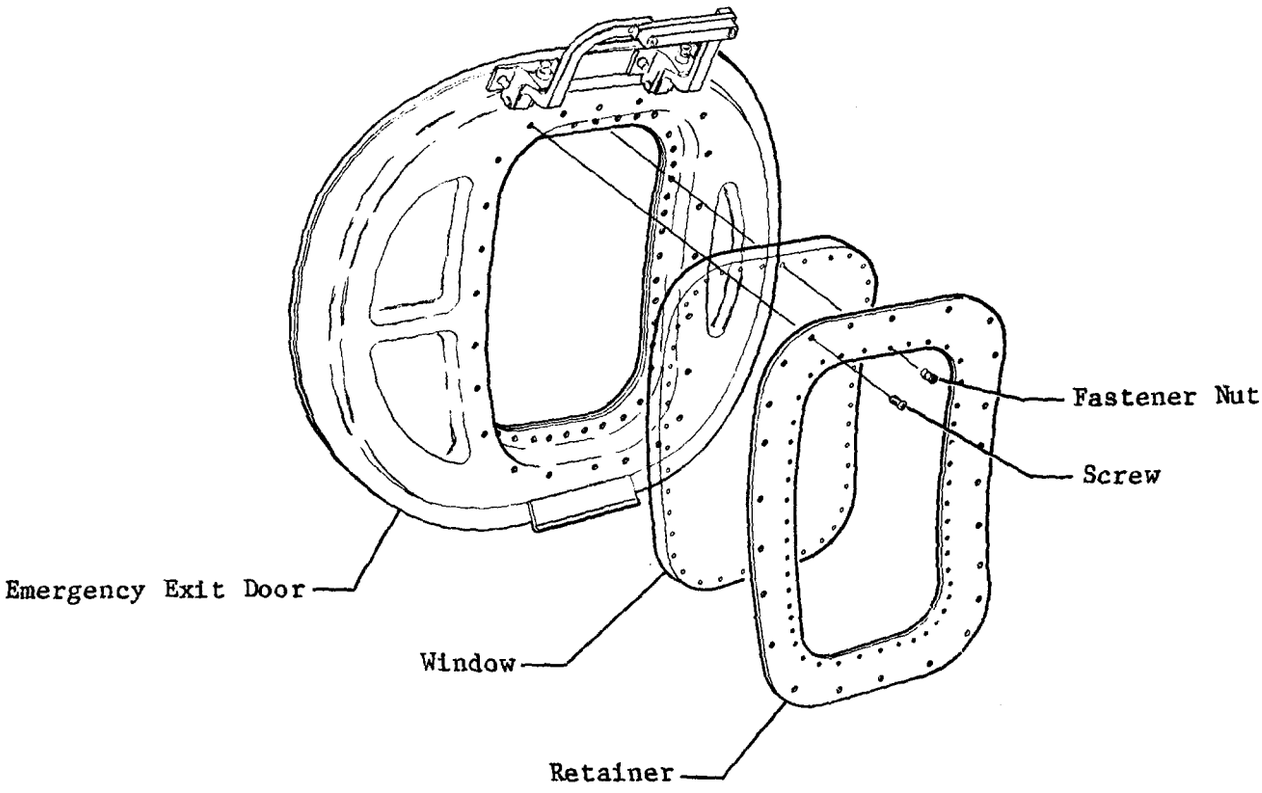


(35-608, 35-610 and Subsequent, 36-056 and Subsequent)

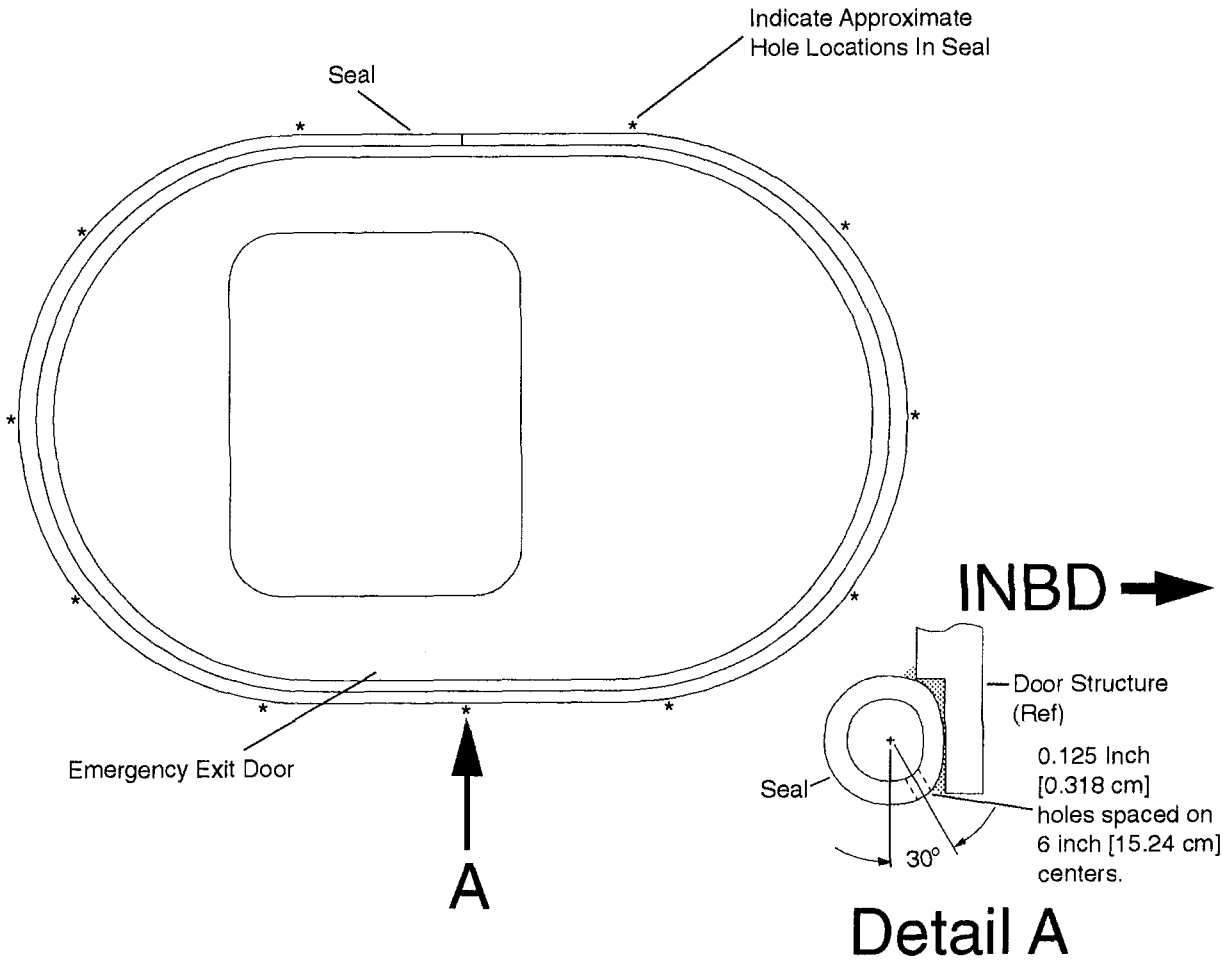
Detail D

2-4C-9

Emergency Exit Door Inspection/Check
Figure 201 (Sheet 4 of 4)



Emergency Exit Door Window Replacement
Figure 202



Replace Emergency Exit Door Seal
Figure 203

SERVICE DOORS - DESCRIPTION AND OPERATION

1. **Description**
   A. Service doors are provided for access to the tailcone, nose compartment, and engine oil filler.
   B. The tailcone access door is located on the bottom of the fuselage aft of frame 26. The door is hinged on the forward side and is secured on the aft side by quick release latches. The tailcone access door provides access to the batteries, electrical components, fuel filters, refrigeration equipment, fire extinguisher bottles and plumbing, and hydraulic components and plumbing. Some aircraft have an optional drag chute installed on the tailcone access door.
   C. Two nose compartment access doors are located on top of the nose section forward of the windshield. The doors are completely removable by rotating the Camloc fasteners around the door perimeter. The nose compartment access doors provide access to the oxygen bottle, emergency air bottle, alcohol anti-ice tank, and electronic equipment.
   D. An oil filler door is located on the outboard side panel of each engine nacelle. The doors are hinged at the bottom by a piano-type hinge and secured at the top by quick release latches. The oil filler door allows access to the oil filler tube.
   E. A small service door located on the RH side of the nose compartment aft of frame 2 is provided for servicing and quick access to the oxygen bottle. The door is secured by two quick release fasteners and is hinged along the lower edge of the door.

