CHAPTER 25

EQUIPMENT AND FURNISHINGS

TABLE OF CONTENTS

NUMBE	<u>er</u>			PAGI
25-1-0	SEATS			
	Description/Operation	200		1
	Front Seats			1
	Rear Seats		٠.	1
	Maintenance Practices			201
	Front Seat Removal/Installation			201
	Rear Seat Removal/Installation			201
25-2-0	SAFETY BELTS			
	Description/Operation			1
	General			1
	Shoulder Harnesses			1
	Lap Belts			1
	Maintenance Practices			201
	Rear Seat Shoulder Harness Removal/Installation			201
	Front Seat Shoulder Harness Removal/Installation			201
	Rear Seat Inner Lap Belt Removal/Installation			201
	Front Seat Inner and Outer Lap Belt Removal/Installa	ation		202
25-3-0	BAGGAGE STRAP ASSEMBLIES			
	Description			1
	General			1
	Maintenance Practices			201

NUMBER		PAGE
	Baggage Strap Assembly Removal/Installation	201
25-4-0	CONSOLE ASSEMBLY	
	Description	1
	General	1
	Maintenance Practices	201
	Console Assembly Removal/Installation	201
25-5-0	CANOPY AND AFT FUSELAGE INNER TRIM	
	PANELING AND AFT FUSELAGE MOULDING	
	Description	1
	General	1
	Maintenance Practices	201
	Canopy Inner Trim Paneling Removal/Installation	201
	Aft Fuselage Moulding Removal/Installation	201
	Aft Fuselage Inner Trim Paneling Removal/Installation	201
25-6-0	MISCELLANEOUS FURNISHINGS	
	Description	1
	Carpeting	1
	Panel Upholstery	1
	Hatshelf	1
	Armrests	1
	Glareshield and Deck Assemblies	1
	Headliners	1
	Sun Visor Assembly	1
	Map Lights	1
	Fire Extinguisher	1
	Storage Box — Approach Plates and Owners Manual	2

NUMBER	4	PAGE
25-7-0	INTERIOR CARE	
	Maintenance Practices	201
	Cleaning	201

SEATS - DESCRIPTION/OPERATION

1. General

The seats for AA-5, AA-5A, and AA-5B model aircraft consist of two bucket type seats in the forward compartment and a straight double seat in the rear compartment.

2. Front Seats

The front seats in the AA-5, the AA-5A, and the AA-5B models are horizontally adjustable bucket seats (see Figure 1). Covering for the seats consists of a vinyl fabric combination.

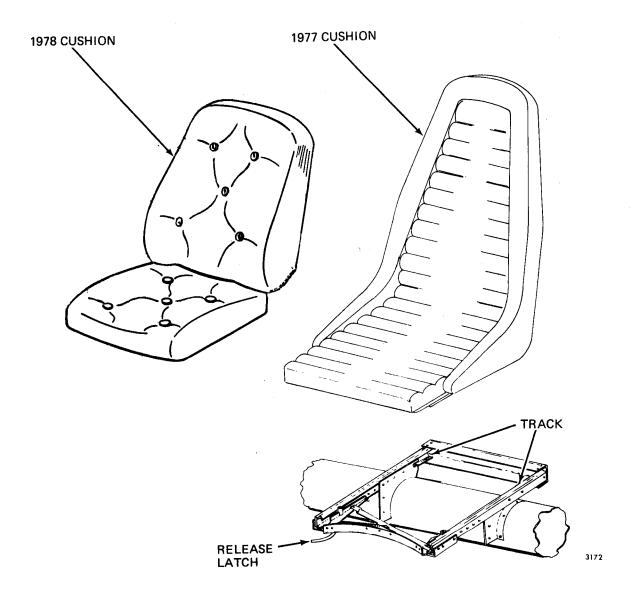
A spring-loaded lever is located on the outboard side of each seat, just below the front portion of the seat cushion. This adjustment lever releases the seat to move forward or aft along the guide track. Detents along the inside and outside track are engaged to lock the seat in place.

The seat backs pull forward to allow entry to the rear seat area or to allow access to bottom cushion snaps, which secure the bottom cushion to the seat pan.

