

CHAPTER 15**FURNISHINGS**

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CHAPTER 15

FURNISHINGS

15.000 Description

The seats are not adjustable but, on later aircraft, pilot-side pedals are adjustable. Each helicopter is supplied with a cushion which can be placed behind the pilot to position him farther forward. This allows shorter pilots to reach the pedals, the cyclic grip in its most forward position, and the controls on the center console.

Each seat is equipped with a combined lap belt and inertia reel shoulder strap. The inertia reel is normally free but will lock if there is sudden movement as would occur in an accident.

Four- or five-point harnesses are optional for the front seats. The lap belts on these harnesses should be adjusted to eliminate slack. On five-point harnesses, the lower strap should be adjusted as necessary to ensure that the buckle does not interfere with the cyclic grip in the full aft position. Later harnesses are equipped with a webbing stop located above the inertia reel. The stops limit shoulder strap retraction of the harnesses and should be adjusted so the straps are comfortable without excessive slack.

A baggage compartment is located under each seat. Seat cushions hinge forward for access. (R44 Cadet: Two additional compartments are located under the rear deck. The rear deck covers hinge forward and have lockable latches.)

Optional anchor loops located in the cabin ceiling above the door posts provide attachment points for a safety tether for equipment or occupants during doors-off operation.

Refer to § 15.700 for description of optional cyclic guard.

