

**R22-series Removable Collective Stick Upgrade Kit Instructions**

*Kit upgrades A758-2 co-pilot collective stick to A758-5 configuration by replacing external wire retainer with internal locking pins. Compliance with R22 Service Bulletin SB-98 is required and may be performed concurrently.*

**NOTE**

Visit [www.robinsonheli.com](http://www.robinsonheli.com) to verify kit instructions are current revision. Review instructions before installation; contact RHC Technical Support with questions. Verify kit contents match list; contact RHC Customer Service if parts are missing or damaged.

**CAUTION**

Upgraded co-pilot collective sticks are not interchangeable with current revision sticks. Replacement of either co-pilot or pilot collective stick requires replacement of both.

ITEM	PART NUMBER	KIT CONTENTS	QTY
1	KI-180Instr.	Kit Instructions .....	1
2	A795-7	Pin – Tube Locking .....	1
3	MS16562-33	Spring Pin .....	1

**Consumables**

Refer to R22 Maintenance Manual (MM) § 23-70 for approved materials list.

- Cotton ball
- MS20955C32 Safety wire (0.032-inch diameter)

**Special Tools**

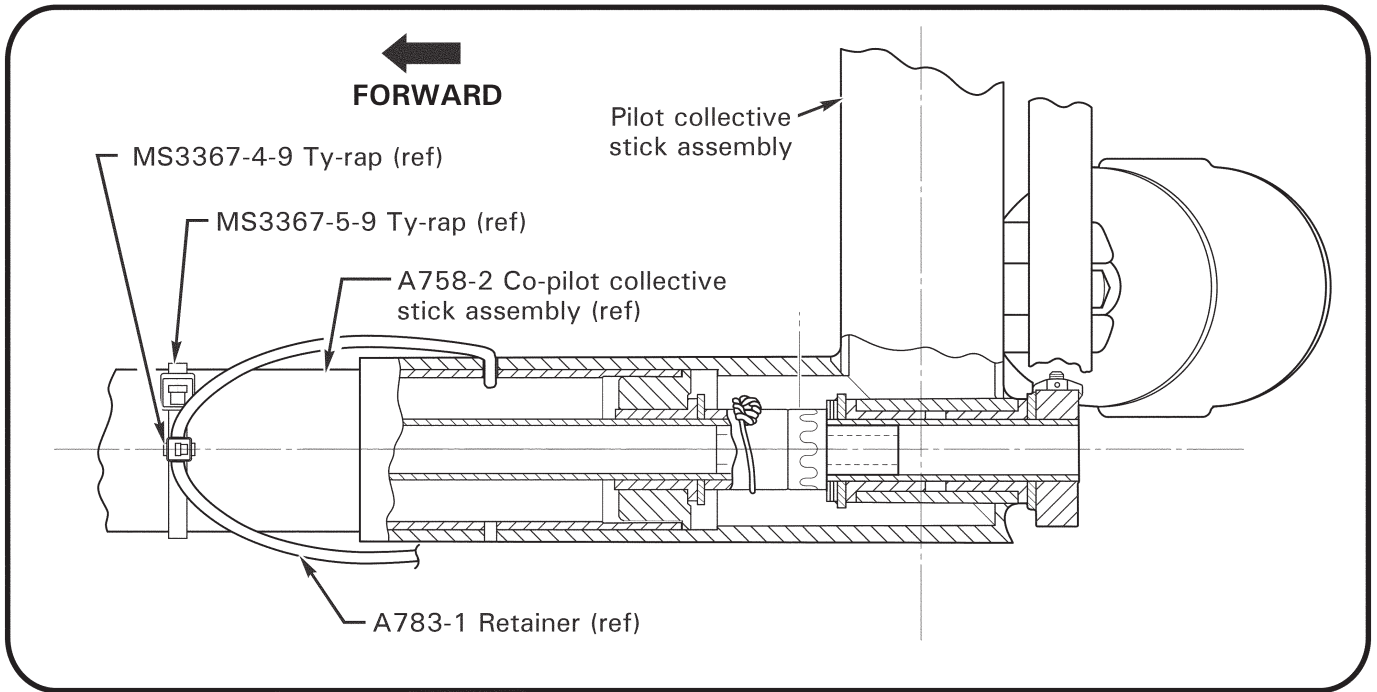
- Drilling and deburring tools

**Kit Instructions**

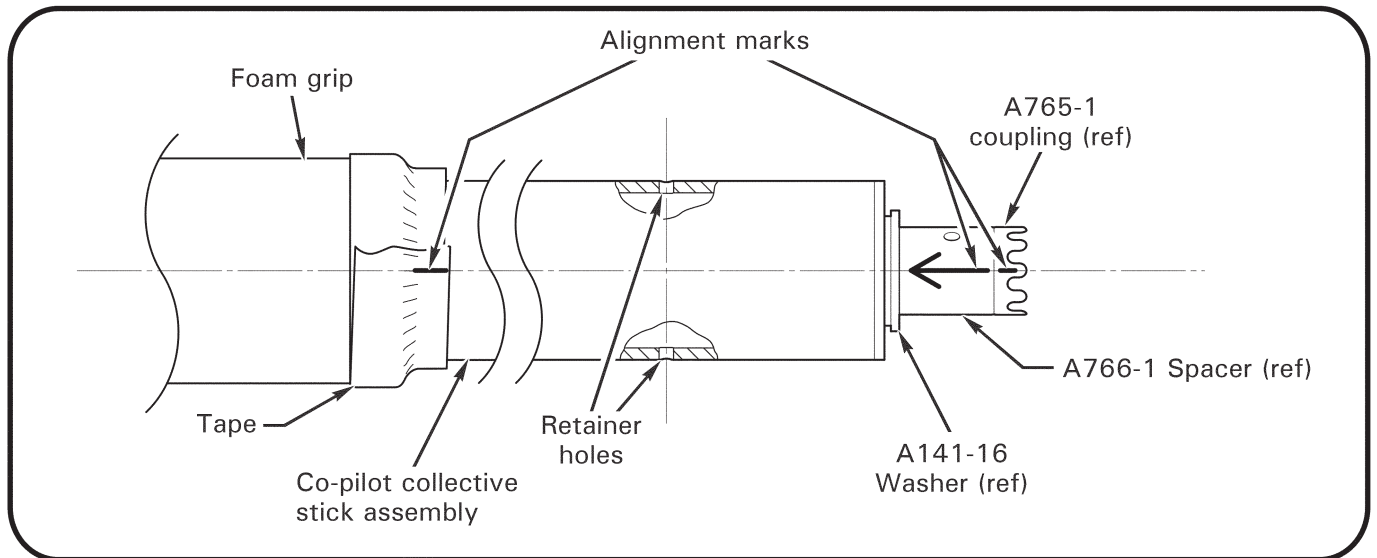
1. Turn battery switch OFF. Remove left seat back assembly, disconnecting governor controller, if installed on seat back.
2. Refer to Figure 1. Remove A758-2 co-pilot collective stick assembly from pilot collective stick assembly.
3. Cut and remove ty-raps securing A783-1 retainer to co-pilot collective stick. Discard retainer.
4. Refer to Figure 2. A765-1 coupling and A766-1 spacer are match-drilled to (throttle) torque tube assembly and must be marked prior to disassembly. Wrap tape around back aft edge of foam grip. Using permanent ink, place alignment marks on tape and across mating edges of A765-1 coupling and A766-1 spacer so they may be reassembled correctly.