3. Rear Seat

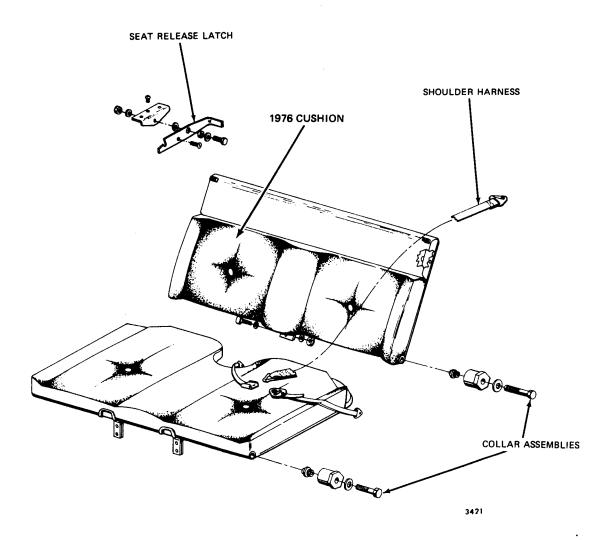
The rear seat in the AA-5, the AA-5A, and the AA-5B models is a straight seat with covering consisting a vinyl/carpet fabric combination (see Figure 2). When the front seats are moved all the way forward, the rear seat bottom may be folded forward, providing access to the flap actuator and control surface rigging turnbuckles.

With the rear seat bottom folded forward, the rear seat back may be folded forward by: first, unsnapping and removing the seat back cushions; and second, pulling up on the spring-loaded latches on each side of the fuselage behind the rear seat. These latches release the seat back to be folded forward and down. The rear seat back in this stowed position provides a large cargo area.



Front Seat Figure 1

25-1-0 Page 2 July 15/78



Rear Seat (Typical) Figure 2

> 25-1-0 Page 3 Dec 15/77

SEATS - MAINTENANCE PRACTICES

1. Front Seat Removal/Installation

A. Front Seat Removal

- (1) Locate mounting brackets beneath seat assembly.
- (2) Remove screws attaching mounting brackets to inner seat tracks.
- (3) Slide the seat aft. As the spacers on the inner track slide out of the slots at the rear of the mounting brackets, lift the seat out of the aircraft.

NOTE:

Front seat removal does not require removal of the front seat mounting brackets. If they are being removed, however, exercise caution in removing the bolts to prevent pulling rivnuts loose. Aircraft may have either LOCTITE applied to the bolt threads to prevent loosening or may have self-locking bolts. After the bolts are removed from the mounting bracket, remove the seat with the mounting bracket attached to the seat tracks.

B. Front Seat Installation

- (1) Slide the spacers on the inner tracks into the slots at the rear of the mounting brackets.
- (2) Install screws attaching mounting brackets to inner seat tracks.

2. Rear Seat Removal/Installation

A. Seat Back Removal

- (1) Slide front seats as far forward as possible.
- (2) Fold rear seat bottoms forward.
- (3) Unsnap seat back cushions and remove.
- (4) Remove screws from ring and clip assembly located on floor behind rear seat back.
- (5) Locate support at the bottom center portion of the seat back and remove bolt from support.
- (6) Remove attaching bolts from collar assemblies located at the hinge points on each side of the seat back and lift seat back out.

NOTE: It may be necessary to hold the collar assembly with a 7/8 inch open-end wrench while removing the attaching bolts.

B. Seat Bottom Removal

- (1) Fold seat bottom back to the sitting position.
- (2) Locate seat bottom supports on each side of the rear seat console. Remove bolts from supports.
- (3) Remove attaching bolts from collars assemblies located at the hinge points on each side of the seat bottom and lift seat bottom out.

NOTE: It may be necessary to hold the collar assembly with a 7/8 inch open-end wrench while removing the attaching bolts.

C. Rear Seat Installation

- (1) Seat Bottom Installation
 - (a) Slide front seats as far forward as possible.
 - (b) Align collar assemblies on each side of seat bottom with hinge holes in support bracket mounted to fuselage floor.
 - (c) Install bolts to the collar assemblies securing the seat bottom to the support bracket.