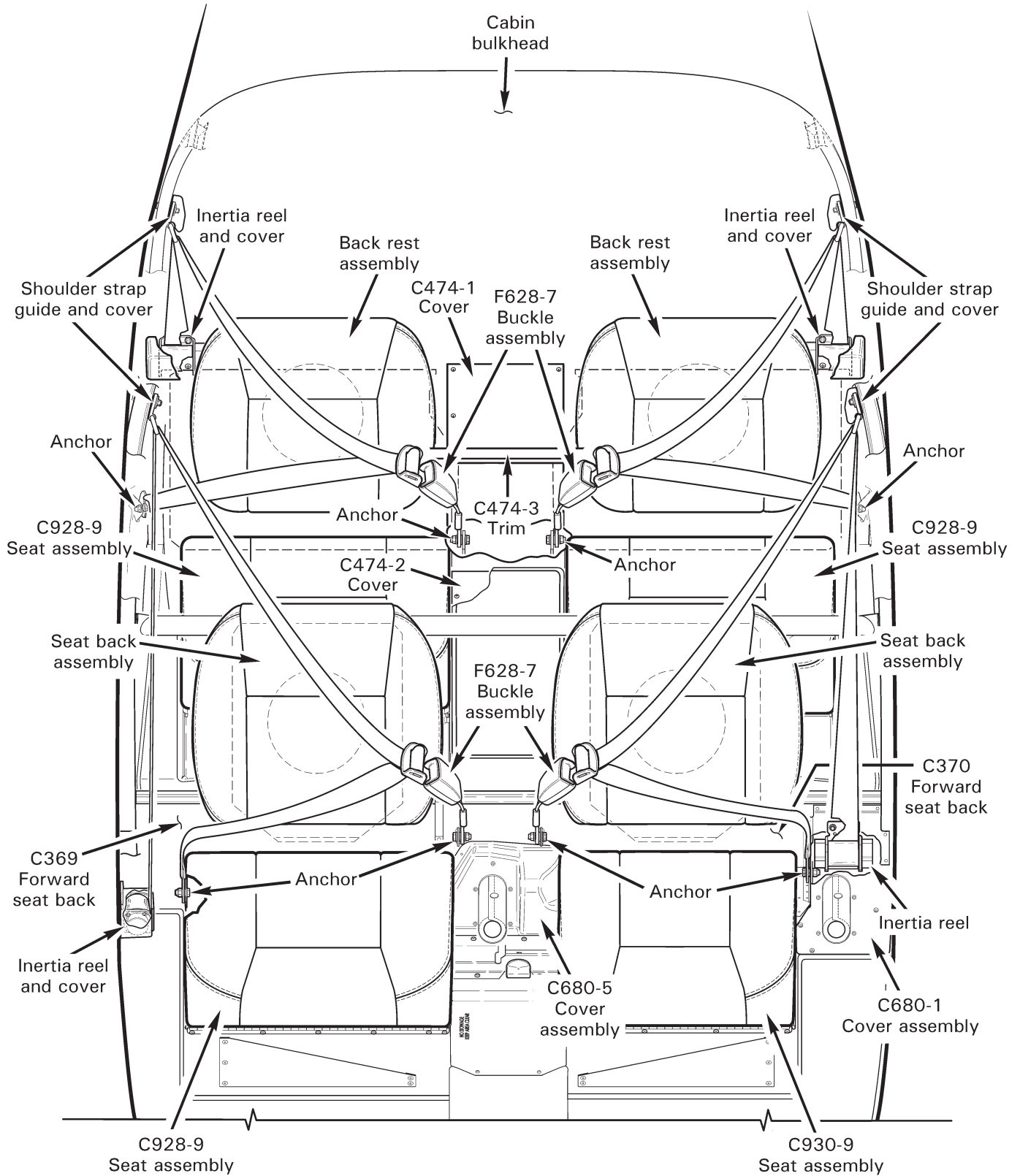


FIGURE 15-1 SEAT HARNESSSES, SEAT ASSEMBLIES, AND BACK RESTS

15.100 Seat Harnesses

15.110 Standard Seat Harnesses

A. Removal

1. Refer to Figure 15-1. As required, remove C680-1 (removable collective) cover assembly. Hinge seat assembly forward.
2. Remove hardware securing F628-7 (or earlier C628-4) buckle assembly to inboard anchor. Remove hardware securing lap belt to outboard anchor.
3. Remove shoulder strap guide cover and remove hardware securing guide to door frame.
4. Remove inertia reel cover and remove hardware securing reel to cabin. Remove seat harness.

B. Installation

1. Refer to Figure 15-1. Install hardware securing inertia reel to cabin and install reel cover. Verify security.
2. Install hardware securing shoulder strap guide to door frame (forward seat harness: orient bolt head flats parallel to door post within 5°). Standard torque fastener per § 1.320. Install guide cover; verify security.
3. a. Rotate F628-7 buckle assembly 35°–40° forward; install hardware securing buckle assembly to inboard anchor. Standard torque fastener per § 1.320.
b. Install hardware securing C628-4 buckle assembly to inboard anchor. Standard torque fastener per § 1.320. Using a calibrated spring scale pulling on buckle slot, measure force required to rotate buckle assembly about its fastener. Force required to rotate buckle is 1.5–2.5 lb. If force is less than 1.5 lb., replace A041-6 spring washer or increase spring washer height by slightly bending and repeat step.

CAUTION

Verify no sharp edges or burrs on buckle assembly locking bar or latch plate.

4. Ensure belt is not twisted; install hardware securing lap belt to outboard anchor. Standard torque fastener per § 1.320.
5. If removed, install C680-1 (removable collective) cover assembly. Hinge seat assembly aft.

15.120 Optional Five- and Four-Point Seat Harnesses

A. Removal

1. As required, remove C680-1 (removable collective) cover assembly. Hinge seat assembly forward.
2. Remove hardware securing five- or four-point harness assembly lap belts to inboard and outboard anchors. Remove hardware securing fifth-point belt to seat box, as required.
3. Remove hole plugs secured to forward side of back rest panel.
4. Remove inertia reel cover and remove hardware securing reel to cabin. Pull connector and buckle assembly through support tube padding cover strap and remove harness.

B. Installation

1. Install hardware securing five- or four-point harness assembly inertia reel to cabin and install reel cover. Install hole plugs in forward side of back rest panel. Verify security.
2. Pull connector and buckle assembly through support tube padding cover strap.
3. Ensure belt is not twisted; install hardware securing lap belts to inboard and outboard anchors. Standard torque fasteners per § 1.320. Verify security.
4. If removed, install C680-1 (removable collective) cover assembly. Hinge seat assemblies aft.

15.200 Seat Assemblies, Aft Seat Seat Back Assemblies, & Back Rest Assembly Replacement**15.210 Seat Assemblies****A. Removal**

1. Forward Seats: If heated seats are installed, turn battery switch off and pull SEAT HEATERS circuit breaker (10 amp) on circuit breaker panel. Disconnect F940-3 wire harness from F941-1 module assembly wiring at connector.
2. Refer to Figure 15-1. Remove hardware securing seat assembly hinge to seat box and remove seat assembly.

