



# SCHWEIZER SERVICE NOTICE

NOTICE NO. N-189.1

DATE: 2 Sept 1986

PAGE 1 of 7

\*Supercedes Service Information  
Notice No. N-189  
Dated 24 October 1983

MANDATORY

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SUBJECT: MAIN ROTOR DAMPER PITCH BEARING CASE ATTACH HOLE  
INSPECTION AND SPACER (PN 269A1207) INSTALLATION.

MODELS AFFECTED: All Model 269A/TH-55A, 269A-1 and 269B  
Helicopters. Model 269C Helicopter Serial  
No. 001 through 1165. Any PN 269A1220 Pitch  
Bearing Case in spares which has previously  
been in service.

TIME OF COMPLIANCE: Part I of this Notice shall be  
accomplished for all affected pitch  
bearing cases in service within the next  
100 hours of helicopter operation, or at  
next removal of main rotor dampers,  
whichever is sooner; and shall be  
accomplished each time damper attach bolt  
is retorqued, until Part II of this Notice  
is accomplished.

Part I shall be accomplished prior to  
installation of affected pitch bearing  
cases in spares.

Part II of this Notice shall be  
accomplished at next removal of main rotor  
dampers.

REFERENCE: 269 Series - Basic HMI, Reissued 15 March 1982.

PREFACE: Cracking around the main rotor damper attach hole in  
the pitch bearing case can occur from the clamping  
load applied when torquing the nut used with the  
damper attach bolt. A spacer (PN 269A1207), which may  
be field fabricated, has been designed for  
installation under the damper attach bolt nut and  
washer, to spread the clamping load over a wider area  
and reduce the possibility of cracking.

Part I of this Notice requires an initial dye  
penetrant inspection of the damper attach hole for  
cracking. Additionally, dye penetrant inspection of  
the area of the pitch bearing case immediately  
adjacent to the damper attach bolt head is required  
each time the bolt is retorqued until Part II of this  
Notice is accomplished.

(I) - Denotes a change.

Part II lists instructions for fabrication and installation of spacer PN 269A1207. Upon compliance with Part II of this Notice, the continuing inspection required in Part I is discontinued.

PART I - DYE PENETRANT INSPECTION OF PITCH BEARING CASE MAIN  
ROTOR DAMPER ATTACH HOLE

Materials

Kit, Dye penetrant	"Spotcheck"	Peabody Testing Magnaflux Los Angeles, CA
		or
	"Tracer-Tech"	Uresco Inc. Downey, CA
		or
		Equivalent kit conforming to MIL-I-25135

Procedure

- a. Remove main rotor damper (Section 8, Basic HMI).
- b. Dye penetrant inspect damper attach hole in pitch bearing case, according to dye penetrant kit instructions. If crack(s) are noted on outboard side of hole perform Part II of this Notice. If cracks are noted on inboard side of hole, pitch bearing must be replaced (Section 8, Basic HMI). (See Figure 1.)
- c. Reinstall main rotor damper (Section 8, Basic HMI).
- d. Repeat above procedure for remaining blades.

NOTE

Each time the damper attach bolt is retorqued, dye penetrant inspect the area of the pitch bearing case immediately adjacent to the bolt head for cracks until Part II of this Notice is accomplished. If cracks are noted, perform Part II of this Notice or replace pitch bearing case as specified in b. above.

## PART I. (Con't)

- e. Record compliance with Part I of this Service Information Notice in Compliance Record of Helicopter Log Book.

## PART II - SPACER (PN 269A1207) FABRICATION AND INSTALLATION

<u>Nomenclature</u>	<u>Part No.</u>	<u>Quantity</u>	<u>Manufacturer</u>
Spacer*	269A1207	3	SAC
Bolt**	NAS1304-63D	3	Commercial
	or NAS1304-70D	3	Commercial
<u>Materials***</u>			
Aluminum alloy bar stock 2024-T4 (0.250-inch thick by 0.500 by 1.50-inch)	QQA-22516		Commercial
Chemical film for aluminum alloys	MIL-C-5541 Class 2 Iridite 14-2 Al-Coat		Richardson Co. Allied-Kelite Product Div 2400 E. Devon Ave. Des Plaines, IL

Procedure

- a. Install blade support approximately 12 inches inboard from blade tip. Adjust support so that blade is parallel to ground. Do not allow support to bend trailing edge tab.