NOTE: It may be necessary to hold the collar assembly with a 7/8 inch open-end wrench white installing the attaching bolts.

- (d) Secure seat bottom supports on each side of rear seat console to fuselage floor structures.
- (e) Swing seat bottom forward and aft several times to ensure easy movement at hinge points.
- (2) Seat Back Installation
 - (a) Fold rear seat bottom forward.
 - (b) Align collar assemblies on each side of seat back with hinge holes in support bracket mounted to fuselage floor.
 - (c) Install bolts to the collar assemblies securing the seat bottom to the support bracket.

NOTE: It may be necessary to hold the collar assembly with a 7/8 inch open-end wrench while installing the attaching bolts.

- (d) At bottom center portion of seat back, secure seat back support to fuselage floor structure.
- (e) Install screws to ring and clip assembly securing support to floor behind seat back.
- (f) Swing seat back forward and aft several times to ensure easy movement at hinge points.
- (g) Snap in cushions to seat back.

SAFETY BELTS - DESCRIPTION/OPERATION

1. General

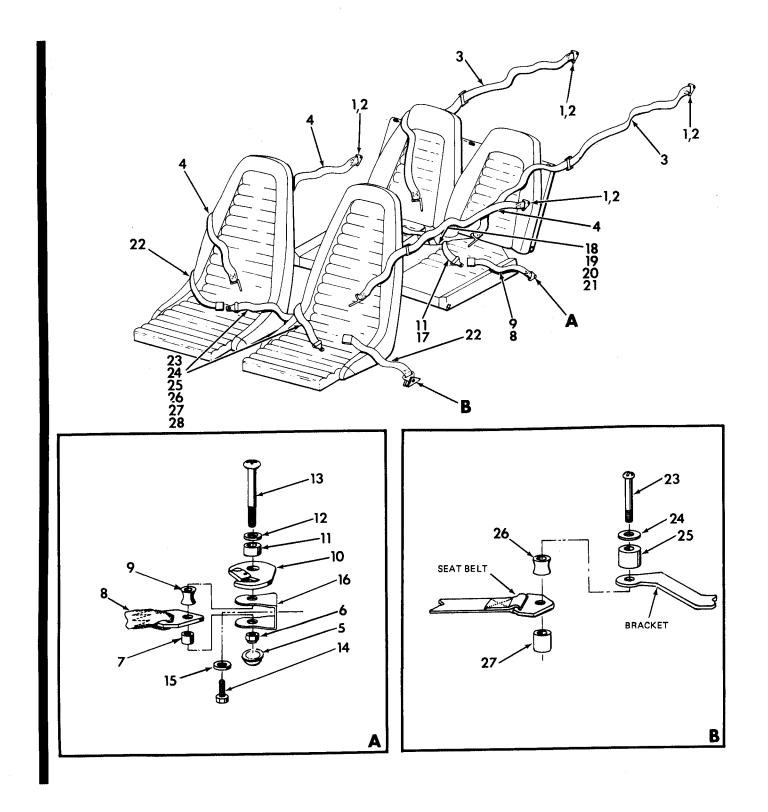
The seat safety belts for the AA-5, AA-5A, and the AA-5B consist of four lap straps and four shoulder harnesses. (See Figure 1.) The end fitting on each shoulder harness has a slit-opening thorough which the lap strap end fitting passes and engages the buckle receptacle. The lap strap and the shoulder harness may be lengthened or shortened by means of an adjustment slide buckle.

2. Shoulder Harnesses

The rear seat shoulder harnesses are anchored to mounting plates located on the fuselage side walls just aft of the baggage compartment. The front seat shoulder harnesses are anchored to mounting plates located on the fuselage side walls just aft of the front seats. When not in use, the shoulder harness straps are held in place by clips mounted on the fuselage side walls.

3. Lap Belts

The rear seat inner lap belt assemblies are anchored to a bracket mounted to the fuselage assembly beneath the center bottom portion of the seat back. The rear seat outer lap belt assemblies are anchored to brackets mounted to the fuselage floor on the left and right outboard sides of the rear seat. The inner and outer lap belt assemblies for the front seats are anchored to brackets which are mounted to the floor and located to the left and right sides of each front seat assembly.