B. Installation

1. Forward Seats: If heated seats are installed, turn battery switch off and pull SEAT HEATERS circuit breaker (10 amp) on circuit breaker panel.
2. Refer to Figure 15-1. Position seat assembly on seat box and install hardware securing hinge to seat box. Verify security.
3. Forward Seats: If heated seats are installed, connect F940-3 wire harness to F941-1 module assembly wiring at connector. Verify security. Push in circuit breaker on circuit breaker panel and turn battery switch on. Verify proper function of switches at control panel. Verify temperature setting system functionality by toggling between high/low/off heat positions.

15.220 Aft Seat Seat Back Assemblies**A. Removal**

1. Refer to Figure 15-1. Remove hardware securing C474-1 cover, C474-3 trim, and C474-2 cover to cabin. Remove covers and trim.
2. Remove hardware securing seat back assembly to cabin bulkhead. Remove seat back assembly.

B. Installation

1. Install seat back assembly and install hardware securing seat back assembly to cabin bulkhead. Verify security.
2. Install C474-1 cover, C474-3 trim, and C474-2 cover, and install hardware securing covers and trim to cabin. Verify security.

15.230 Back Rest Assembly Replacement

A. Forward Back Rest Assembly

1. If heated seats are installed, turn battery switch off and pull SEAT HEATERS circuit breaker (10 amp) on circuit breaker panel. Disconnect F940-3 wire harness from F939-2 pad assembly wiring at connector.
2. Refer to Figure 15-1. Drill out rivets securing back rest assembly cushion to back rest panel and remove cushion. Deburr holes.
3. Remove old adhesive residue from back rest support tube with plastic wedge. Wipe surface with a clean cloth, wet with acetone.
4. Center and straighten new cushion on back rest panel. Match drill cushion through back rest panel #30 holes and deburr holes. Clean up debris.
5. Attach cushion to back rest panel with rivets. Verify security.
6. Apply B270-18 adhesive to underside of cushion flap and to mating portion of support tube. Pull flap around tube, smooth wrinkles, and trim excess flap. Remove excess adhesive prior to curing.
7. If heated seats are installed, push in circuit breaker on circuit breaker panel and turn battery switch on. Verify proper function of switches at control panel. Verify temperature setting system functionality by toggling between high/low/off heat positions.

B. Aft Back Rest Assembly

1. Remove aft seat seat back assembly per § 15.220 Part A.
2. Drill out rivets securing back rest assembly cushion to seat back panel and remove cushion. Deburr holes.
3. Center and straighten new cushion on seat back panel. Match drill cushion thru seat back panel #30 holes and deburr holes. Clean up debris.
4. Attach cushion to seat back panel with rivets. Verify security.
5. Install back rest assembly per § 15.220 Part B.

15.240 Heated Seats

A. Description

Heated seat bottoms and backrests for the forward seats are an option. Switches to control low and high heat settings for both heated seats are located on the panel above the right-side collective boot.

The seat heaters operate only when the alternator switch is in the ON position to reduce the likelihood of inadvertently draining the battery before the engine is started.

B. Schematics

Refer to Figure 14-39 for heated seats installation electrical schematic.

C. Removal and Installation

Seat Assemblies

Remove and install seat assemblies per § 15.210.

(Circuit Board) Module Assembly Replacement

1. Remove seat assembly per § 15.210 Part A.
2. Disconnect F940-3 harness from F941-1 module assembly at connector.
3. Drill out rivets securing module to seat assembly pan and remove module. Clean up debris.
4. Cleco (sheet metal fastener) new module to seat assembly pan. Progressively remove clecos and install rivets securing module to pan. Verify security.
5. Connect F940-3 harness to module at connector. Verify security.
6. Install seat assembly per § 15.210 Part B.

D. Every 100-Hour / Annual Inspection or Troubleshooting

1. Open circuit breaker panel and applicable access panels.
2. Verify correct fuses are installed in circuits: F940-6 harness assembly requires (2) AGC-5 fuses, one for each heated seat.
3. Inspect condition of and verify no obvious damage to F941-1 module assemblies, F940-5 switch assembly, wire harnesses, copper bus bars, circuit breaker, or circuit breaker wiring. Verify no loose, chafed, or broken wires or terminals. Verify no evidence of arcing. Verify installed equipment security.
4. Secure circuit breaker panel and removed access panels.
5. Verify proper function of switches at control panel. Verify temperature setting system functionality by toggling between high/low/off heat positions.

