



SCHWEIZER SERVICE BULLETIN

B-256.2*
11 June 1993

MANDATORY

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SUBJECT: INSPECTION OF CLUTCH CONTROL SPRING ASSEMBLY INSTALLATION

APPROVAL STATUS: MODIFICATION FAA APPROVED - THE FAA HAS DETERMINED THAT APPLICABLE PORTIONS OF B-256.2 MAY BE USED AS AN ACCEPTABLE ALTERNATE MEANS OF COMPLIANCE WITH AD 93-03-01 WHERE B-256.1 IS REFERENCED.

MODELS AFFECTED: ● PART I: All Model 269A, TH55A, 269A-1, 269B, and 269C Helicopters
● PART II: All Model 269A, TH55A, 269A-1, 269B Helicopters, and all Model 269C Helicopters prior to Serial Number 1632

TIME OF COMPLIANCE: ● PART I shall be accomplished prior to next flight (unless B-256 or B-256.1 has been complied with), and at each 100-Hour or 400-Hour Inspection (as applicable) thereafter.

● PART II shall be accomplished on all affected helicopters at the next 400-Hour or 12-Month Inspection (unless B-256.1 has been complied with), whichever occurs first. In any case, compliance shall be accomplished prior to 13 Jan 1994.

REFERENCE: ● 269 Series Basic HMI (Reissued: 15 March 1982; Revised 08 May 1992)
● 269 Series HMI Appendix B (Reissued: 20 May 1993)
● R-79 - HMI Temporary Revision 79 (11 June 1993)
● R-80 - HMI Temporary Revision 80 (11 June 1993)
● 269A/A-1 Pilot's Flight Manual (Issued 13 Jan 1971, Revised 02 Nov 1992)
● TH-55 Pilot's Flight Manual (Issued 5 Nov 1964, Revised 02 Nov 1992)
● 269B Pilot's Flight Manual (Issued 17 Jun 1970, Revised 02 Nov 1992)
● 269C Pilot's Flight Manual (Issued 29 Feb 1981, Revised 03 Nov 1992)

PREFACE: ● A field report indicates that clutch control spring assembly failure has occurred due to excessive wear of the spring retainer. A field report also indicates that clutch control spring assembly hardware may not have been secured properly.
● PART I provides inspections for component wear and security. These inspections are required in addition to the pilot's preflight inspection.

(■) Denotes portion of text added or revised

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- PART II provides instructions for mandatory replacement of clevis pins with threaded fasteners.
- Installation of the stainless steel spring retainer is recommended for all helicopters equipped with the aluminum spring retainer. If stainless steel spring retainer is to be installed (269A5452-7/-11, or 269A5483-21), compliance with Part III of Service Notice N-226 is also recommended. (269C Helicopters Serial Number 510 and subsequent were factory equipped with 269A5590-1 clutch control spring assembly incorporating a stainless steel spring retainer.)
- Failure to comply with this Service Bulletin may lead to loss of control of the helicopter and subsequent serious injury, death and/or property damage.
- This revision provides instructions for replacement of thermofit tube on clutch control spring retainer and to approve use of shorter bolts when replacing clevis pins. It B-256.1 was previously complied with, no further action is required.

PROCEDURE:

PART I INSPECTION FOR COMPONENT WEAR AND SECURITY

- a. Inspect clutch control installation/spring assembly in accordance with steps (1) through (3) below as applicable (Figure B-256.2-1 and Basic HMI Figure 10-7):
 - (1) Visually inspect clutch control installation with clevis pins installed in accordance with HMI Appendix B, 100-Hour Inspection. (This inspection applies to any affected helicopter with clutch control installation that HAS NOT been modified in accordance with PART II of this Service Bulletin.)

WARNING

EXCESSIVE WEAR ON SPRING RETAINER CAN CAUSE CLUTCH CONTROL SPRING ASSEMBLY FAILURE.