Lap Belts and Shoulder Harnesses Figure 1

25-2-0 Page 2 July 15/78

SAFETY BELTS - MAINTENANCE PRACTICES

- 1. Rear Seat Shoulder Harness Removal/Installation (See Figure 1.)
 - A. Rear Seat Shoulder Harness Removal
 - (1) Locate point at which rear seat shoulder harness is attached to fuselage side wall just aft of the baggage compartment.
 - (2) Remove screw (1) and spacer (2) securing harness end fitting to mounting plate. Remove rear seat shoulder harness (3).
 - B. Rear Seat Shoulder Harness Installation
 - (1) Align hole in harness end fitting with hole in mounting plate.
 - (2) Secure harness (3) end fitting to mounting plate with spacer (2) and screw (1).
- 2. Front Seat Shoulder Harness Removal/Installation (See Figure 1.)
 - A. Front Seat Shoulder Harness Removal
 - (1) Locate point at which front seat shoulder harness (4) is attached to fuselage side wall just aft of the front seats.
 - (2) Remove screw (1) and spacer (2) securing harness end fitting to mounting plate. Remove harness (4).
 - B. Front Seat Shoulder Harness Installation
 - (1) Align hole in harness (4) end fitting with hole in mounting plate.
 - (2) Secure harness end fitting to mounting plate with spacer (2) and screw (1).
- 3. Rear Seat Outer Lap Belts Removal/Installation (See Figure 1.)
 - A. Rear Seat Outer Lap Belts Removal
 - (1) Locate point at which rear seat outer lap belts are attached to brackets mounted to the fuselage floor on the left and right outboard sides of the rear seat.
 - (2) Remove plug (5), nut (6), spacer (7), belt end (8), spacer (9), latch hook (10), spacer (11), washer (12), and screw (13). If necessary to remove bracket (16), remove screw (14) and washer (15). Plug (5) is used on AA5-0406 and subsequent and AA5B-0001 and subsequent.
 - B. Rear Seat Outer Lap Belts Installation
 - (1) If bracket (16) was removed, reinstall with screw (14) and washer (15).
 - (2) Secure lap belt end fitting to bracket, aligning hardware in the following order: screw, washer, spacer, cargo latch hook (on aircraft having this hook installed), bracket, spacer, lap belt end fitting, spacer, bracket nut, and plug (only on AA5-0406 and subsequent; and AA5B-0001 and subsequent).
- 4. Rear Seat Inner Lap Belts Removal/Installation (See Figure 1.)
 - A. Rear Seat Inner Lap Belt Removal
 - (1) Fold rear seat bottom forward and unsnap and remove seat back cushions.
 - (2) Locate bracket mounted to the fuselage assembly beneath the center bottom portion of the seat back. Locate point at which rear seat inner lap belts (17) are attached to bracket.
 - (3) Remove nut (18), washer (19), spacer (20), and bolt (21). Remove inner lap belts (17).

- B. Rear Seat Inner Lap Belt Installation
 - (1) Align holes in lap belt end fittings with holes in bracket.
 - (2) Secure lap belt end fittings to bracket, aligning hardware in the following order: bolt, bracket, right lap belt end fitting, spacer, left lap belt end fitting, bracket, washer, and nut.
- 5. Front Seat Inner and Outer Lap Belt Removal/Installation (See Figure 1.)
 - A. Front Seat and Outer Lap Belt Removal
 - (1) Locate brackets which are mounted to the floor to the left and right sides of each front seat assembly, Locate point at which front seat lap belts (22 and 28) are attached to brackets.
 - (2) Remove screw (23), washer (24), spacers (25, 26, and 27). Remove sap belts (22 and 28).
 - B. Front Seat Inner and Outer Lap Belt Installation
 - (1) Place end fittings of lap belts (22) and (28) in position and install spacer (27), spacers (26 and 25), washer (24), and screw (23).