**Kit Instructions (continued)**

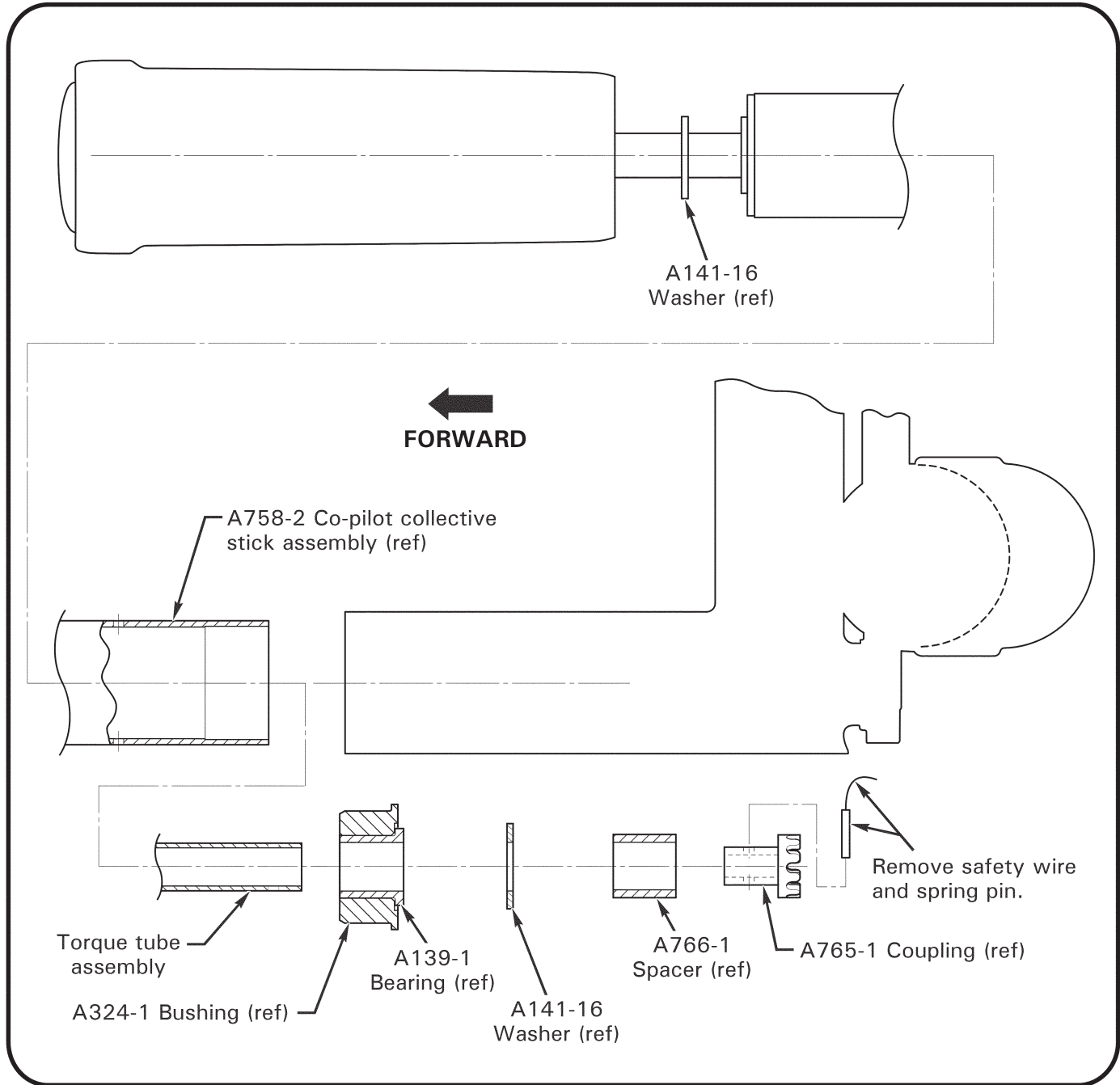
5. Refer to Figure 3. Remove and discard safety wire and spring pin (roll pin) securing A766-1 spacer and A765-1 coupling to torque tube. Remove and retain coupling, spacer, and washer. Remove any burrs on torque tube at spring pin holes to prevent damage to A139-1 bearings during removal of torque tube from collective stick.
6. Remove torque tube assembly and A141-16 washer (on torque tube under handle) from co-pilot collective stick. Remove aft A324-1 bushing from stick. Bushing is a snug fit with epoxy primer and may be driven out using a deburred 1/4-inch diameter metal rod about 18 inches long, inserted through forward bushing. Remove old primer from stick and bushing mating surfaces using an approved solvent and ScotchBrite® or 320-grit wet-or-dry abrasive paper.
7. Mask pilot collective sticks' receptacle with cotton ball (or equivalent), per Figure 4, to prevent contamination by drilling debris. Mask area under receptacle.
8. With decals facing up, insert co-pilot collective stick into receptacle. Align original 0.085–0.090 inch diameter holes by inserting an appropriately sized drill (typically a #43 or #44 drill) thru the outboard holes. Secure stick in place with tape per Figure 4.
9. Using original holes as pilots, drill 0.265–0.272 inch diameter hole thru inboard walls using appropriately-sized drill. Remove alignment drill from outboard holes and complete drilling of outboard 0.265–0.272 inch diameter hole from inboard side, again using original holes as pilots.
10. Remove tape and co-pilot collective stick. Deburr holes and remove all debris. Remove cotton ball (or equivalent).
11. Insert A795-7 pin into co-pilot collective stick with curved portion toward handle end. Ensure pin buttons snap into newly drilled holes, and can be freely depressed.
12. Refer to Figure 3. Install A324-1 bushing with wet primer.
13. From handle end, insert torque tube assembly (with A141-16 washer on tube under handle) thru bearings. Install retained washer, spacer, and coupling. Ensure marks on handle, spacer, and coupling align.
14. Refer to Figures 5 and 6. Carefully align spring pin holes and install new MS16562-33 spring pin. Verify no more than 0.010 inch axial play of torque tube assembly in bearings. Safety wire spring pin, trimming end of safety wire to no longer than 0.25 inch, then bend close to spacer. Verify throttle grip rotates smoothly.
15. Install removable co-pilot stick into pilot collective stick. Verify both retainer buttons snap freely into position to secure stick. Verify throttle grip rotates smoothly.
16. Install left seat back assembly. Connect governor controller, if disconnected.
17. Make appropriate maintenance record entries. No change to Weight and Balance Record is required.