1. Approved Repairs

A. Nose Access Door Seal Replacement (See figure 201.)

(1) Remove old damaged seal.

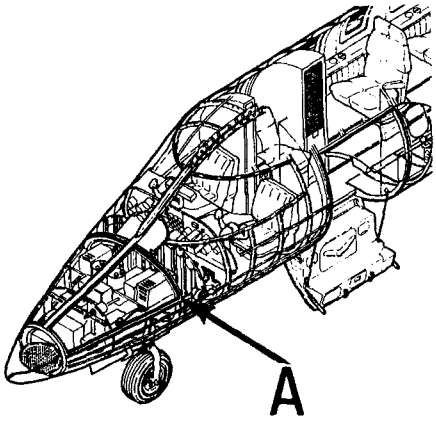
(2) Scrape off existing adhesive where new seal(s) are to be installed. Clean surface with MEK dampened cloth. Wipe dry using a clean dry cloth. Apply chromate primer on metal mating surface if damaged.

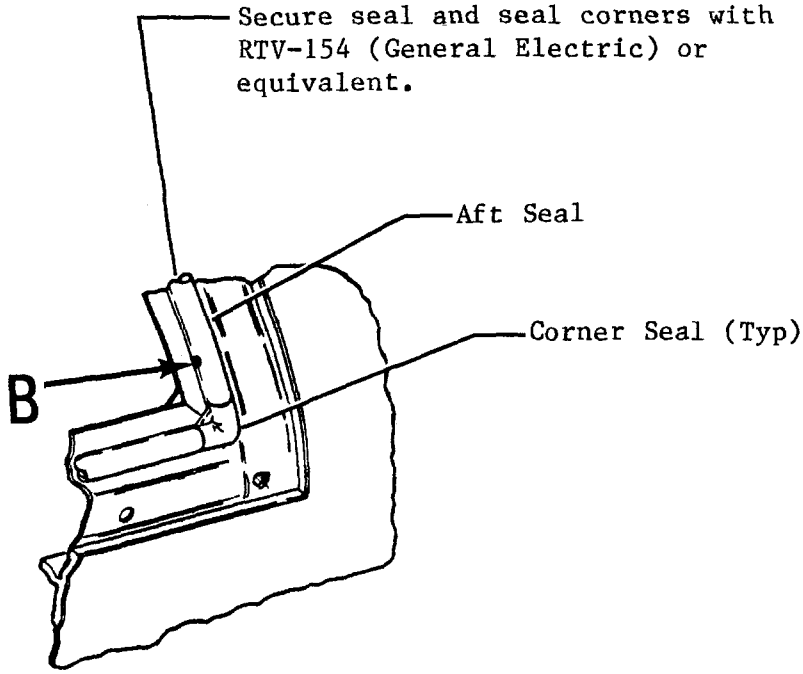
(3) Drill 0.125 inch holes in seals spaced approximately 12 inches (30.50 cm) using a sharpened pin chucked in an air motor. These holes allow the air inside the seal to be vented and maintain ambient pressure altitude. If not allowed to escape, the air in seals would expand and cause access doors to become distorted.

NOTE: When drilling holes in seals, the placement should be:
(a) Upper seal-holes to be facing in.
(b) Lower seal-holes to be facing out.
(c) Forward seal-holes to be facing forward.
(d) Aft seal-holes to be facing forward.

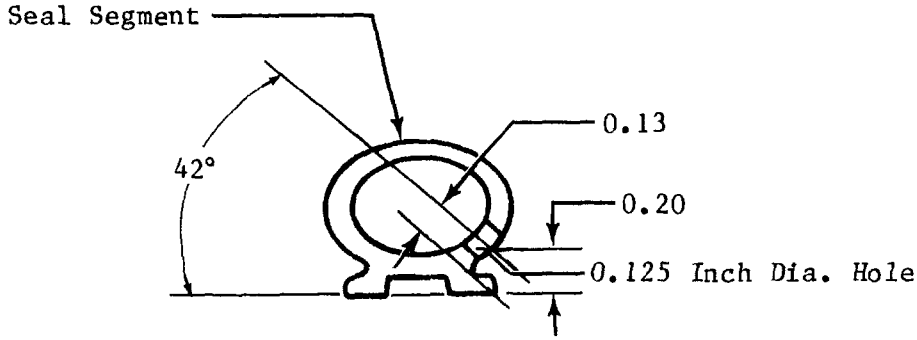
(4) Apply adhesive (RTV-154, General Electric) and install new seals. Seal corners with an extra application of adhesive.

(5) Allow adhesive to cure per manufacturer's specifications.





Detail A



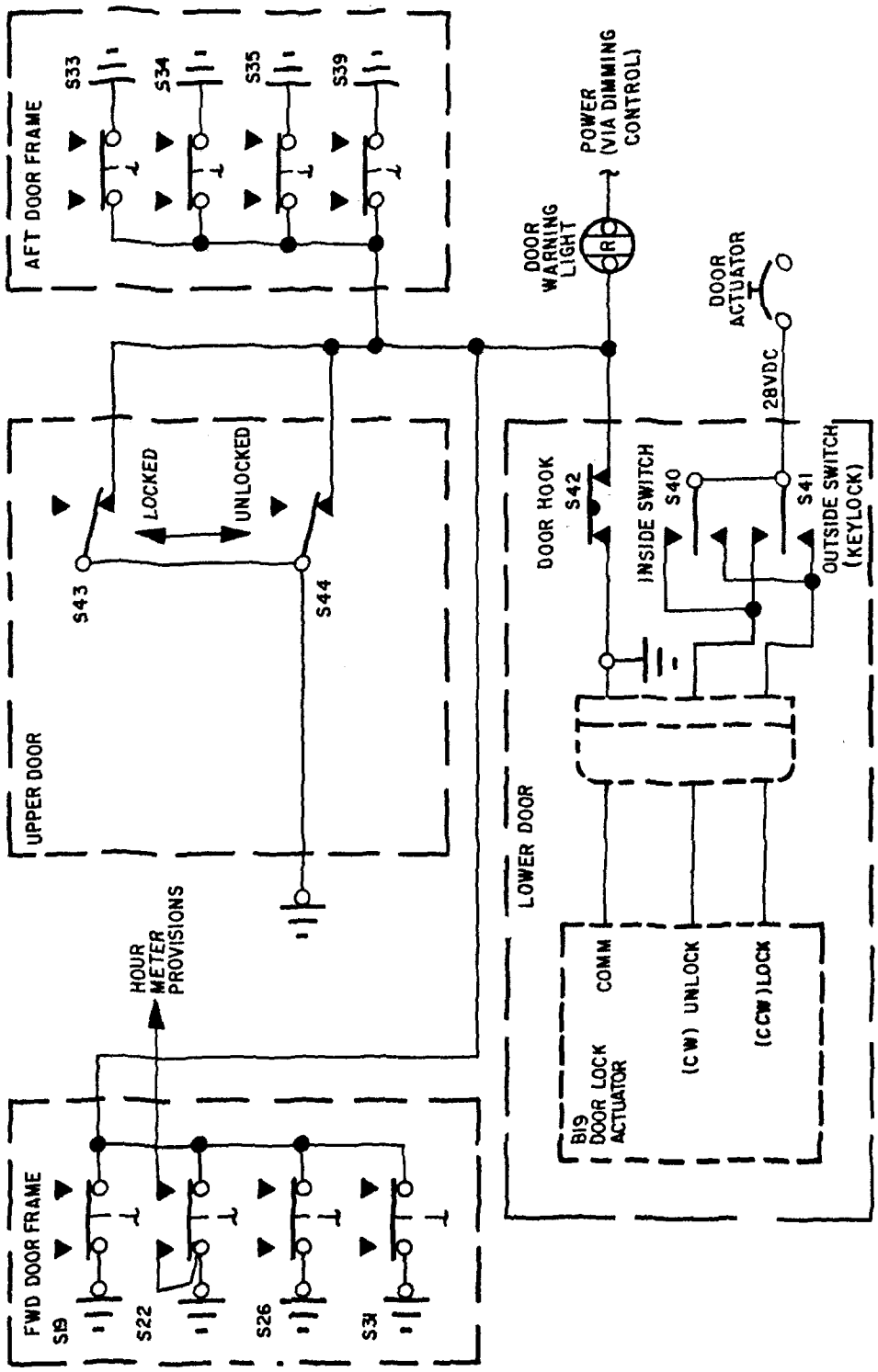
Detail B

Nose Access Door Seal Replacement
Figure 201

DOOR WARNING SYSTEM - DESCRIPTION AND OPERATION

1. **Description**
   A. The door warning system provides the crew with a visual indication when the passenger/crew door is not properly closed and latched. Latch pins, installed in the upper and lower assembly doors, extend from the doors into the fuselage door frame and actuate microswitches, attached to the fuselage door frame, when the doors are closed and latched.
   B. Eight switches are installed in the forward and aft sides of the fuselage door frame and monitor the upper and lower door assembly latch pins for proper extension. Two switches are installed on the lower edge of the upper door assembly and monitor the latch pins which secure the upper and lower door assemblies together. A switch is installed in the lower door assembly to monitor the engagement and disengagement of the door hook(s).
   C. Small, round windows are installed in the upper door assembly for visual verification that the latch pins have fully engaged into the fuselage door frame. When the latch pins are fully engaged, an indicator on the linkage will align with an indicator on the door structure.