BAGGAGE STRAP ASSEMBLIES - DESCRIPTION

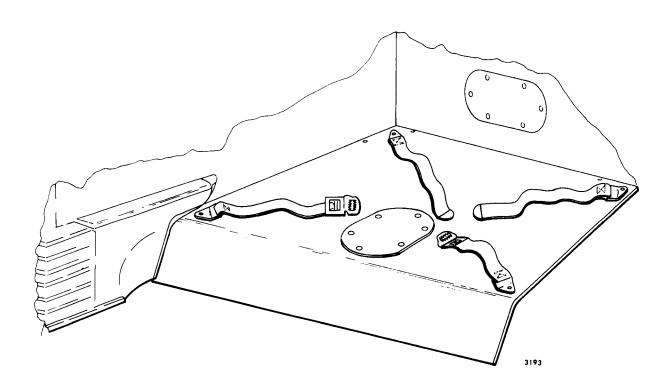
1. General

The baggage strapping consists of four (4) strap assemblies, each anchored to the corner of the baggage compartment floor (see Figure 201).

The straps are normally arranged in a crossed position for securing baggage. Each of the two (2) straps directly behind the rear seat is equipped with a buckle which accepts and clamps the strap anchored at the diagonally opposite corner of the baggage floor.

BAGGAGE STRAP ASSEMBLIES - MAINTENANCE PRACTICES

- 1. Baggage Strap Assembly Removal/Installation (See Figure 201.)
 - A. Baggage Strap Assembly Removal
 - (1) Fold rear seat bottom forward and fold rear seat back down.
 - (2) Remove baggage floor carpet.
 - (3) Remove inspection cover assembly to gain access to washer and nut for particular strap assembly being removed.
 - (4) Remove screw securing strap end fitting to baggage floor. Note the order in which the parts are aligned: screw, washer, bushing, washer and nut.
 - B. Baggage Strap Assembly Installation
 - (1) Secure strap end fitting to baggage floor, aligning the hardware in the following order: screw, washer, bushing, washer and nut.
 - (2) Install inspection cover assembly.
 - (3) Install baggage floor carpeting.



Baggage Strap Assemblies Figure 201

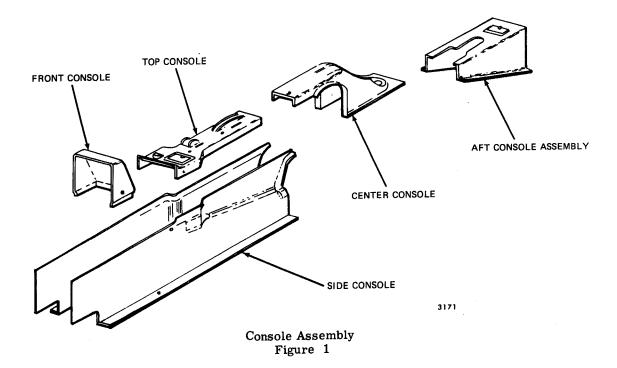
CONSOLE ASSEMBLY - DESCRIPTION

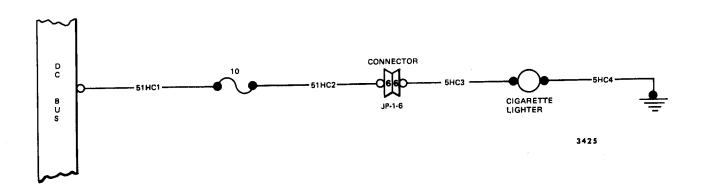
1. General

The console assembly is located between the front seats and consists of forward, top, side and aft Royalite panel sections surrounding the console frames (see Figure 1, Console Assembly). The console assembly contains the fuel gauges, fuel selector valve, removable ash tray, trim wheel, trim indicator, flap switch, flap indicator and pop-out cigarette lighter (see Figure 2, Cigarette Lighter Wiring Schematic). The console assembly also covers the control surface pulley groups in the cabin area.

The console sections can be removed individually or entirely depending on the nature of the repair being performed. Maintenance Practices in the following section presents removal and installation procedures for each console section and the items that can be serviced or inspected with that console section removed.

Limited inspection of components within the console can be accomplished by removing the ash trays and using a hand mirror.