- (2) Visually inspect clutch control spring assembly with aluminum spring retainer in accordance with HMI Appendix B, 100-Hour Inspection.
 - (3) Visually inspect clutch control spring assembly with stainless steel spring retainer in accordance with HMI Appendix B, 400-Hour Inspection.
- b. If any worn or defective parts are found in step a.(2) or a.(3) above, disassemble and inspect the clutch control spring assembly in accordance with the following:
 - (1) Remove belt drive clutch control installation in accordance with Basic HMI, Paragraph 10-21.
 - (2) Carefully compress tension control spring (Basic HMI, Figure 10-7) to remove tension from spring end. Remove rivets and remove spring end from spring retainer.
 - (3) Inspect spring retainer for acceptable wear, in accordance with Basic HMI, Table 2-6, as amended by HMI Temporary Revision R-79. If defects are found, perform step (a) or (b) below as appropriate:

- (a) Replace spring retainer with serviceable replacement (stainless steel part recommended) if worn beyond acceptable limits, or if otherwise damaged. (Measure overall length spring retainer and determine replacement Part Number from Table B-256.2-1 below.)
- (b) Replace thermofit tube (plastic sleeve) on spring retainer in accordance with Basic HMI, Paragraph 10-23A, as provided by HMI Temporary Revision R-80.

Table B-256.2-1. Identification of Spring Retainers

EXISTING RETAINER LENGTH	SLEEVED? Yes/No	REPLACEMENT RETAINER OR ASSEMBLY
7.22	No	269A5452-7
6.35	Yes	269A5483-21
6.35	No	269A5452-11
6.35	Yes	269A5590-7

- (4) Inspect tension control spring seat for wear and for concentric alignment with hole in spring housing. If defective, remove rivets and install new tension control spring seat in spring housing.
- (5) Inspect remaining components for wear and other damage; replace with serviceable like parts, if defective.
- (6) Reassemble the clutch control spring assembly in reverse order of disassembly, and in accordance with the following.

CAUTION

Verify that rivet holes in spring end and spring retainer are correct size before installing rivets. A 0.129 inch hole is required for driven rivet P/N MS20470AD4; a 0.144 inch hole is required for blind rivet P/N NAS1738B4-2. If driven rivets were previously installed, the rivet holes may be modified (if desired) to accommodate the blind rivets. In this event, perform step (b) instead of step (a).

- (a) Carefully compress the tension control spring (Basic HMI, Figure 10-7) and install spring end on spring retainer using MS20470AD4 or NAS1738B4-2 rivets, as applicable.
- (b) To convert to blind rivets, modify spring end (Basic HMI, Figure 10-7) as follows: Enlarge four rivet holes to 0.144 inch using #27 drill. Spotface rivet holes to 0.281 inch diameter, 0.010 inch deep. Carefully compress the tension control spring and install modified spring end on spring retainer using NAS1738B4-2 rivets.
- (c) Prior to installation of inner spring guide, verify that rivets (installed in step (a) or (b) above) will not interfere with movement of inner spring guide. After installation of rivets, maintain 0.610 diameter clearance; concentric within 0.010 to I.D. of tube. A 0.610 inch diameter shaft (fabricated locally) should be inserted inside the spring end to check for this condition.

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NOTE

For old style configurations, where hole in spring end is not large enough to allow cable removal, it will be necessary to cut a longitudinal slot in fabricated shaft in order to check condition specified in step (c).

- (d) Reassemble remaining components of clutch control spring assembly in reverse order of disassembly.
- (7) Install and adjust the belt drive clutch control installation in accordance with Basic HMI, Paragraph 10-23.
- c. Record compliance with PART I of this Service Bulletin in the aircraft records.

PART II MANDATORY REPLACEMENT OF CLEVIS PINS

NOTE

The M10041 clutch control cable guard installation is incompatible with the use of a clevis bolt for the attachment of the clutch control cable to the clutch linear actuator. If installed, the M10041 clutch control cable guard installation must be removed prior to complying with the following instructions.

- a. Using applicable steps of Basic HMI Section 10 as a guide, disassemble the clutch control installation as necessary to remove affected clevis pins (Figure B-256.2-1).

NOTE

In the following steps, a longer or shorter bolt is permissible provided the conditions specified in the steps are satisfied.

- b. Using specified hardware (Figure B-256.2-1), replace each of the removed clevis pins in accordance with the following requirements:
 - (1) Install bolt with a minimum of one washer at nut end. Verify that spring fitting does not contact bolt threads; refer to Figure B-256.2-2 for typical example.