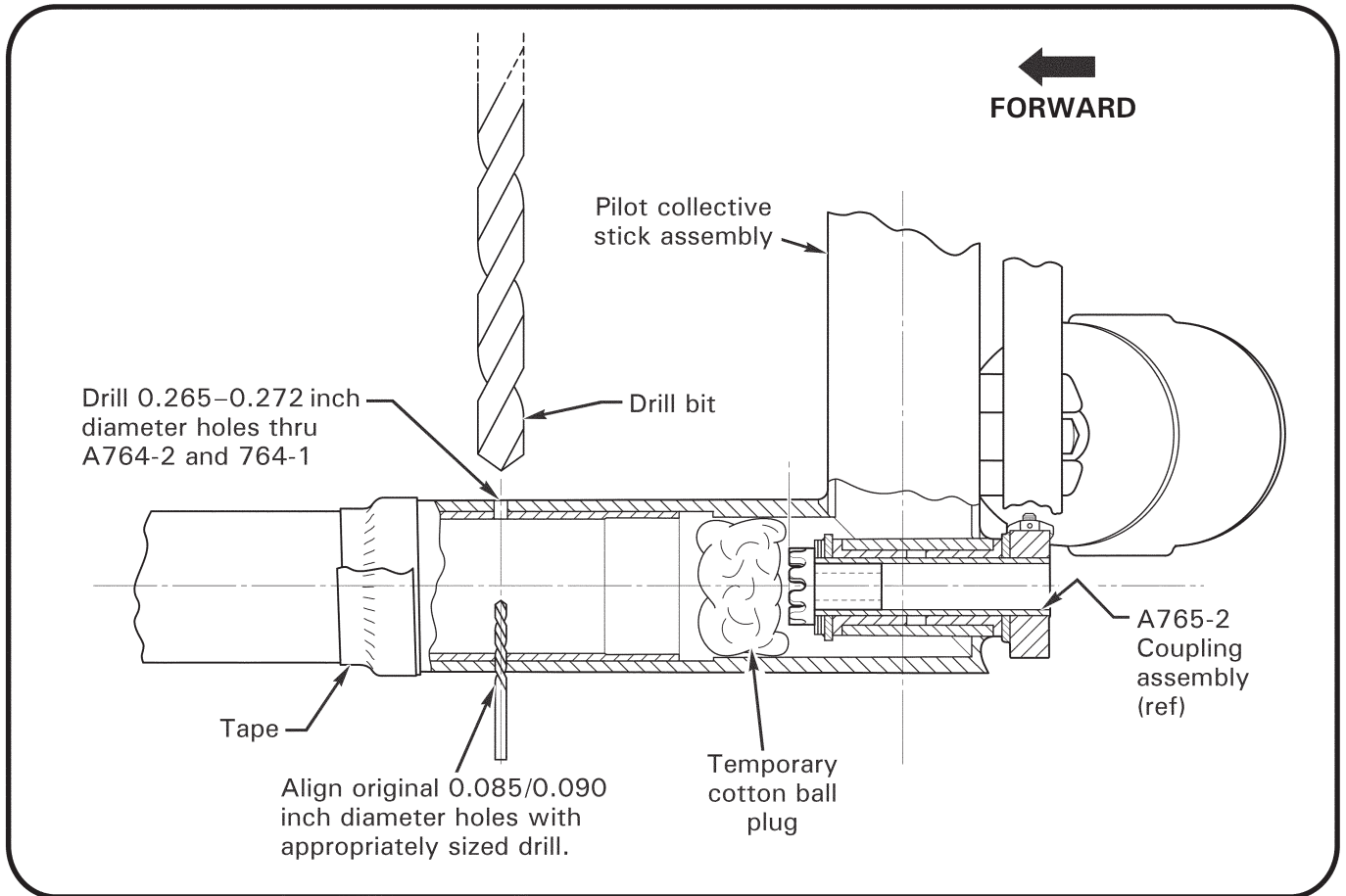
**FIGURE 1 A758 Collective stick assembly**  
(A758-2 with external wire retainer shown; view looking down)



