Sikorsky Aircraft Corporation
6900 Main Street P.O. Box 9729
Stratford, Connecticut 06615-9129
(203) 386-4000

269C-1™ HELICOPTER

ALERT SERVICE BULLETIN

ASB C1B-040

Basic Issue ▪ June 30/15

SUBJECT: POWER TRAIN – Belt Drive Transmission Assembly – One-Time Inspection of the Belt Drive Transmission Upper Pulley Installation for Correct Torque, Parts Configuration and Stack-up, Damage and/or Wear

Section 1. PLANNING INFORMATION

A.	Effectivity	All 269C-1 model helicopters, serial numbers S0001 and subsequent.
B.	Purpose	To perform a one-time inspection of the belt drive transmission for aft pinion nut torque, parts configuration and stack-up, damage and/or wear.
C.	Description	Helicopter is prepared for inspection. Access is gained to the belt drive transmission upper pulley. A torque check of the upper pulley aft pinion nut is performed. An inspection of upper belt drive transmission assembly is performed. Any worn or discrepant parts are replaced. If pinion is rejected, main transmission is removed and returned to an authorized Sikorsky Light Helicopter Support Center for repair. Findings are recorded on Aft Pinion and Belt Drive Transmission Upper Pulley Inspection Data Sheet. Helicopter is returned to service.
D.	Compliance	Compliance is essential. The inspection outlined herein shall be accomplished no later than 100 flight hours or 60 days from the issue date of this Alert Service Bulletin (ASB), whichever occurs first.
E.	Approval	Inspection item.

Section 1. PLANNING INFORMATION (Continued)

F. Manpower (Estimated)

Task	No. of Men	No. of Hours	Man-Hours*
Check Torque of Upper Pulley Aft Pinion Nut**	2	0.75	1.5
Removal of Belt Drive Transmission Assembly**	2	0.60	1.2
Inspection of Belt Drive Transmission Assembly	1	1.20	1.2
Installation of Belt Drive Transmission Assembly*	2	1.50	3.0
Total Man-Hours		4.05	6.9
*Estimate does not include time required to prepare helicopter or return it to flight status.			
**Estimate does not require two people for entire task.			

G. Tooling

Magnifying glass (10X) (commercially available or equivalent)

H. Weight and Balance

Not affected.

I. Electrical Load Data

Not affected.

J. Software Load Data

Not changed.

K. References

NOTE: Use 269C-1 Basic Handbook of Maintenance Instructions (HMI) CSP-C1-2, latest revision, dated 15 Oct 2014 for references listed.

(1) 269C-1 HMI CSP-C1-2, Paragraph 10-42.

(2) 269C-1 HMI CSP-C1-2, Paragraph 10-43.

(3) 269C-1 HMI CSP-C1-2, Paragraph 10-45.

(4) 269C-1 HMI CSP-C1-2, Paragraph 10-48.

Section 1. PLANNING INFORMATION (Continued)

(5) 269C-1 HMI CSP-C1-2, Table 10-1.

L. Publications Affected

None.

M. Attachment

None.

Section 2. MATERIAL INFORMATION

A. Basis for Material Data

Per helicopter.

B. Bill of Material

None.

C. Consumable Material

None.

Section 3. ACCOMPLISHMENT INSTRUCTIONS

A. Prepare helicopter for inspection:

(1) Turn off all helicopter electrical power.

(2) Gain access to belt drive transmission upper pulley.

B. Inspect upper pulley aft pinion nut torque, assembly configuration, and stack-up as follows:

NOTE: Make sure to record inspection results on Aft Pinion and Belt Drive Transmission Upper Pulley Inspection Data Sheet. (Refer to Section 3, Step D, and Tables 1, 2, and 3).

(1) Perform torque check on upper pulley aft pinion nut. (Refer to HMI CSP-C1-2, Paragraph 10-42).

(a) If torque check passes, proceed to step (c).