 $\begin{array}{c} \textbf{Cigarette Lighter Wiring Schematic} \\ \textbf{Figure 2} \end{array}$

CONSOLE ASSEMBLY — MAINTENANCE PRACTICES

1. Console Assembly Removal/Installation

- A. Forward (Front) Console Removal
 - (1) Remove fuel selector handle insert to gain access to screw securing handle to handle shaft. Remove screw and lift handle off.
 - (2) Remove upper and lower forward console panel screws and remove panel.
- B. Top Console Removal

NOTE: Removal of the top console section allows access to trim wheel and flap switch for repair work.

- (1) Remove flap switch handle by rotating it counterclockwise.
- (2) Remove screws securing microphone bracket to console and remove bracket.
- (3) Remove ash tray from console.
- (4) Remove cigarette lighter base from console and disconnect wire from lighter.
- (5) Remove screws around side of top console and remove console.
- C. Aft Console Removal

NOTE: Removal of the aft console cover provides access to the aileron and elevator turnbuckles.

- (1) Unsnap or pull Velcro apart on rear floor carpet around console.
- (2) Remove aft console attach screws and remove aft console.
- D. Side Console Removal

NOTE: Removal of console side panels provides access for inspection and servicing of the pulley groups, trim wheel and indicator, and flap switch and indicator.

NOTE: Removal of front seats will provide easier access to side console panels.

- (1) Unsnap or pull Velcro apart on floor carpet around console.
- (2) Remove screws securing console panel to floor. If top console has not been removed, also remove screws securing side panel to top console.
- (3) On aircraft having microphone jack on side console, remove mounting nut from jack.
- (4) Remove side console panel. If top console has not been removed, remove the side panel by pulling bottom out and down to disengage the upper edge of panel from under the flange on the top cover.
- E. Side Console Installation

NOTE: If top console panel is already installed, be sure the upper edge of side panel is inserted between the metal console frame and the flange on top console panel.

(1) Install screws securing side panel to the floor and top console.

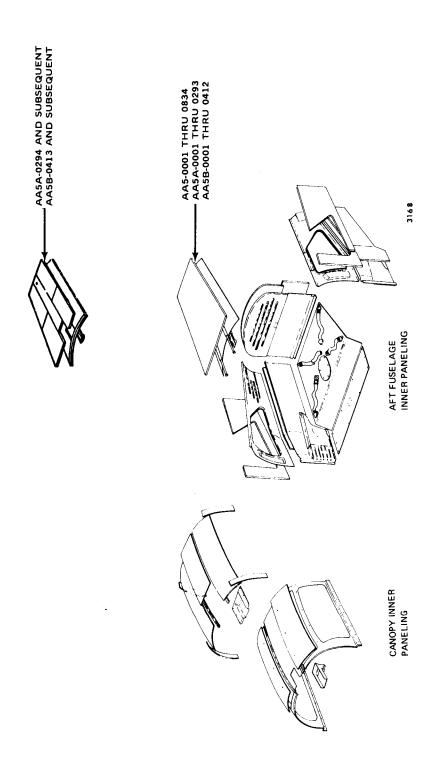
- (2) Snap floor carpet to floor.
- F. Aft Console Installation
 - (1) Install screws securing aft console to floor.
 - (2) Snap floor carpet to floor.
- G. Top Console Installation
 - (1) Align top console panel with metal console frame.
 - (2) Install screws around side flange of top console.
- H. Forward Console Installation
 - (1) Install upper and lower forward console frame.
 - (2) Install screw mounting fuel selector handle to handle shaft.
 - (3) Replace fuel selector handle insert.

CANOPY AND AFT FUSELAGE INNER TRIM PANELING AND AFT FUSELAGE MOULDING - DESCRIPTION

1. General

The canopy inner paneling and aft fuselage mouldings consist of a thermo-plastic material and serve as trims around the canopy and aft fuselage windows (see Figure 1).

The aft fuselage inner paneling consists of a thermo-plastic material which extends across the lower section of the aft fuselage, including the baggage door.