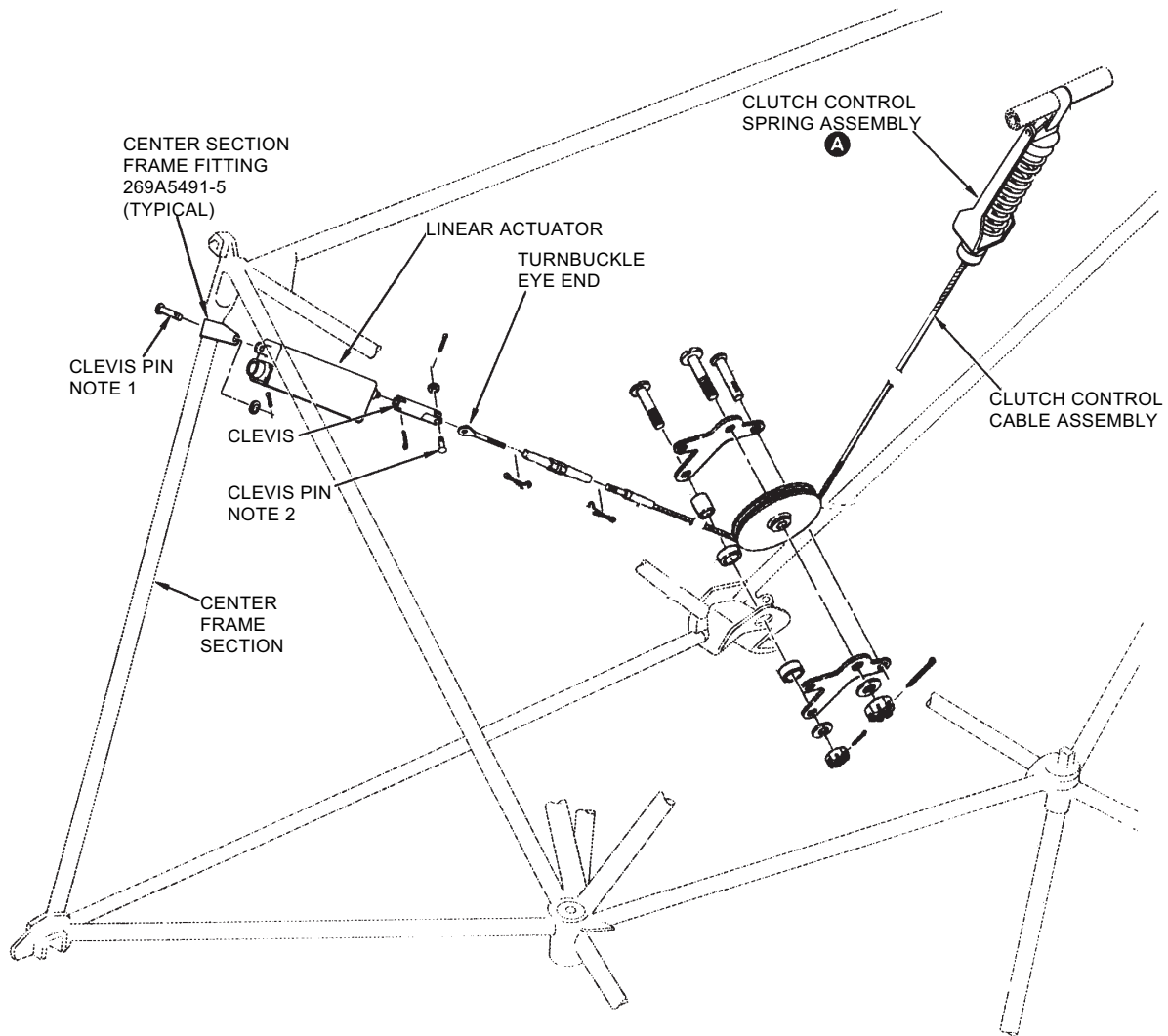
CAUTION

MS17826 nuts are self locking and castellated for double safety, and must be used. Do not torque nuts; all joints must be free to swivel after hardware is installed.

- (2) Install nut and align castellation with cotter pin hole in bolt. To be sure joint is free, check for 0.010 to 0.020 inch axial play in bolt; add washer(s) at nut end only if required.
 - (3) Install cotter pin.
 - (4) For early Model 269A Helicopters with hand clutch, remove clevis pin from hand clutch mechanism and replace with NAS1303-5D bolt, AN960-10L washer, MS17826-3 nut, and MS24665-151 cotter pin.
- c. Reassemble and check clutch control installation using applicable steps of Basic HMI Section 10.
 - d. Check for appropriate clearance through full range of cable movement.
 - e. Record compliance with PART II of this Service Bulletin in the aircraft records.