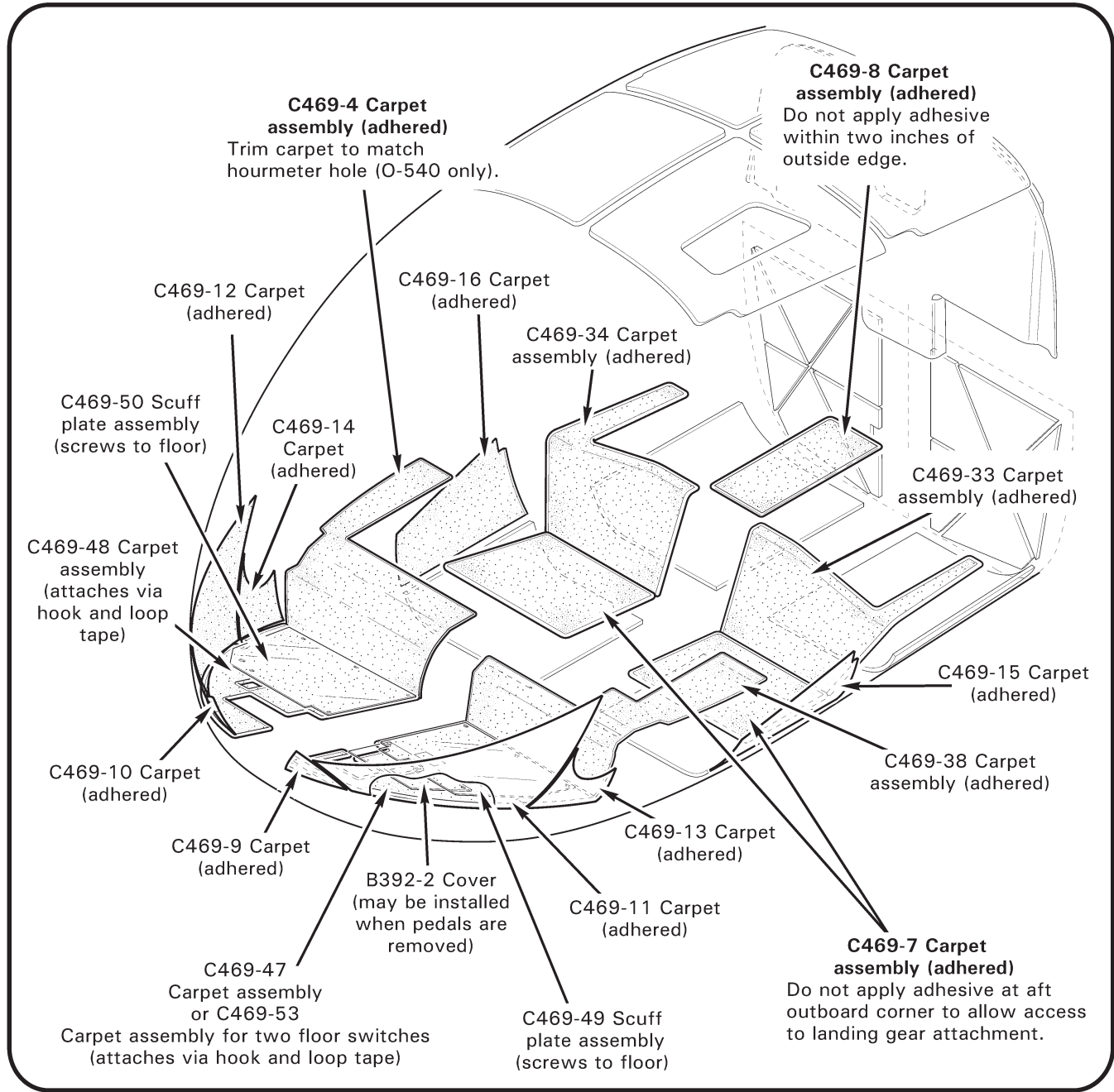


FIGURE 15-2 CARPET

15.300 Carpet15.310 Forward Cabin Floor Carpet**A. Removal and Installation**

1. Refer to Figure 15-2 (observe notes for specific parts). Remove adjustable and/or removable pedals, as required. If installed, remove hardware securing B392-2 cover to cabin floor and remove cover.
2. Remove hardware securing scuff plates to floor and remove scuff plates. Detach carpet assembly from floor via hook and loop tape (Velcro).
3. Install carpet assembly, and attach carpet to floor via hook and loop tape.
4. Install scuff plates, and install hardware securing scuff plates to floor.
5. Install adjustable and/or removable pedals, as required. As required, install B392-2 cover, and install hardware securing cover to floor.