2. **Operation** (See figure 1.)
   A. On *Aircraft 35-002 and Subsequent and 36-002 and Subsequent, except 35-509 thru 35-588*, with the latch pins fully engaged in the fuselage door frame, each latch pin actuates a switch and opens the individual switch ground circuit. A switch in the lower door is actuated by a striker mounted on the door hook torque tube. With the hook(s) disengaged, the switch opens a ground circuit. With both doors closed, all latch pins properly engaged and the door hook(s) disengaged, the DOOR warning annunciator on the glareshield will extinguish.
   B. The door warning system switches are wired in parallel so that any malfunction or misadjusted switch will illuminate the DOOR warning annunciator.



Door Warning System Schematic
Figure 1

DOOR WARNING SYSTEM - MAINTENANCE PRACTICES

1. Adjustment/Test

A. Adjust Door Hook Switch (See figure 201.)

(1) Adjust door hook actuator. (Refer to 52-11-04.)

NOTE: Ensure that door hook actuator is properly adjusted prior to hook switch adjustment.

(2) Remove lower center access cover from lower door assembly.
(3) Attach an ohmmeter to the microswitch.
(4) Hold door switch to the open position until hook(s) is in the fully disengaged position.
(5) Loosen jamnuts on switch and adjust switch until ohmmeter shows an open circuit.
(6) Secure jamnuts and remove ohmmeter.
(7) Check operation of door warning system as follows:
  (a) Set Battery Switches on.
  (b) Ensure that passenger/crew door is closed and latched and that door hook(s) are disengaged.
  (c) Verify that DOOR warning annunciator is not illuminated.
(8) Install lower center access cover.

B. Adjust Latch Pin Switches

(1) Adjust door latch pins. (Refer to 52-11-02 and 52-12-02.)

NOTE: Ensure that door latch pins are properly adjusted prior to latch pin switch adjustment.

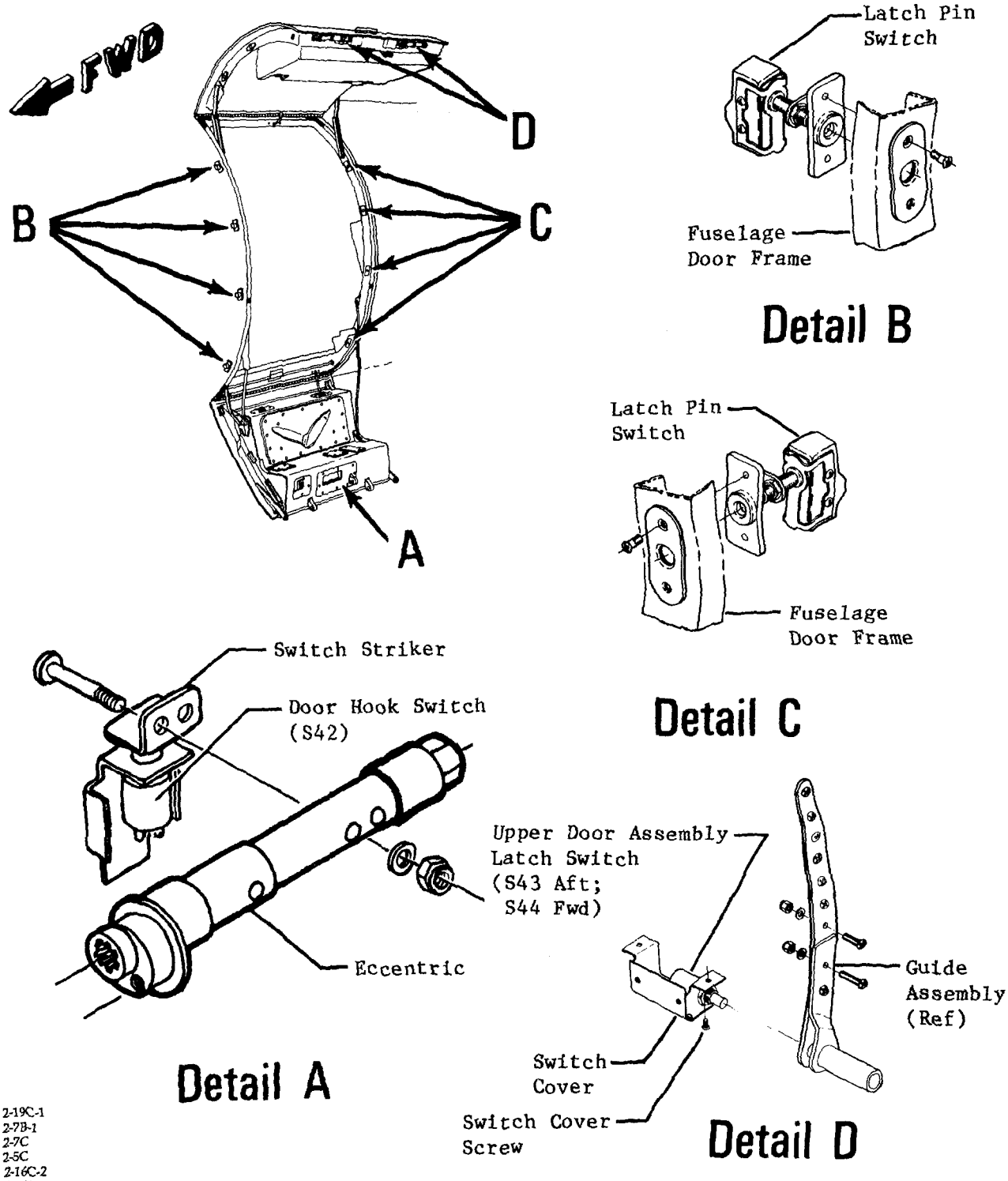
(2) Remove upholstery as necessary to gain access to switches.
(3) Close and lock passenger/crew door from inside of aircraft.
(4) Attach ohmmeter to switch and adjust switch jamnuts until ohmmeter indicates an open circuit.
(5) Secure jamnuts and remove ohmmeter.
(6) Check operation of door warning system as follows:
  (a) Set Battery Switches on.
  (b) Ensure that passenger/crew door is closed and latched and that door hook(s) are disengaged.
  (c) Verify that DOOR warning annunciator is not illuminated.
(7) Install previously removed upholstery.

C. Adjust Upper Door Latch Pin Switch (See figure 201.)

(1) Check adjustment of upper door assembly latch pin. (Refer to 52-12-02.)

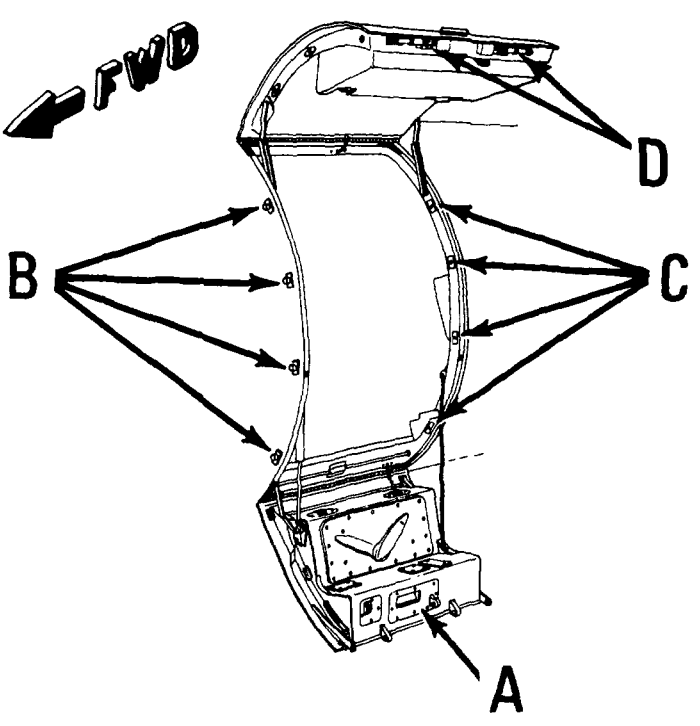
NOTE: Ensure that door latch pins are properly adjusted prior to latch pin switch adjustment.

