

**R22**

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**SERVICE BULLETIN SB-98**

**DATE:** 22 February 2008

**TO:** R22 Owners, Operators, and Service Centers

**SUBJECT:** Removable Collective Spring Pin

**ROTORCRAFT AFFECTED:** R22 Helicopters S/N 0002 thru 4231 with removable controls.

**TIME OF COMPLIANCE:** Within next 100 flight hours or by 31 May 2008, whichever occurs first.

**BACKGROUND:** RHC received a report of a failed spring pin on the removable collective stick causing the co-pilot to lose throttle control. This spring pin attaches the toothed coupling at the aft end of the stick to the throttle grip's internal torque tube. Original 0.094-inch diameter spring pins must be replaced with stronger 0.125-inch diameter spring pins.

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**COMPLIANCE PROCEDURE:**

1. Remove A758-5 co-pilot collective stick assembly. If stick is retained in helicopter by dual integral locking pins (buttons), proceed to step 2. If stick is retained in helicopter by an external wire retainer, upgrade is required; order modification kit P/N KI-180 from RHC Customer Service and install per kit instructions.
2. Measure spring pin diameter. If pin is 0.125-inch diameter and coupling is tight on throttle torque tube (firmly grasp coupling and rotate throttle grip in each direction with opposite hand), no pin replacement is required. If pin is 0.125-inch diameter and coupling is loose on torque tube, return removable collective stick to RHC for repair. If pin is 0.094-inch diameter, order MS16562-33 spring pin from RHC Customer Service and install per following steps.
3. Refer to figure on page 2. Immobilize throttle torque tube by wrapping collective stick and throttle grip together with several layers of masking tape.
4. Cut and remove safety wire from spring pin. Press out spring pin until it protrudes approximately 0.06 inch.
5. Mark coupling, spacer, and collective stick with alignment marks.
6. Install a 0.125-inch diameter cobalt drill in a drill press chuck and set spindle speed to approximately 1750 rpm.

**CAUTION**

Drill press is required; hand drilling is prohibited.

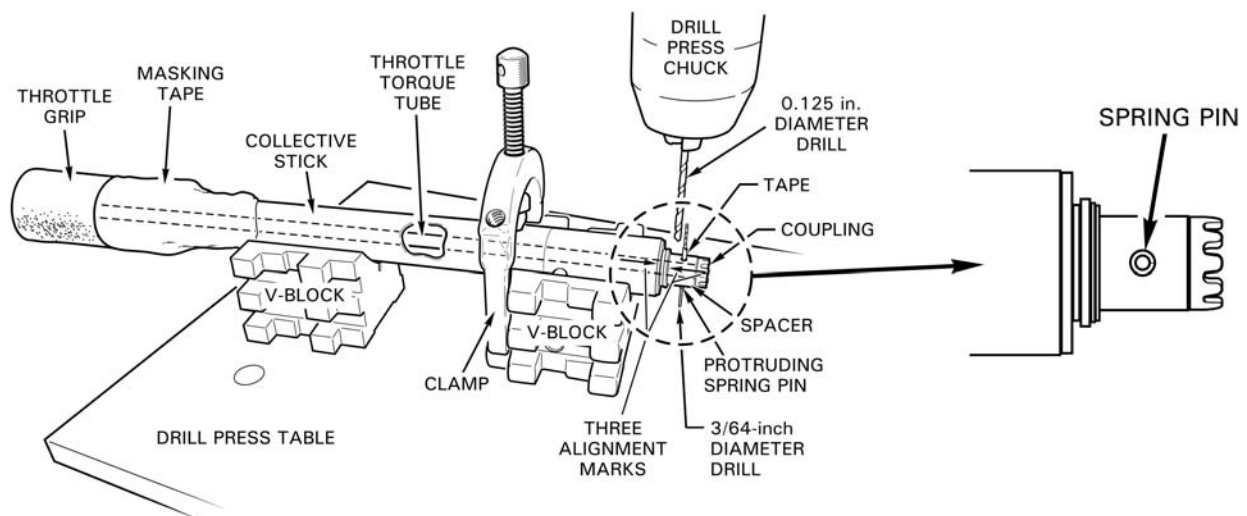
(OVER)

7. Place collective stick on V-blocks on drill press table with protruding spring pin pointed down. Install a small piece of tape on a 3/64-inch diameter drill approximately one inch from one end and insert drill in spring pin bore. Adjust collective stick position so 3/64-inch drill is parallel to drill press' 0.125-inch drill and clamp collective stick to V-block. Remove 3/64-inch drill from spring pin.
8. Align drill press' 0.125-inch drill with spring pin hole and drill completely through spacer; drill will push out old spring pin.
9. Confirm alignment marks are aligned. Insert new MS16562-33 spring pin through top hole. Press spring pin through spacer and coupling sufficiently to engage toothed coupling but without obstructing coupling bore.
10. Remove collective from V-blocks and deburr hole opposite spring pin. Remove all drilling debris, including debris from inside torque tube, using compressed air and/or flushing with no-residue solvent.
11. Press spring pin fully into position and verify coupling and spacer are tight relative to throttle torque tube. If there is any movement of coupling or spacer relative to torque tube, return removable collective stick to RHC for repair. Safety wire spring pin and bend pigtail flush against spacer.
12. Remove masking tape. Verify throttle rotates smoothly.
13. Install removable collective stick in helicopter and verify both locking pins engage holes to secure stick. Verify throttle operates smoothly.
14. Make appropriate maintenance record entries.

**Approximate Cost:**

Parts: No charge for MS16562-33 spring pin if ordered by 31 May 2008. Order must include helicopter serial number.

Labor: 1.0 hour.



THE DESIGN ENGINEERING ASPECTS OF THIS BULLETIN HAVE BEEN SHOWN TO COMPLY WITH APPLICABLE FEDERAL AVIATION REGULATIONS AND ARE FAA APPROVED.