15.320 Adhered Carpet**A. Removal and Installation****WARNING**

Ensure adequate ventilation when using solvents and adhesives.

CAUTION

Use caution when removing adhered carpet if carpet is intended for reuse.

NOTE

Refer to Chapter 94 Cadet Version, as required.

1. Refer to Figure 15-2 (observe notes for specific parts). Starting at corners, gently peel back carpet by hand, or with a plastic wedge or putty knife. Dampen old adhesive with Dupont Prep-Sol (or equivalent) to facilitate removal.
2. Verify proper carpet fit and trim as required (do not trim carpet welt). Apply B270-8 adhesive to bonding surface and carpet backing. Press carpet to surface, smooth wrinkles, and remove excess adhesive prior to curing.

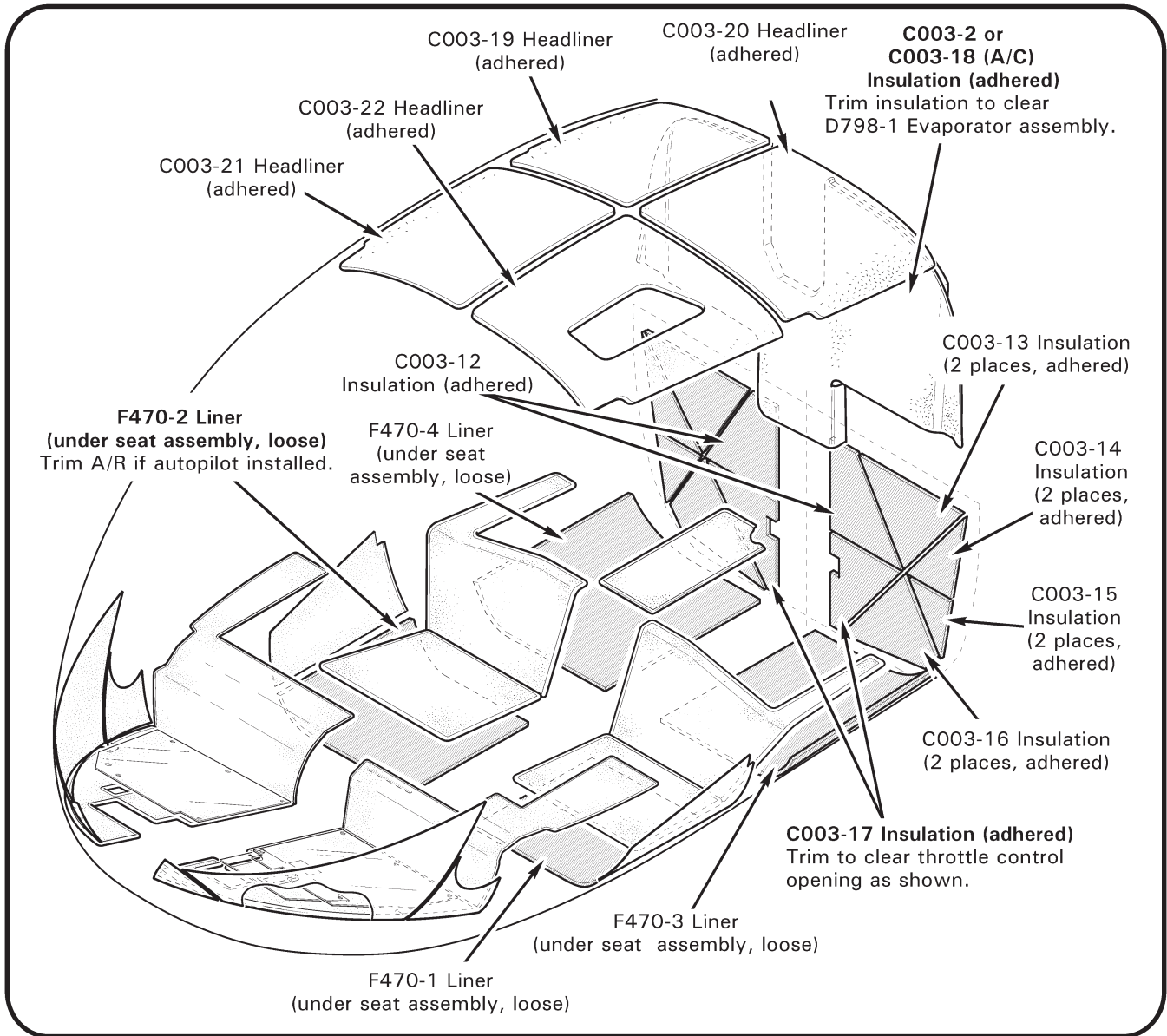


FIGURE 15-3 INSULATION AND HEADLINER

15.400 Insulation and Headliner Replacement**WARNING**

Ensure adequate ventilation when using solvents and adhesives.

NOTE

Use caution not to damage surface underneath insulation when removing insulation with tools. Insulation is installed with adhesive, except under seat assemblies. Order new insulation as required; reuse of removed insulation is not recommended.

NOTE

Refer to Chapter 94 Cadet Version, as required.

1. Refer to Figure 15-3 (observe notes for specific parts). Peel off insulation by hand. Using a plastic wedge or putty knife, carefully remove residual insulation and old adhesive. Wipe surface with a clean cloth, wet with acetone.
2. Verify proper insulation fit and trim as required. Apply B270-8 adhesive to bonding surface and insulation backing. Press insulation to surface, smooth wrinkles, and remove excess adhesive prior to curing.

15.500 General Maintenance**15.510 Pilot's Operating Handbook (POH) Strap Replacement****A. Removal**

Remove Pilot's Operating Handbook (POH). Drill out rivets securing POH retaining strap to cabin and remove strap. Deburr holes and clean up debris.

B. Installation

Cleco retaining strap to cabin. Progressively remove clecos and install rivets; verify security. Install POH.

15.520 License Holder Replacement**A. Removal**