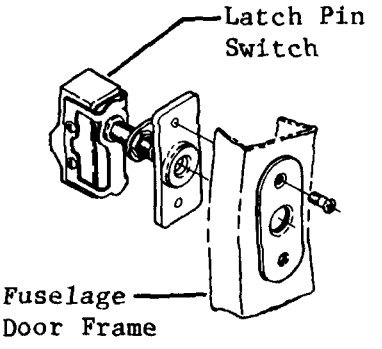
(2) Remove switch cover screws. This will release switch and cover from edge of upper door assembly. The switch wiring will retain switch and cover to door.
(3) Close upper door assembly handle to extend latch pins.
(4) Attach ohmmeter and adjust switch jamnuts until switch actuates (circuit opens).
(5) Secure switch cover to door.
(6) Check operation of door warning system as follows:
  (a) Set Battery Switches on.
  (b) Ensure that passenger/crew door is closed and latched and that door hook(s) are disengaged.
  (c) Verify that DOOR warning annunciator is not illuminated.



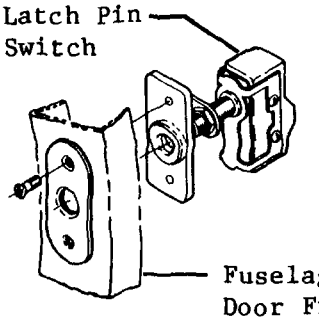
2-19C-1
2-7B-1
2-7C
2-5C
2-16C-2
2-16C

Door Warning System Switch Adjustment
Figure 201 (Sheet 1 of 2)

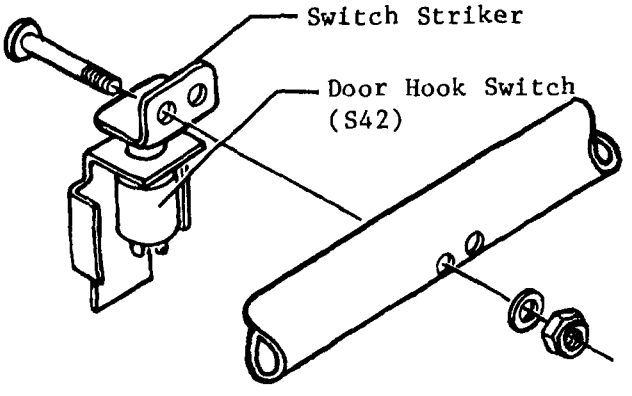




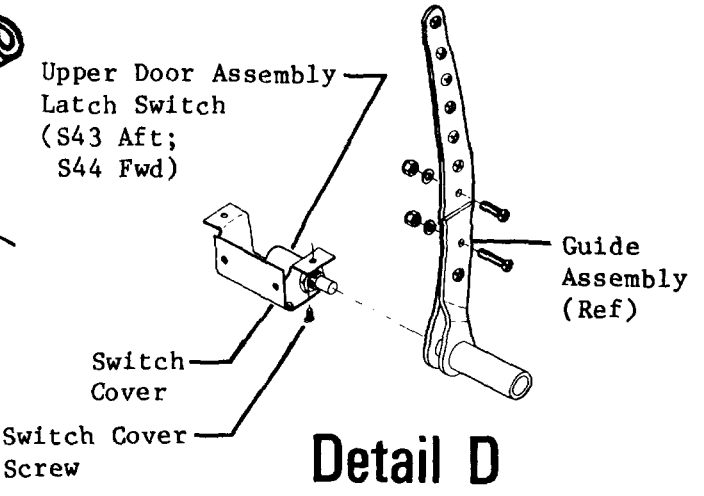
Detail B



Detail C



Detail A



Detail D

2-19C-1
2-7B-1
2-7C
2-5C
2-16C-2
2-16C

Door Warning System Switch Adjustment
Figure 201 (Sheet 2 of 2)

DOOR WARNING SWITCHES - MAINTENANCE PRACTICES

1. **Removal/Installation**
   A. Remove Fuselage Door Frame Switches (See figure 201.)
      (1) Remove LH forward cabinet, upholstery, and floorboards as required to gain access to door frame switches.

      CAUTION:
      - USE EXTREME CARE NOT TO SCRATCH SURFACE OF AIRCRAFT'S SKIN WHEN REMOVING INSULATION. IF SURFACE IS SCRATCHED, THE AREA MUST BE CLEANED AND TREATED WITH AN ANTI-CORROSION CHEMICAL FILM TREATMENT (REFER TO CHAPTER 20) AND THEN PRIMED.
      - WHILE PERFORMING MAINTENANCE IN THIS AREA, INSPECT ALL ACCESSIBLE AREAS FOR ANY SIGN OF CORROSION. TAKE CORRECTIVE ACTION AS REQUIRED.

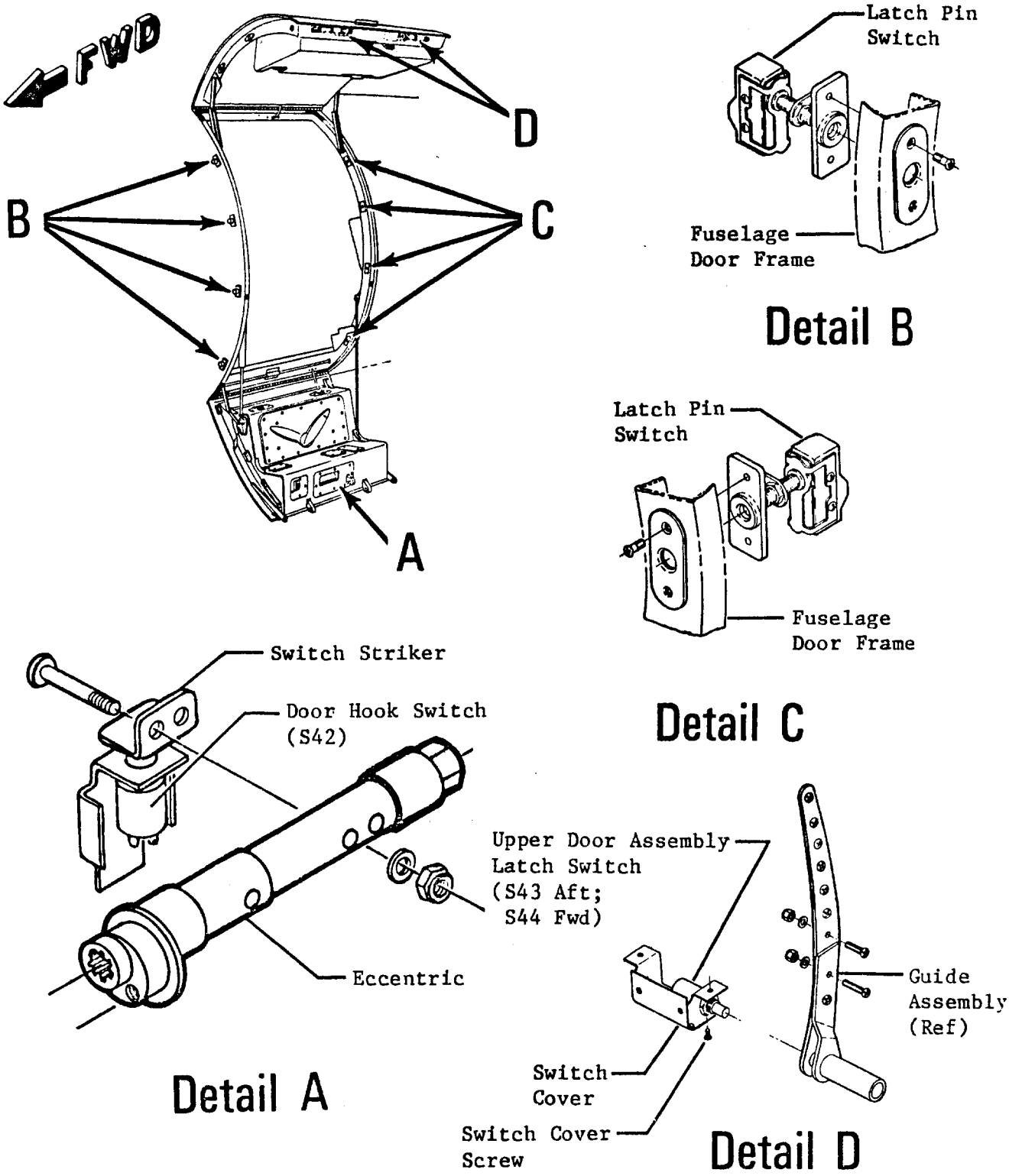
      (2) Clean foam insulation from around switch as required.
      (3) Disconnect electrical wiring from switch.
      (4) Loosen and remove jamnuts and switch from door frame.
   B. Install Fuselage Door Frame Switch (See figure 201.)
      (1) Close and latch applicable door assembly (either upper or lower) that actuates switch being replaced.
      (2) Install door frame switch and connect electrical wiring. Using jamnuts, adjust switch to actuate. Tighten jamnuts.