Inner Paneling Figure 1

CANOPY AND AFT FUSELAGE INNER TRIM PANELING AND AFT FUSELAGE MOULDING — MAINTENANCE PRACTICES

1. Canopy Inner Trim Paneling — Removal/Installation

- A. Canopy Inner Trim Paneling Removal
 - (1) Remove canopy. (See Chapter 52.)
 - (2) Drill out three rivets toward top of forward canopy bow.
 - (3) Remove remaining five screws from forward canopy bow.
 - (4) On the outside of the canopy, remove the bottom row of screws.
 - (5) Drill out rivets securing side panel to back flange of canopy and pull panel out.
- B. Canopy Inner Trim Paneling Installation
 - (1) If new panel is to be installed, align plastic trim panel to inside of canopy and drill out holes needed for screws and rivets. If required, trim panel for proper fit. Insert panel flange beneath forward canopy bow.
 - (2) Install screws to secure panel to bottom edge of canopy.
 - (3) Install screws to forward canopy bow to secure flange of panel.
 - (4) Install rivets securing flange of panel to top portion of forward canopy bow.
 - (5) Install rivets securing side panel to back flange of canopy.
 - (6) Install canopy. (See Chapter 52.)

2. Aft Fuselage Moulding — Removal/Installation

- A. Aft Fuselage Moulding Removal
 - (1) Remove bottom four screws on aft fuselage bow.
 - (2) Remove 12 screws from panel around window edges and pull panel out.
- B. Aft Fuselage Moulding Installation
 - (1) If new moulding is to be installed, align moulding to inside of aft fuselage and drill out holes needed for screws. If required, trim panel for proper fit. Insert moulding flange beneath aft fuselage bow.
 - (2) Install screws to aft fuselage bow to secure flange of moulding.
 - (3) Install 12 screws securing moulding to flanges around window edges.
- 3. Aft Fuselage Inner Trim Paneling Removal/Installation
 - A. Aft Fuselage Inner Trim Paneling Removal
 - (1) Remove upholstery side paneling in front seat cabin area by removing screws securing upholstery to fuselage.
 - (2) Fold back seat bottom section forward to gain access to screws securing panel to metal flange. Remove screws.

- (3) Remove bolt securing front shoulder harness end fitting to mounting bracket.
- (4) Remove screws attaching air outlet vent to side panel and remove vent.
- (5) At the rear section of aft fuselage paneling, pull panel down and out.
- (6) At forward section of aft fuselage paneling, pull panel from beneath aft fuselage moulding.
- (7) Pull paneling out and up to remove paneling from shoulder harness mounting bracket.
- (8) If baggage door inner panel is to be removed, remove screws attaching panel to baggage door.
- B. Aft Fuselage Inner Trim Paneling Installation
 - (1) If new paneling is to be used, drill out holes needed for screws.
 - (2) Fit paneling over shoulder harness mounting bracket and under back seat latch.
 - (3) Place top edge of paneling beneath aft fuselage moulding.
 - (4) Install screws securing air outlet vent to side panel.
 - (5) Install bolt securing front shoulder harness end fitting to mounting bracket.
 - (6) Install screws securing bottom of panel to metal flange on floor.
 - (7) Install screws securing upholstery side paneling to fuselage.
 - (8) If baggage door inner panel is to be installed, install screws attaching panel to baggage door.

MISCELLANEOUS FURNISHINGS - DESCRIPTION

1. Carpeting

The flooring in the cabin area and in the baggage compartment is covered with carpeting which is secured to the floor with snap attachments or Velcro allowing easy removal and replacement. The carpeting just below the side trim panels is secured to the forward and aft cover assemblies with an adhesive glue. An adhesive glue application is also used to secure carpeting to the aft console frame. Spots or stains on carpeting may be removed with a household spot remover, used sparingly.

2. Panel Upholstery

The side paneling in the front seat cabin area consists of a vinyl/carpet combination. The paneling is installed to the side fuselage with screws. The vinyl portions of the paneling may be cleaned with a damp cloth. Spots and stains on carpet portions of the paneling may be removed with a household spot remover, used sparingly.

3. Hatshelf

Aircraft AA-5-0406 and subsequent and Aircraft AA-5B-0001 and subsequent are furnished with a hatshelf installation located just aft of the baggage compartment.

4. Armrests

The front seat armrests are located on each fuselage side trim panel. The rear seat armrests are attached to the left and right aft panels.