Remove aircraft documents from license holder. Drill out rivets securing license holder to cabin and remove license holder. Deburr holes and clean up debris.

B. Installation

Cleco license holder to cabin. Progressively remove clecos and install rivets; verify security. Insert aircraft documents into license holder and tuck holder under windshield frame.

15.530 Map Pocket Replacement**A. Removal**

Remove contents. Drill out rivets securing map pocket to seat support. Remove pocket, washers, and retaining strips. Deburr holes and clean up debris.

B. Installation

1. Fold (long) outboard pocket edge around (long) A913-1 strip, align holes, and align holes with front of forward seat box. Cleco in place.
2. Pull material taut, fold (short) inboard pocket edge around (short) A913-2 strip, align holes, and align holes with front of forward seat box. Cleco in place. Trim excess material.
3. Progressively remove clecos and install washers and rivets.

15.600 Emergency Equipment

15.610 Emergency Locator Transmitter (ELT)

A. Description

The ELT activates when subjected to a significant change in velocity (as in a crash), by remote control switch located on the cyclic control panel, or by a switch on the ELT transmitter. Refer to § 37-90 for system description.

Refer to Kannad Aviation AF Integra / AF-H Integra or 406 AF-Compact/406 AF-Compact (ER) ELT Installation and Operation Manual for maintenance requirements and procedures.

Register an ELT when first purchased, when contact information changes, or when aircraft ownership, or tail number changes. Registration information is available online at: www.cospas-sarsat.org.

Dongles contain a memory chip that must be programmed with aircraft-specific information prior to installation for the ELT to function. The dongle may be removed and shipped to RHC or a Kannad Service Center for reprogramming. Kannad Aviation's Programming Data Sheet is available online at: <https://robinsonheli.com>.

B. Transmitter

Removal

1. Release D693-4 strap assembly or B359-2 (reusable) ty-rap.
2. Release Velcro strap; disconnect dongle and antenna wiring from transmitter at connectors and remove transmitter.