      CAUTION: DOOR FRAME SWITCHES SHALL SHOW AN OPEN CIRCUIT WHEN THE LATCH PINS ARE FULLY EXTENDED INTO THE DOOR FRAME.

      (3) Check operation of door warning system as follows:
         (a) Set Battery Switches on.
         (b) Ensure that passenger/crew door is closed and latched and that door hook(s) are disengaged.
         (c) Verify that DOOR warning annunciator is not illuminated.
      (4) Refoam area around door frame switches as required using FP9.5 Foam Kit and following kit instructions.
      (5) Install previously removed floorboards, upholstery, and cabinet.
   C. Remove Door Hook Switch (See figure 201.)
      (1) Remove upholstery from lower door assembly.
      (2) Remove access panels from lower door as shown.
      (3) Disconnect electrical wiring from door hook switch.
      (4) Loosen, remove jamnuts and door hook switch from lower door.
   D. Install Door Hook Switch (See figure 201.)
      (1) Ensure that door lock hook is completely disengaged (actuator driven to electrical stops).
      (2) Install switch on bracket and connect electrical wiring. Using jamnuts, adjust switch until it actuates. Tighten jamnuts.

      CAUTION: DOOR HOOK SWITCH MUST SHOW AN OPEN CIRCUIT WHEN THE DOOR HOOK(S) ARE COMPLETELY DISENGAGED.

      (3) Check operation of door warning system as follows:
         (a) Set Battery Switches on.
         (b) Ensure that passenger/crew door is closed and latched and that door hook(s) are disengaged.
         (c) Verify that DOOR warning annunciator is not illuminated.
      (4) Install previously removed access panels and upholstery.



2-19C-1
2-7B-1
2-15C-2
2-5C

Door Warning Switch Installation
Figure 201

E. Remove Upper Door Assembly Latch Switch (See figure 201.)
   (1) Remove switch cover screws securing switch cover and switch to lower edge of upper door assembly.
   (2) Disconnect electrical wiring from switch.

CAUTION: NOTE THE NUMBER OF EXPOSED THREADS OF OLD SWITCH SO THAT NEW SWITCH CAN BE POSITIONED AS CLOSE AS POSSIBLE TO POSITION OF OLD SWITCH.

   (3) Loosen and remove jamnuts and switch from switch cover.

F. Install Upper Door Assembly Latch Switch (See figure 201.)
   (1) Install new switch in switch cover. Adjust jamnuts so that thread exposure is the same as those exposed for old switch. Connect electrical wiring to switch.
   (2) Install switch cover and switch on lower edge of upper door assembly.
   (3) Close upper door assembly and slowly close door handle while watching latch pins engage switches. Ensure that switch is adjusted so that it actuates at full latch pin extension.
   (4) Check operation of door warning system as follows:
      (a) Set Battery Switches on.
      (b) Ensure that passenger/crew door is closed and latched and that door hook(s) are disengaged.
      (c) Verify that DOOR warning annunciator is not illuminated.

LANDING GEAR DOORS - DESCRIPTION AND OPERATION

1. **Description**
   A. Each main landing gear is enclosed by an inboard door and an outboard door. The inboard door is hydraulically operated. The outboard door is mechanically connected to the shock strut by an adjustable link. The doors are hinged from the structure by continuous-type hinges.
   B. The nose landing gear is enclosed by two split-type, hinge-mounted doors. The doors are opened and closed mechanically by pushrods linked to the shock strut. The pushrods can be adjusted to bring the doors into contour with the fuselage when the gear is retracted.

MAIN GEAR DOORS - MAINTENANCE PRACTICES

1. Removal/Installation

NOTE: Removal and installation procedures for the left and right doors are identical.

Replacement doors are fabricated 0.250 inch [0.635 cm] oversize on the forward, aft, and outboard sides to allow for trimming to fit during installation.

A. Removal of Main Gear Inboard Door (See Figure 201.)
(1) Place aircraft on jacks. (Refer to Chapter 7.)

WARNING: FAILURE TO DISCONNECT AIRCRAFT BATTERIES COULD RESULT IN BODILY INJURY WHILE WORKING IN WHEEL WELL AREA IF ELECTRICAL POWER IS INADVERTENTLY APPLIED TO THE LANDING GEAR SYSTEM.

(2) Remove electrical power from aircraft.
(3) Using a screwdriver to override uplatch actuator, release uplatch hook from roller.

CAUTION: BRAKES MUST BE PUMPED DURING MANUAL LOWERING OF INBOARD GEAR DOOR TO PREVENT POSSIBLE DOOR ACTUATOR DAMAGE AND TO AID IN LOWERING INBOARD GEAR DOOR.

(4) To lower main gear inboard door, station a person at inboard door and a person to operate brake pedals. While pumping brakes, pull inboard door to down position.
(5) Disconnect door actuator at inboard door.
(6) Disconnect bonding jumper at inboard door.
(7) Remove main gear door up switch and electrical wiring and clamps from inboard door. Tie electrical wiring and switch to aircraft structure out of immediate work area.
(8) Mark location of forward and aft inboard ends of existing door on keel beam. This will assist in locating new door.
(9) Mark inboard edge of gear door on hinge.
(10) Drill out rivets securing existing door to hinge and remove door from hinge.
(11) Remove inboard door actuator attach bracket and inboard door switch bracket from door.
(12) Check hinge for serviceability. (Refer to Inspection/Check, this section.)

B. Installation of Main Gear Inboard Door (See Figure 201.)
(1) Align inboard door and hinge with hinge on outer face of door as shown in Figure 201, detail A.
(2) Clamp door in place on hinge and make sure that door is aligned per Figure 201, detail A.
(3) Drill two end holes in door using existing two end holes in hinge as a template. Attach door to hinge using Cleco fasteners.
(4) Drill remaining holes in door to match those in hinge.
(5) Mark trim contour on forward and aft sides of door. Remove door and trim to contour marks.
(6) Install inboard uplatch bracket and inboard door actuator attach bracket on inboard door.
(7) Countersink outer door skin hinge attachment holes (100° x 0.159 inch [0.404 cm] diameter).
(8) Position hinge on inboard door between door pan and outer door skin so that holes in hinge and door align and secure in place with rivets as shown in Figure 201, detail A.
(9) Connect bonding jumper to door.
(10) Final trim door to match wheel well.
(11) Restore electrical power to aircraft.
(12) Retract landing gear. Make sure that inboard gear door actuator and uplatch actuator ends are clear of aircraft structure prior to starting retraction sequence.
(13) Raise inboard gear door. Mark and trim inboard gear door to match edge of outboard gear door.
(14) Lower landing gear and remove electrical power from aircraft.

(15) Connect inboard door actuator to door.
(17) Adjust main gear door up switch. (Refer to 32-60-02.)
(18) Restore electrical power to aircraft.
(19) Remove aircraft from jacks.

C. Removal of Main Gear Outboard Door (See Figure 201.)
(1) Place aircraft on jacks. (Refer to Chapter 7.)
(2) Disconnect door closure link assembly from door.
(3) Retract landing gear to allow access to door hinge attachment screws.

WARNING: FAILURE TO DISCONNECT BATTERIES COULD RESULT IN BODILY INJURY WHILE WORKING IN WHEEL WELL AREA IF ELECTRICAL POWER IS INADVERTENTLY APPLIED TO LANDING GEAR SYSTEM.

(4) Remove electrical power from aircraft.
(5) Disconnect bonding jumper from door and wing structure.
(6) Remove screws securing hinge to wheel well and remove outboard door from aircraft.
(7) Check hinge for serviceability. (Refer to Inspection/Check, this section.)