(b) If torque check fails, inspect parts in the assembly/stack-up of the belt drive assembly for damage or wear and determine the cause of looseness and proceed to next step. (Refer to HMI CSP-C1-2, Paragraph 10-42 d.).

(c) Record results of torque check on upper pulley aft pinion nut in Aft Pinion and Belt Drive Transmission Upper Pulley Inspection Data Sheet (Refer to Section 3, Step D) and proceed to next step.

Section 3. ACCOMPLISHMENT INSTRUCTIONS (Continued)

(2) Remove belt drive transmission assembly. (Refer to HMI CSP-C1-2, Paragraph 10-43).

(3) Inspect belt drive transmission assembly for correct parts configuration and stack-up. (Refer to HMI CSP-C1-2, Paragraph 10-43 and 10-48).

NOTE: • Pay particular attention to the threads on the aft end of the pinion and pinion nut.

• No corrosion or blending of the pinion aft grooves, thread relief or aft pinion nut is allowed.

• Threads of both the pinion and nut should be clean, dry and free of grease or material debris of any kind.

(4) Using a 10x magnifying glass, inspect threads and relief groove area on aft end of pinion and pinion nut for nicks, wear and pitting, cracks, breaks, excessive wear, galling, spalling, chipping, distortion or any other abnormality. None of these conditions are allowed and are cause for pinion or aft pinion nut rejection. (Refer to HMI CSP-C1-2, Table 10-1).

NOTE: Pay particular attention to end face surfaces of the pinion oil seal collar, upper pulley hub, upper H-frame bearings, drive sleeve, and aft pinion nut for wear and signs of fretting.

(5) Perform detailed inspection of the following parts (Refer to HMI CSP-C1-2, Paragraph 10-45):

- Transmission pinion oil seal collar for correct part number and installation. Inspect for signs of corrosion, fretting or wear. None allowed. (Refer to HMI CSP-C1-2, Paragraph 10-15A).
- Forward and aft H-frame bearings inner race surfaces for fretting/face surface wear damage and corrosion. None allowed.
- Hub for fretting/face surface wear damage and corrosion. None allowed.
- Forward drive spline sleeve for fretting/face surface wear damage and corrosion. None allowed. Also inspect spline drive sleeve for overall condition and spline wear. (Refer to HMI CSP-C1-2, Paragraph 10-45).
- Split bushing (269A5595-001) – Inspect split bushing for general condition and installation in the forward spline sleeve. Replace if worn. (Refer to HMI CSP-C1-2, Paragraph 10-48).
- Nut (269A5714) – Inspect nut for general condition and wear. Remove and treat any signs of corrosion. No pitting or thread wear allowed. (Refer to HMI CSP-C1-2, Appendix D).
- Plug (269A5441) – If applicable, inspect phenolic plug for cracks and breaks. Replace if cracked or broken.

(a) Replace any part(s) that are beyond limits. (Refer to HMI CSP-C1-2, Paragraph 10-45).

(b) If the pinion is rejected, remove main transmission assembly and return to an authorized Sikorsky Light Helicopter Support Center for repair.

Section 3. ACCOMPLISHMENT INSTRUCTIONS (Continued)

(6) Install belt drive transmission assembly with serviceable parts. (Refer to HMI CSP-C1-2, Paragraph 10-48).

(a) After installation of the transmission belt drive and Total Indicated Runout (TIR) is achieved within limits, record the final torqued pinion nut TIR. (Refer to HMI CSP-C1-2, Paragraph 10-48).

(b) Record final main transmission pinion TIR value after installation of the transmission belt drive assembly in log book record.

(7) Record inspection results on Aft Pinion and Belt Drive Transmission Upper Pulley Inspection Data Sheet. (Refer to Section 3, Step D, and Tables 1, 2, and 3).