5. Glareshield and Deck Assemblies

The glareshield and deck assemblies are mounted to the top of the instrument panel and supported by the instrument panel brace and left and right angle structures. The deck assembly houses defroster outlet assemblies and speaker assemblies. The glareshield and deck assemblies may be removed by removing the attaching screws.

6. Headliners

Headliner panels for the canopy section are located on each side of center cover section. These headliner panels are permanently affixed to the canopy. The headliner for the aft fuselage overhead section is attached to metal tubes which are inserted into the frame structures on the front and aft mouldings. The headliner in the aft overhead section may be removed by removing the dome assembly and the outer frame on the front moulding and pulling the tubes from the front and aft frames.

7. Sun Visor Assembly

On Aircraft AA-5A-0001 and subsequent and on Aircraft AA-5B-0111 and subsequent, optional plexiglass sun visor assemblies are attached to the left and right hand sides of the forward canopy panel. When not in use visors may be folded back to the side of the canopy.

8. Map Lights

See Chapter 33 for Description/Operation of map light assemblies.

9. Fire Extinguisher

A fire extinguisher is available as optional equipment. On some aircraft, the fire extinguisher is installed in a bracket mounted on the seat bottom and some are in a bracket attached to the floor of the aircraft.

10. Storage Box — Approach Plates and Owner's Manual

A storage box is available as optional equipment. The box is a 6 inch by 10 inch box and is installed on the aircraft floor below the front seats. The storage box provides convenient storage for the Pilot's Operating Handbook and approach plates.

INTERIOR CARE - MAINTENANCE PRACTICES

1. Cleaning

Clean the interior regularly with a vacuum cleaner to remove dust and loose dirt from the upholstery and carpet.

CAUTION: THE APPLICATION OF CERTAIN CLEANING AGENTS, PROTECTIVE COATINGS, STAIN REPELLENTS, AND OTHER CHEMICAL COMPOUNDS MAY REDUCE THE FIRE RETARDANT
QUALITIES OF INTERIOR FABRICS. CONSULT THE COMPOUND MANUFACTURER BEFORE
USE.

If liquid (coffee, etc.) is spilled on the upholstery or carpet, blot it up promptly with cleansing tissue or rags. Continue blotting until no more liquid is taken up. Sticky materials may be scraped up with a dull knife, then cleaned up with a spot remover.

Oily spots may be cleaned with household spot removers, used sparingly. Before using any solvent, read the instructions on the container and test it on an obscure place on the fabric to be cleaned. Never saturate the fabric with a volatile solvent; it may damage the padding and backing materials.

CAUTION: NEVER USE GASOLINE, BENZINE, ALCOHOL, ACETONE, CARBON TETRACHLORIDE, FIRE EXTINGUISHER FLUID, ANTI-ICE FLUID, LACQUER THINNER, OR GLASS CLEANER TO CLEAN PLASTIC. THESE MATERIALS WILL DAMAGE THE PLASTIC AND MAY CAUSE SEVERE CRAZING.

The plastic trim headliner, instrument panel, and control knobs need only be wiped off with a damp cloth. Oil and grease on the control wheel and control knobs can be removed with a cloth moistened with Stoddard solvent.

CHAPTER 27

FLIGHT CONTROLS

TABLE OF CONTENTS

NUMBER		PAGE
27-0	FLIGHT CONTROLS	
	Description/Operation	1
	General	. 1
	Lateral Control System	1
	Directional Control System	. 1
	Longitudinal Control System	1
	Flap System	. 1
	Gust Lock	1
27-1-1	AILERON & TAB	
	Description/Operation	1
	General	1
	Maintenance Practices	301
	Servicing	301
	Lubrication of Aileron Bearings and Control Column	301
	Removal/Installation	401
	Aileron and Torque Tube Removal/Installation	401
	Aileron Bearing Removal/Installation	401
	Aileron Bearing Wear Limits	404
	Aileron Cable Removal/Installation	404
	Control Column Removal/Installation	406
	Control Column Disassembly/Assembly	408
	Aileron Removal/Installation	413
	Aileron Control Horn and Torque Tube Repair	413
	Adjustment/Test	501