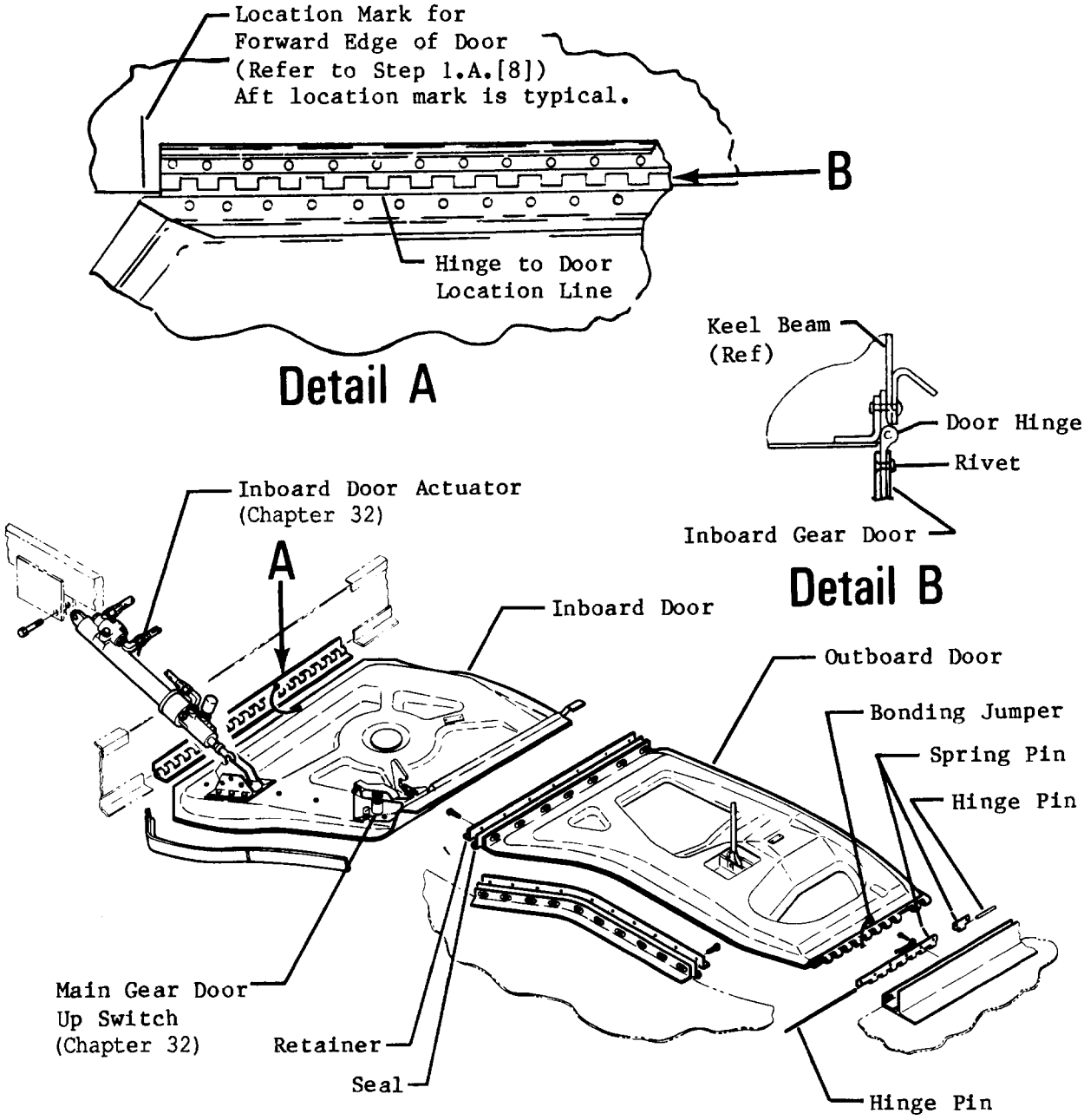
D. Installation of Main Gear Outboard Door (See Figure 201.) *(Aircraft 35-002 thru 35-147 and 36-002 thru 36-035)*
(1) Install hinge halves on aircraft structure where old hinges were installed.
(2) Install hinge halves together using hinge pin.
(3) Position and attach hinge half on outboard door.
(4) Temporarily install door using hinge pin and mark trim contour.
(5) Remove door and rough trim.
(6) Attach bonding jumper to door.
(7) Install door and final trim. Insert spring pins to secure hinge pins.
(8) Restore electrical power to aircraft.
(9) Extend landing gear.
(10) Connect door closure link to door.
(11) Cycle gear and check door for proper operation and clearance.
(12) Remove aircraft from jacks.

E. Installation of Main Gear Outboard Door (See Figure 201.) *(Aircraft 35-148 and Subsequent and 36-036 and Subsequent)*
(1) Remove electrical power from aircraft.
(2) Temporarily install and close door. Mark trim contour.
(3) Remove door and rough trim.
(4) Install door and final trim.
(5) Attach bonding jumper to door.
(6) Restore electrical power to aircraft.
(7) Extend landing gear.
(8) Connect door closure link to door.
(9) Cycle gear and check door for proper operation and clearance.
(10) Remove aircraft from jacks.

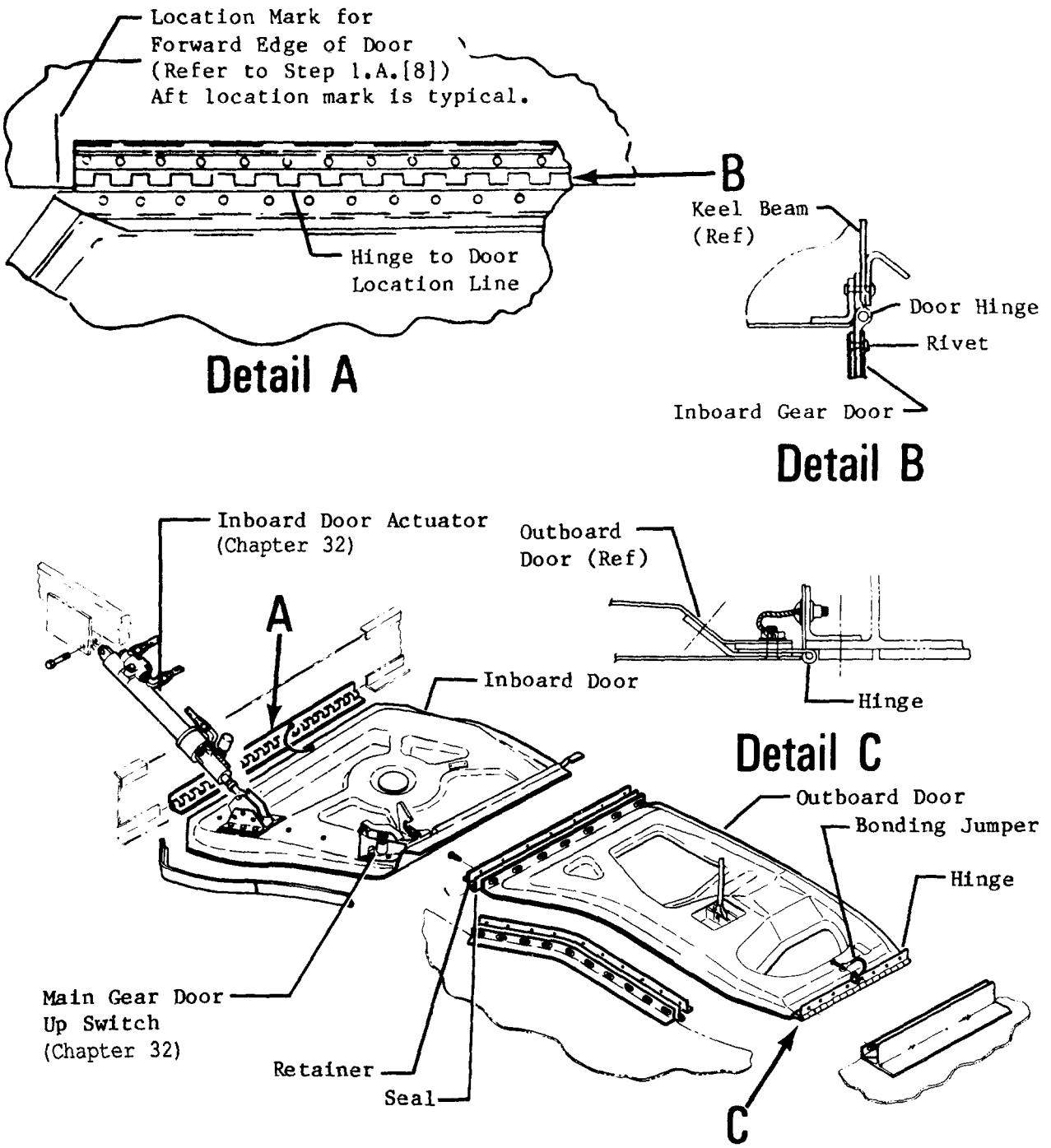
2. Inspection/Check

A. Main Gear Door Hinge Wear and Damage Allowance
(1) If a main gear door hinge is worn/loose to the point that it interferes with normal operation (such as fit or closure of door), it shall be replaced.
(2) If more than two (2) loops of a hinge half are broken or worn through, that half shall be replaced.