CAUTION

Blade support must be installed throughout procedure. If not supported, damage to blade or pitch bearing assembly can occur when damper is not installed.

\* Spacer may be locally fabricated.

\*\* NAS1304-63D bolts required for friction type dampers.  
NAS1304-70D required for elastomeric dampers.

\*\*\* Materials listed are required only for spacer fabrication.

## PART II. (Con't)

- b. Remove main rotor damper (Section 8, Basic HMI).

CAUTION

Dye penetrant inspection of pitch bearing case damper attach hole per Part I of this Service Information Notice must be performed prior to reinstalling damper.

NOTE

Field fabricate PN 269A1207 spacer as shown in Figure 2, if desired.

- c. Reinstall elastomeric damper with spacer and new attach bolt (PN NAS1304-70D) as follows and as shown in Figure 1. (For reinstallation of rotary friction type damper, refer to paragraph d.)
1. Insert new NAS1304-70D bolt through damper fitting and pitch bearing case. Install 269A1207 spacer, washer and nut on bolt. Torque nut to 20-30 inch-pounds. If castellation of nut does not line-up with cotter pin hole, advance nut to next hole. Add washers as required to stay within 20 - 30 inch-pounds torque limit. Install new cotter pin.
  2. Complete elastomeric damper installation according to Section 8, Basic HMI.
  3. Remove blade support and repeat above procedure for remaining dampers.
- d. Reinstall rotary friction type damper with spacer and new attach bolt (PN NAS1304-63D) as follows and as shown in Figure 1.
1. Install damper assembly to rotor blade pitch case, using vertical bolt, washer and nut. Do not torque.
  2. Install new horizontal bolt (PN NAS1304-63D) through pitch case and lugs of pitch bearing grease cap. Install 269A1207 spacer and secure with washer and nut. Torque nut to 20 - 30 inch-pounds. If castellation of nut does not line up with cotter pin hole, advance nut to next hole. Add washers as required to stay within 20-30 inch-pounds torque limit. Install new cotter pin.

PART II. (Con't)

3. Complete installation of damper according to Section 8, Basic HMI.
  4. Remove blade support and repeat above procedure for remaining dampers.
- e. Record compliance with Part II of this Notice in Compliance Record of Helicopter Log Book.

**WEIGHT AND BALANCE DATA**

Weight and balance not affected.

The procedures and information provided by this Service Information Notice has been shown to comply with applicable Federal Aviation Regulations and is FAA approved.

NOTES:

1. REPLACE EXISTING BOLT WITH NAS1304-70D BOLT IF ELASTOMERIC DAMPERS ARE INSTALLED; NAS-1304-63D BOLT IF ROTARY FRICTION DAMPERS ARE INSTALLED.
2. DYE PENETRANT INSPECT PER PART 1 OF THIS NOTICE.