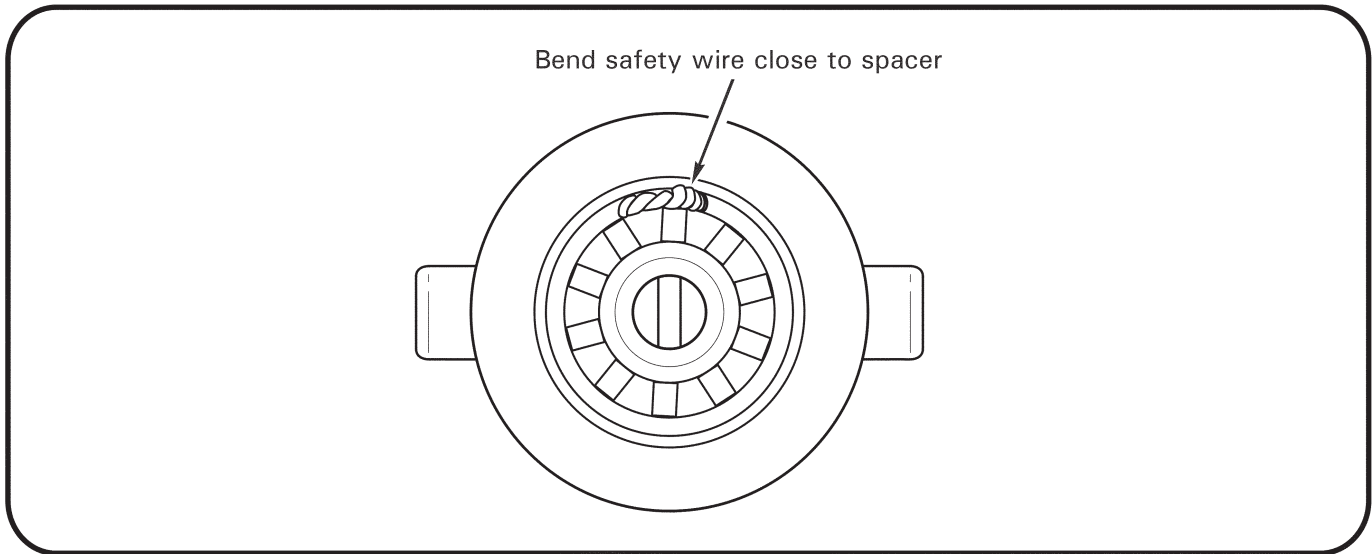
**FIGURE 2 A758-2 Co-pilot stick assembly**