NOTE: Make sure replacement hinge half will mate and align correctly with existing hinge half. It may be easier to replace the entire hinge.



Main Gear Door Installation
Figure 201 (Sheet 1 of 2)



Main Gear Door Installation
Figure 201 (Sheet 2 of 2)

NOSE GEAR DOORS - MAINTENANCE PRACTICES

1. Removal/Installation

NOTE: Removal and installation of both gear doors is identical.

A. Removal of Nose Gear Door (See Figure 201.)
   (1) Place aircraft on jacks. (Refer to Chapter 7.)
   (2) Remove electrical power from aircraft.
   (3) Disconnect and remove applicable nose gear door pushrod.
   (4) Remove nose compartment access doors and remove equipment and equipment racks necessary to gain access to nose gear door hinge attach rivets.
   (5) Mark a line on the aircraft structure around hinge. This line will be used in locating new door and hinge.
   (6) Drill out rivets and remove door from aircraft.

B. Installation of Nose Gear Door (See Figure 201.)
   (1) Position new door hinge assembly on aircraft and align hinge with scribe mark which was made during removal. Clamp in place.
   (2) Using existing holes in aircraft structure as a template, drill a hole in each end of hinge and secure hinge in place using Cleco fasteners.
   (3) Remove clamps and drill remainder of holes in hinge to match aircraft structure.
   (4) Secure hinge to structure with rivets.
   (5) Temporarily attach door pushrod to door and, with door lowered, check for clearance between outboard end of deflector and fuselage skin. If necessary, the outboard end of the deflector may be trimmed a maximum of 0.050 inch [0.127 cm] to obtain clearance.

      NOTE: If a marker beacon is installed and it interferes with the deflector, the deflector must be trimmed to a length of 2.20 inches [5.59 cm] as shown in Figure 201.

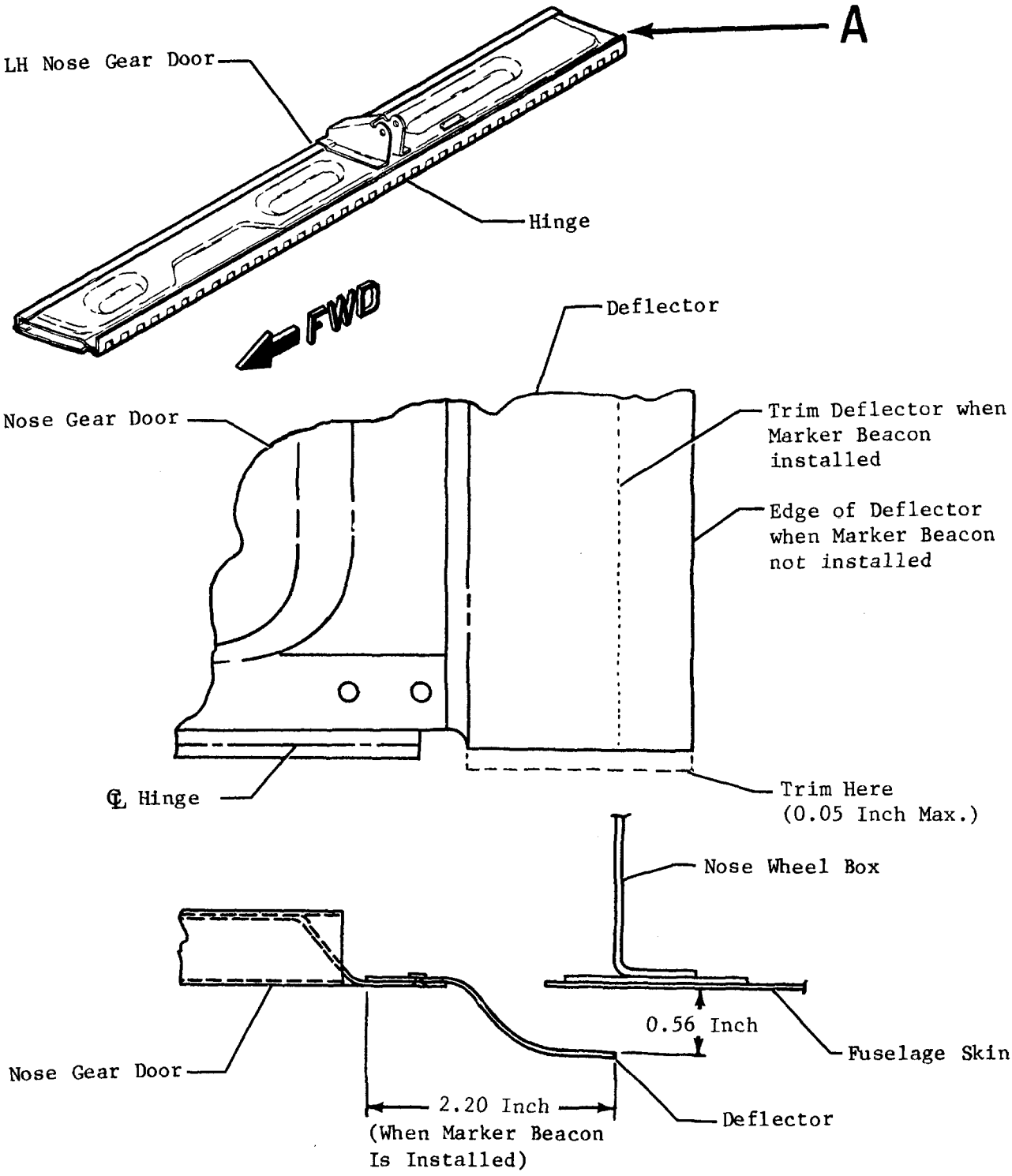
   (6) Remove door pushrod and close door until it is faired with fuselage skin. Check for 0.560 inch clearance between deflector and fuselage skin.
   (7) Install nose compartment equipment and access doors.
   (8) Rig nose gear doors. (Refer to Adjustment/Test, this section.)

      NOTE: Make sure heads of all attaching parts that attach door actuating pushrods (with exception of those attaching pushrods to doors are on the outboard side. This will make sure attaching parts do not come into contact with aircraft structure.

   (9) Remove aircraft from jacks.
   (10) Restore electrical power to aircraft.