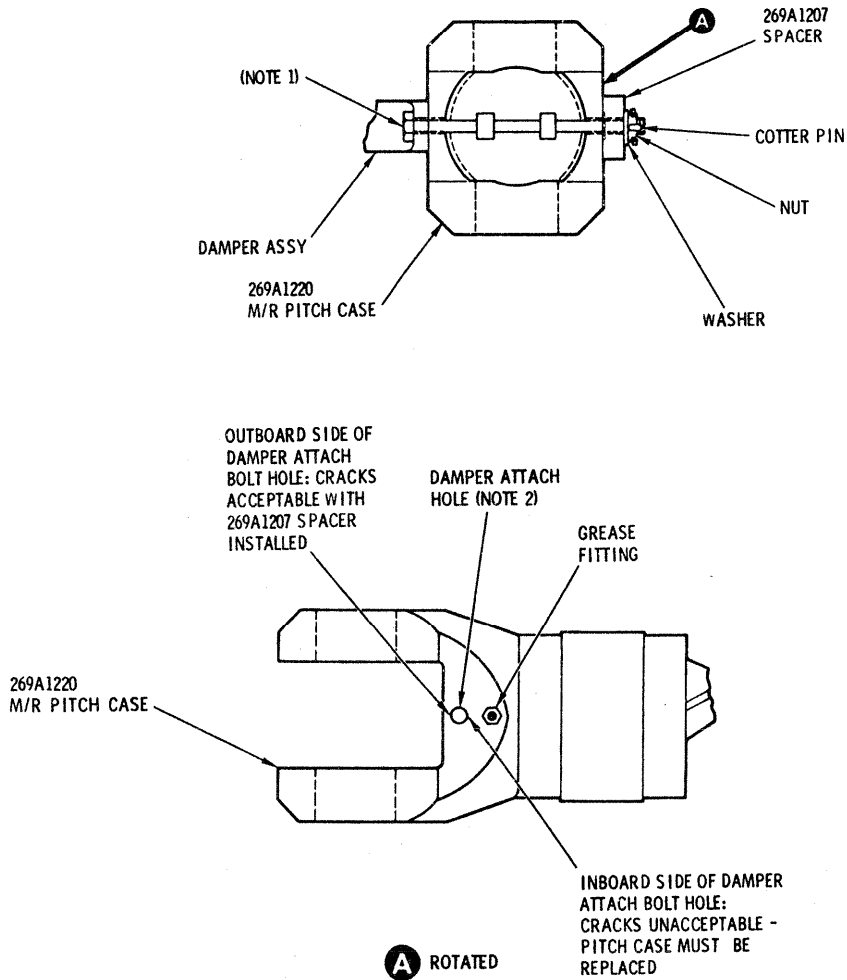
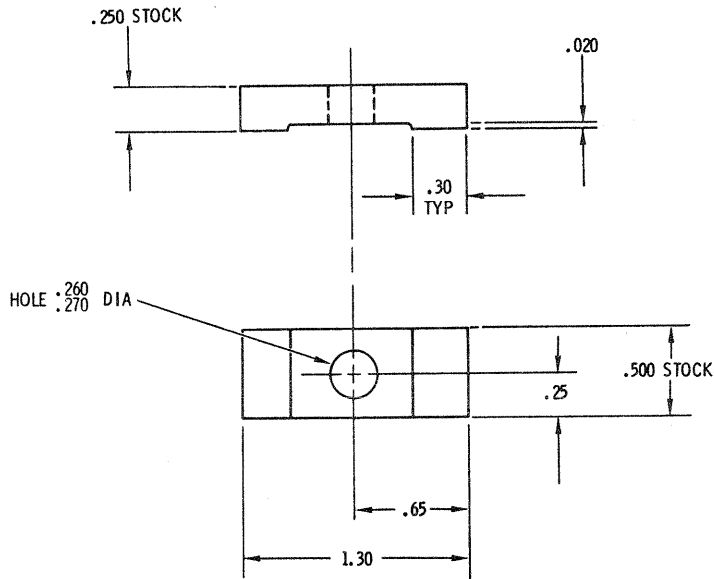


Figure 1. Pitch Bearing Case Damper Attach Hole Inspection and Spacer PN 269A1207 Installation



NOTES:

1. MAKE SPACER FROM .250 THICK  
x .500 x 1.50 2024-T4  
QQ-A-225/6 ALUMINUM ALLOY  
BAR STOCK.
2. BREAK ALL EDGES AND CORNERS  
TO .03/.06 INCH.
3. ALL DIMENSIONS IN INCHES.
4. TREAT WITH IRIDIOTE AND PAINT  
TO MATCH PITCH BEARING CASE  
(BASIC HMI, SECTION 2).

Figure 2. Field Fabrication of PN 269A1207 Spacer