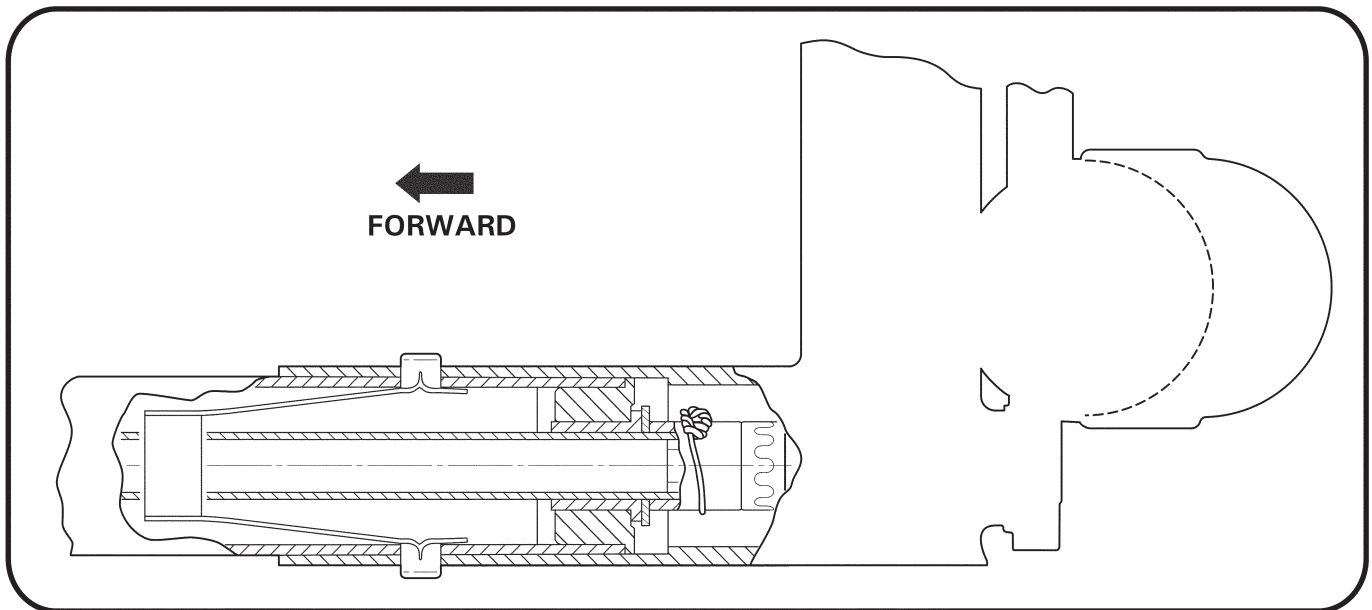
**FIGURE 3 Co-pilot stick assembly**  
(disassembly of components; view looking down)



**FIGURE 4 Set up for drilling A795-7 pin installation holes**  
(view looking down)



**FIGURE 5 Spring pin and safety wire installed**  
(view looking forward from aft end of co-pilot stick assembly)



**FIGURE 6 A795-7 tube locking pin installed**  
(completed upgrade; view looking down)