WEIGHT AND BALANCE

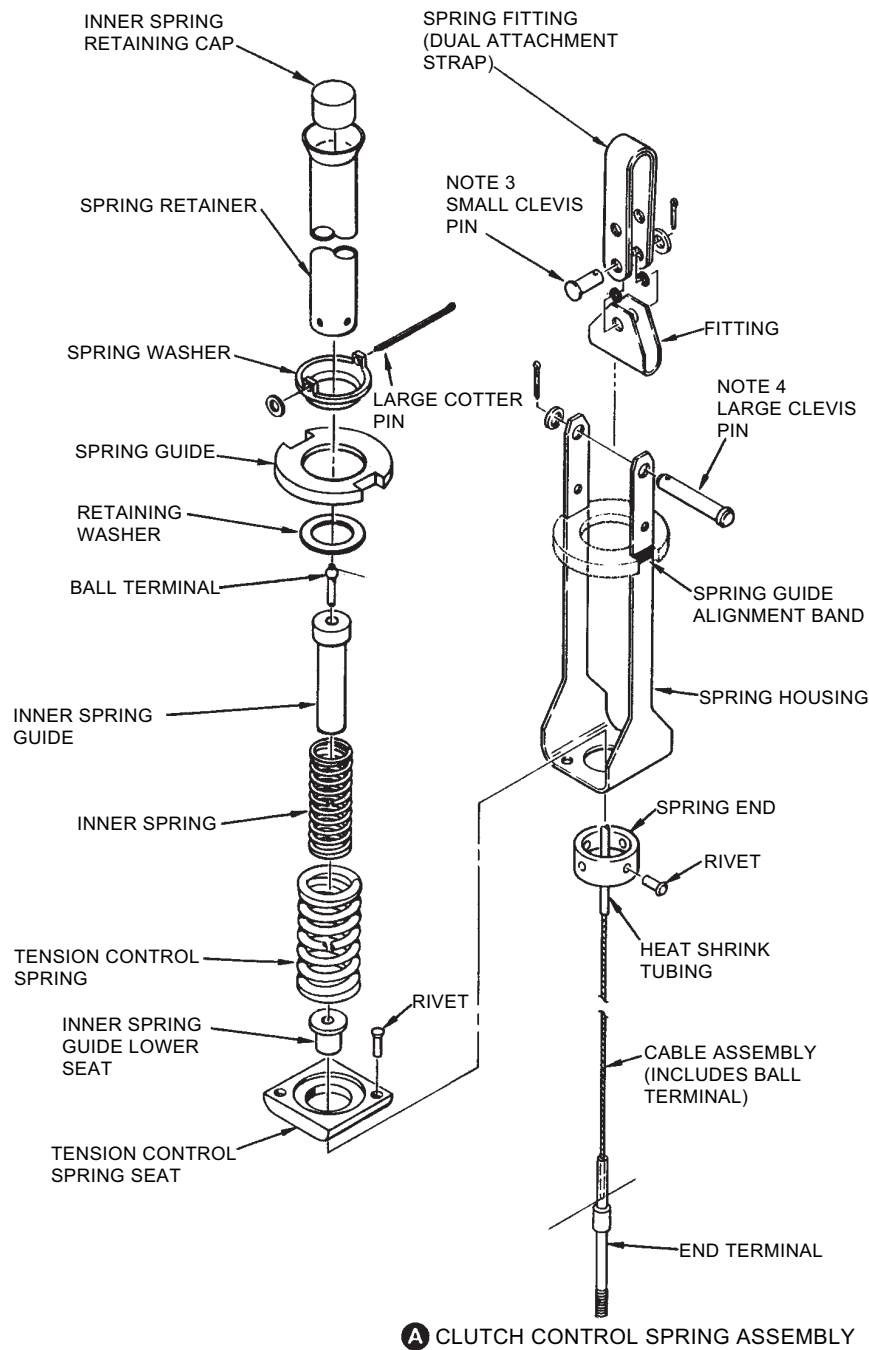
Weight and balance are not affected.



NOTES:

1. IF 269A5491-5 WELDED FITTING IS INSTALLED (SHOWN): REPLACE CLEVIS PIN WITH NAS1304-8D BOLT, AN960-416L WASHER, MS17826-4 NUT, AND MS24665-151 COTTER PIN. (IF 269a5490 BOLTED FITTING IS INSTALLED, A NAS1304-12D BOLT WILL BE REQUIRED.)
2. REPLACE CLEVIS PIN WITH NAS1303-7D BOLT, AN960-10L WASHER, MS17826-3 NUT, AND MS24665-151 COTTER PIN.