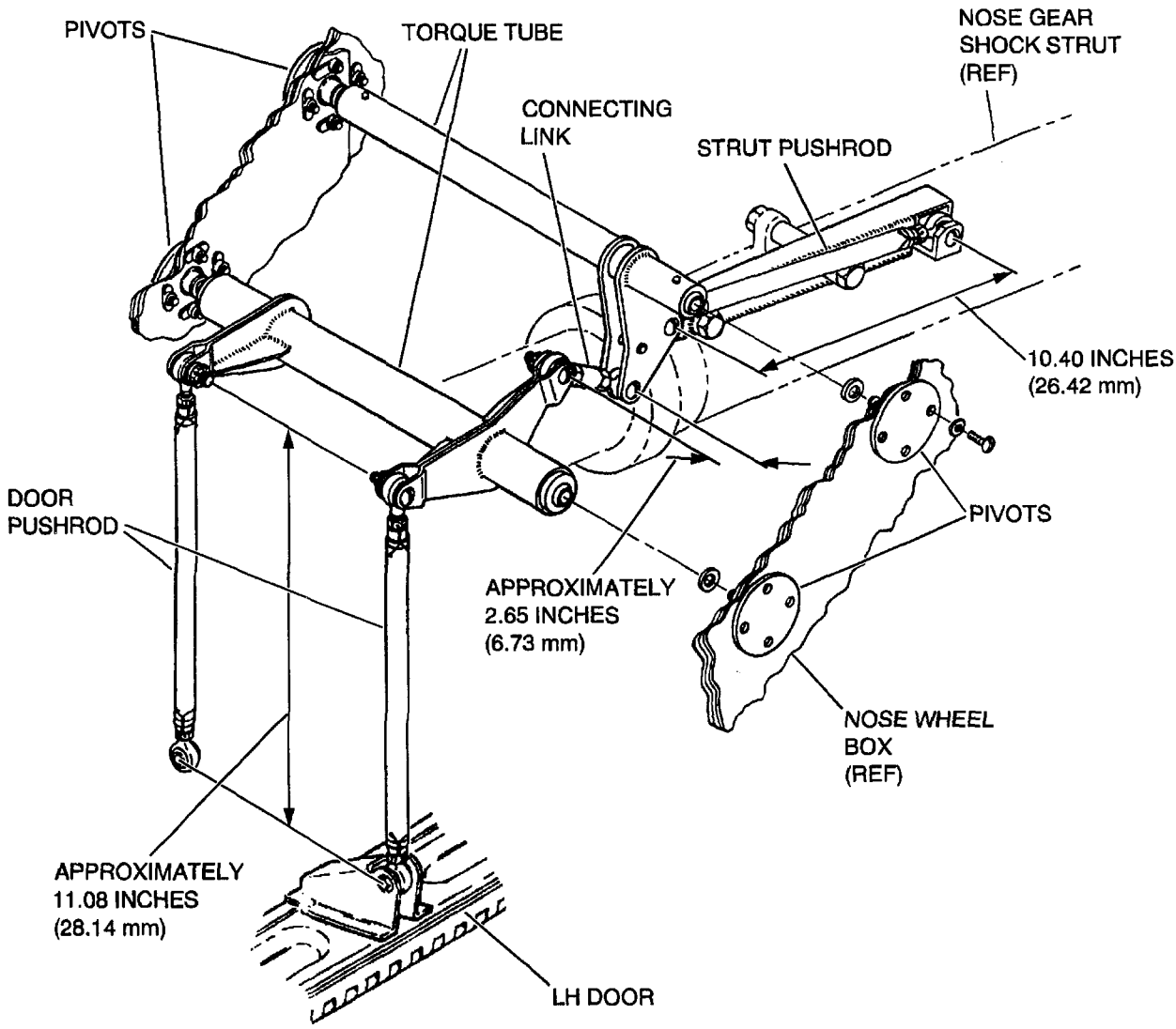
2. Adjustment/Test

A. Rigging of Nose Gear Doors (See Figure 202.)
   (1) Place aircraft on jacks. (Refer to Chapter 7.)
   (2) Remove electrical power from aircraft.
   (3) With nose gear down, adjust strut pushrod to obtain 10.40 inches [26.42 cm] between rod end bearing centers.
   (4) Adjust connecting link to obtain 2.650 inches [6.731 cm] between rod end bearing centers.
   (5) Disconnect right and left door pushrods and retract gear.
   (6) Adjust door pushrods as required to bring doors into contour with fuselage. Approximate door pushrod length between rod end bearing centers is 11.080 inches [28.143 cm].
   (7) Extend gear and connect door pushrods.
   (8) Remove aircraft from jacks.
   (9) Restore electrical power to aircraft.



Detail A

Nose Gear Door Installation
Figure 201



SHOWN IN RETRACTED POSITION WITH ACTUATOR ATTACH BRACKET REMOVED FOR CLARITY.

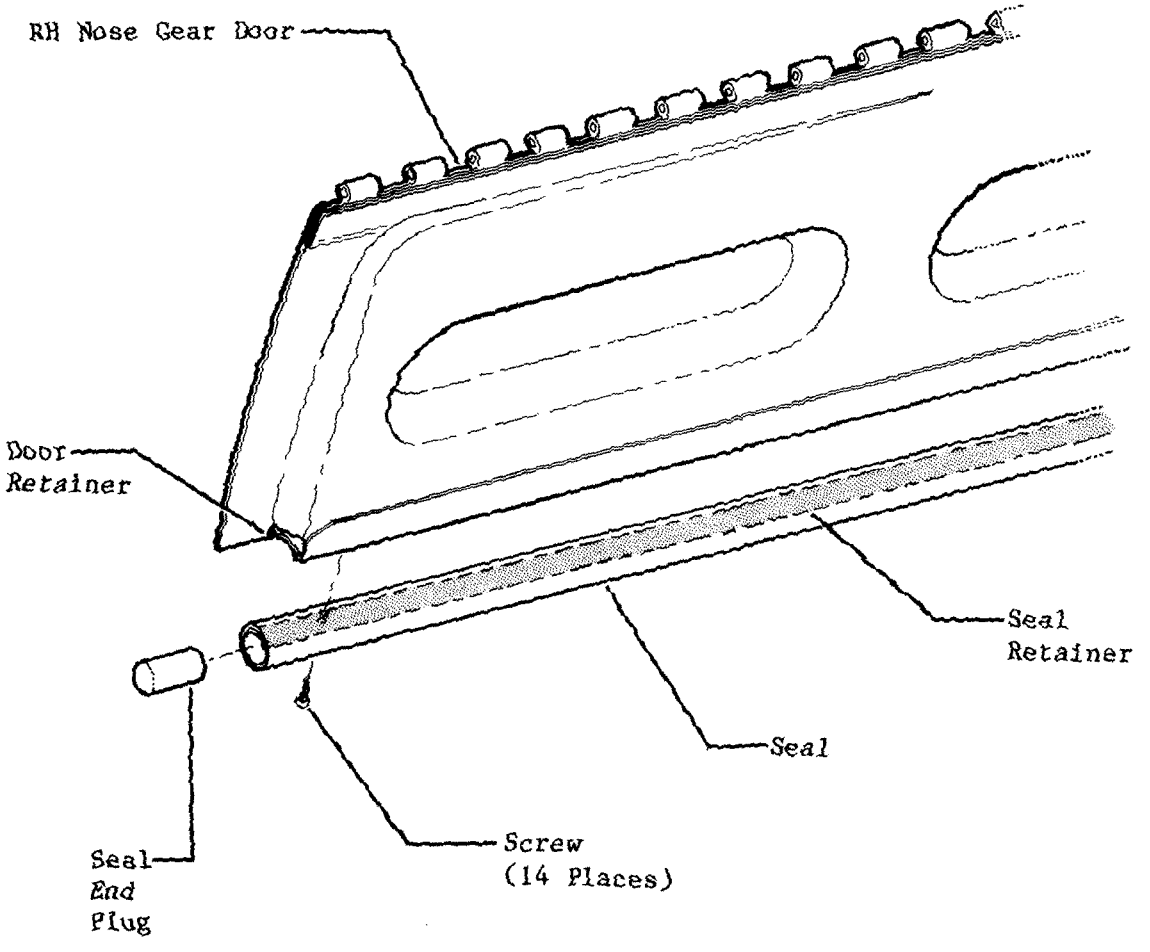
Nose Gear Door Linkage Rigging
Figure 202

3. **Repairs**
   A. Replacement of Nose Landing Gear Door Seal (See Figure 203.)
      (1) Acquire necessary tools and equipment.

NOTE: Equivalent substitutes may be used in lieu of the following:

NAME	PART NUMBER	MANUFACTURER	USE
Cleaning Solvent (MEK)		Commercially Available	Cleaning.
Cotton Cloth, Clean, White, and Lint-Free		Commercially Available	Cleaning and drying.
Adhesive	EC-776	3M Co. St. Paul, MN	Bonding seal to door retainer.
Drill	#52 or #53	Commercially Available	Drilling holes in seal.
Drill Motor		Commercially Available	Drilling holes.

(2) Remove attaching parts securing door seal and seal retainer to door retainer.
(3) Remove seal from door retainer.
(4) Using a clean cloth dampened with cleaning solvent, remove all adhesive from door retainer. Wipe dry with a clean, dry cloth.
(5) Slide seal retainer out of seal.
(6) Match new seal with door retainer. Mark seal where door retainer holes (14) match.
(7) Drill 0.06 (±0.01) inch [0.15 (±0.03) cm] holes through seal as marked.
(8) Feed seal retainer into seal; match holes in seal retainer with holes in seal.
(9) Apply uniform coat of adhesive to both seal and door retainer.
(10) Allow to air-dry until adhesive will stick but not transfer to knuckle of hand.
(11) Place screws through seal and seal retainer.
(12) Match screws in seal with holes in door retainer; tighten screws to secure seal and seal retainer to door retainer.
(13) Plug seal ends using plugs made from sponge or hard rubber.
(14) Allow to air-dry 24 hours at room temperature.



Nose Gear Door Seal Replacement
Figure 203