Installation

1. Connect dongle and antenna wiring to transmitter at connectors. Verify security.
2. Position transmitter on mounting bracket and secure with Velcro strap. Secure D693-4 strap assembly or install B359-2 (reusable) ty-rap around transmitter and bracket. Verify security.

C. Dongle

Removal

Cut and discard ty-raps as required, disconnect dongle from transmitter and airframe harness at connectors, and remove dongle.

Installation

1. Connect programmed dongle to transmitter and airframe harness at connectors.
2. Install ty-raps as required. Cinch ty-raps until snug without over-tightening, and trim tips flush with heads. Verify security.

15.620 Fire Extinguisher**CAUTION**

Fire extinguisher operating and storage temperature range is -40°F to 120°F (-40°C to 49°C). If conditions expose extinguisher to temperatures outside this range (e.g. long-term parking in direct sunlight in hot climates), remove extinguisher from helicopter and store it within the specified temperature range.

A. Inspection

Every 12 months: Remove B381-1 or B381-4 fire extinguisher from helicopter. Visually inspect extinguisher for damage or corrosion and ensure nozzle is unobstructed and tamper seal is intact. Ensure G654-15 or G654-23 decal (maintenance log) is legible; replace decal if required. Measure extinguisher weight using a 1-gram resolution (or better) scale and record weight on maintenance log; remove extinguisher from service if total weight falls below minimum allowable weight specified on decal.

Every 12 years: Remove B381-1 fire extinguisher from service at end of 12th year from date of manufacture (labeled on bottom).

B. Bracket Removal

1. Unlatch fire extinguisher bracket and remove extinguisher.
2. Remove hardware securing bracket to cabin and remove bracket.

C. Bracket Installation

1. Install hardware securing fire extinguisher bracket to cabin. If installing bracket to chin, select screw length as required to provide 0.00–0.06 inch thread exposure. Verify security.
2. Position fire extinguisher on mounting bracket and latch bracket.

D. Strap and Pocket Assembly Replacement

1. Detach strap assembly from pocket assembly, and detach pocket assembly straps via hook and loop tape. Remove fire extinguisher.
2. As required, open upper console. If installed, remove hardware securing HID landing light left ballast to left console and secure ballast away from workspace.
3. Drill out rivets securing strap assembly and pocket assembly to cabin or console and remove strap and pocket. Deburr holes and clean up debris.
4. Cleco new strap assembly and pocket assembly to cabin or console. Progressively remove clecos and install washers and rivets. Verify security.
5. If removed, install hardware securing HID landing light left ballast to left console. Verify security. If opened, close upper console.
6. Install fire extinguisher and attach pocket assembly straps around extinguisher via hook and loop tape. Route strap assembly through extinguisher head and attach to pocket assembly via hook and loop tape. Verify security.

15.700 Cyclic Guard

NOTE

Flight with handle assembly & mounting hardware removed or with handle in either position is permissible.

A. Description

The optional cyclic guard is a bar that extends from the inboard corner of the left front seat to the instrument console. It is intended to act as a barrier to help prevent inadvertent interference with the cyclic control. The guard also provides a hand grip for a passenger's right hand.

In order to access the under seat compartment with the guard installed, pull the silver spring knob at the forward end of the guard and allow the aft end to rotate down away from the seat hinge. To re-secure the guard, lift the aft end and allow the spring knob to lock back in place.

It is recommended that the guard be installed whenever a non-pilot passenger occupies the left front seat. A pilot flying from the left seat may find that the guard contacts the right leg when feet are on the pedals. The guard should be removed prior to flight if the pilot finds it objectionable.

B. Removal

1. With G721-1 handle assembly in locked (upper, extended) position, remove hardware securing handle to left hand forward seat.
2. Pull spring knob at forward end of handle assembly and slide handle off of G722-6 plate.
3. As required, open console assembly. Remove hardware securing plate to lower console and remove plate.

C. Installation

1. If G722-6 plate was removed, open console assembly. Position plate on lower console and install hardware; verify security. Close and secure console.
2. Pull spring knob at forward end of G721-1 handle assembly and slide handle onto plate until pin is in locked (upper, extended) position. Install hardware securing handle to left hand forward seat; verify security.
3. Actuate handle assembly and verify proper operation.

D. Scheduled Inspections

Refer to § 2.400 100-Hour/Annual Inspection.

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