Figure B-256.2-1. Belt Drive Clutch Control Installation (Sheet 1 of 2)



A CLUTCH CONTROL SPRING ASSEMBLY

NOTES:

3. REPLACE CLEVIS PIN WITH NAS1304-10D BOLT, AN960-416L WASHER, MS17826-4 NUT, AND MS24665-151 COTTER PIN.
4. REPLACE CLEVIS PIN WITH NAS1303-7D BOLT, AN960-10L WASHER, MS17826-4 NUT, AND MS24665-151 COTTER PIN.

Figure B-256.2-1. Belt Drive Clutch Control Installation (Sheet 2 of 2)

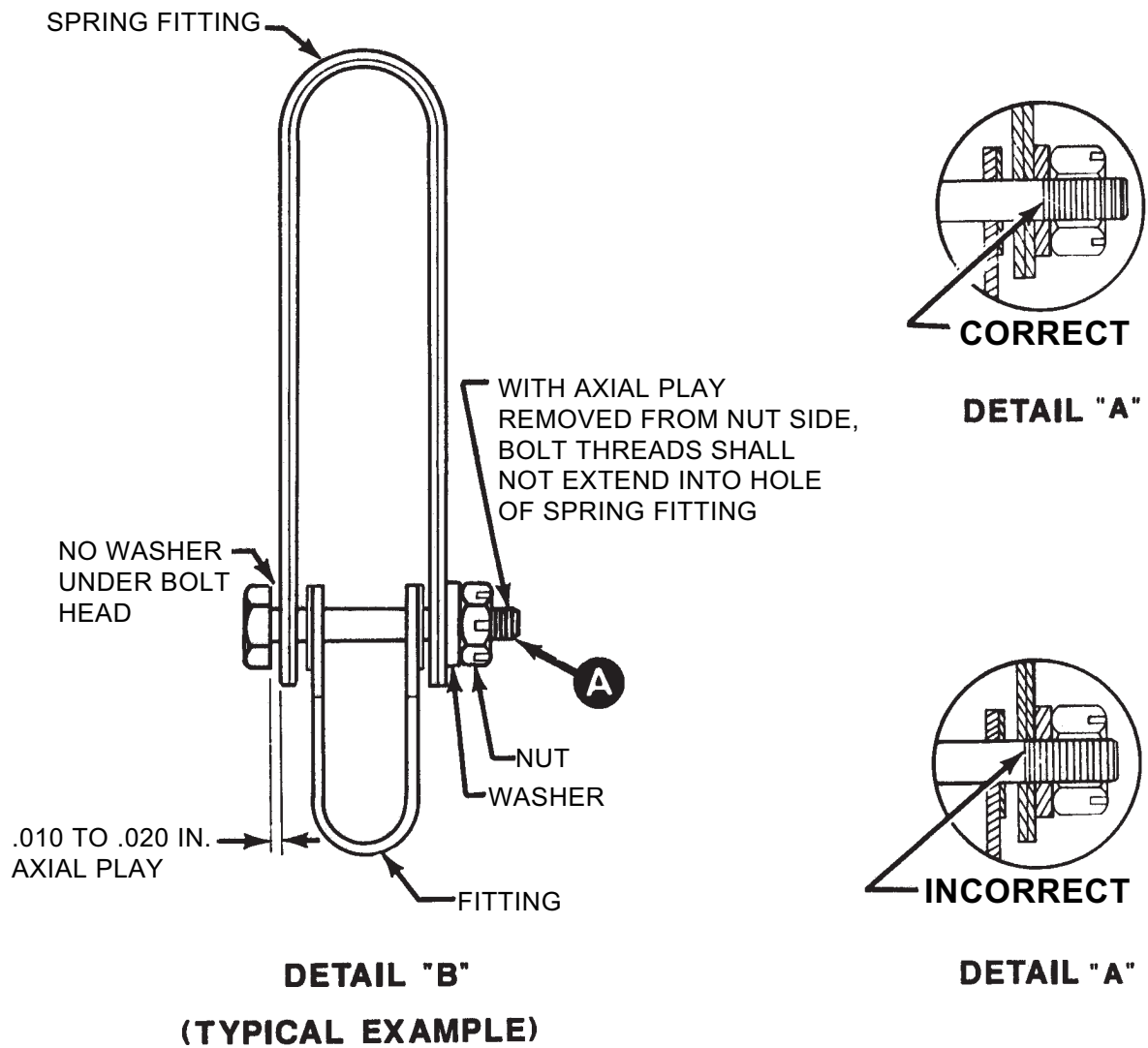


Figure B-256.2-2. Clutch Control Bolt Installation (Typical for All Locations)