C. Return helicopter to service.

Section 3. ACCOMPLISHMENT INSTRUCTIONS (Continued)

D. Aft Pinion and Belt Drive Transmission Upper Pulley Inspection Data Sheet:

NOTE: Return completed Aft Pinion and Belt Drive Transmission Upper Pulley Inspection Data Sheet directly to engineering at Email address:

S300ASB@sikorsky.com
Attn: SLH Engineering

(1) Record the following information for each helicopter, and attach labeled photographs showing the same:

Customer/Operator Name: _____

Helicopter Serial Number: _____

Helicopter Total Time Since New: _____

Pinion Serial Number: _____

Did the upper pulley pinion nut pass the torque check? Yes_____ No_____

If NO, was there any evidence of the cause of looseness? (Specify evidence in Table 1).

Were the pinion threads clean and free of grease? Yes_____ No_____

Was there any damage or wear found on the pinion shaft (including spines and threads)? Yes____ No___

If YES, specify the condition and type of damage found In Table 2.

Final torqued pinion TIR: _____

In Table 3, specify any addition discrepancies, improper assembly, missing split bushing, incorrect pinion oil seal collar, improper grease, damaged sleeve, or nut. Include serial number and total time on worn parts.

Date ASB is Performed: _____

Section 3. ACCOMPLISHMENT INSTRUCTIONS (Continued)

TABLE 1				
Damage Type (Part end-face wear, incorrect stack-up, or parts, other damage)	Location (distance from feature)	Size of Damage (inches)	Part Serial Number	Total Time on Worn Part

TABLE 2				
Type (pitting, galling, fretting, corrosion, dimensional, cracks)	Location (Distance from feature)	Size of Damage (Inches)	Part Serial Number	Total Time on Worn Part

TABLE 3				
Type (pitting, galling, fretting, corrosion, dimensional, cracks)	Location (Distance from feature)	Size of Damage (Inches)	Part Serial Number	Total Time on Worn Part

Section 3. ACCOMPLISHMENT INSTRUCTIONS (Continued)

E. Record of compliance:

(1) Make an appropriate helicopter logbook entry to show compliance with this ASB.

(2) Upon compliance with the ASB, complete attached ALERT SERVICE BULLETIN COMPLIANCE RECORD CARD and return it to Sikorsky Aircraft Corporation.

(Fold over and tape closed)

SIKORSKY AIRCRAFT CORPORATION

FACSIMILE NUMBER (860) 998-7565

EMAIL ADDRESS: GPSIKSASProductSafet@utc.com

ATTENTION: SAS PRODUCT SAFETY MANAGER
SIKORSKY AEROSPACE SERVICES

IMPORTANT NOTICE

Upon COMPLIANCE with the attached ASB, Sikorsky requests your cooperation in completing and returning this ENTIRE PAGE by MAIL, FAX, or scan & EMAIL.

Please fill in the requested information at the bottom of the page, so we may maintain proper records documenting the configuration of your aircraft. This information is useful when determining configuration and effectivity of issues affecting fielded aircraft.

This request is in keeping with our policy to assure that our customers receive the latest information applicable for the maintenance of your aircraft. Thank you.

ALERT SERVICE BULLETIN: No. C1B-040 **Compliance Record Card**

TITLE: POWER TRAIN – Belt Drive Transmission Assembly – One-Time Inspection of the Belt Drive Transmission Upper Pulley Installation for Correct Torque, Parts Configuration and Stack-up, Damage and/or Wear

OWNER/OPERATOR: _____

SUBMITTED BY: _____ **DATE:** _____

☐ **FOLLOWING SERIAL NUMBERS ARE NOT AFFECTED BY THIS ASB**

☐ **ASB HAS BEEN COMPLIED WITH ON HELICOPTER SERIAL NUMBERS:**

_____ _____ _____ _____ _____ _____

_____ _____ _____ _____ _____ _____

(Fold Up to Arrows)

Sikorsky
A United Technologies Company

No Postage Necessary

BUSINESS REPLY MAIL
FIRST-CLASS MAIL PERMIT NO. 432 BRIDGEPORT CT

POSTAGE WILL BE PAID BY ADDRESSEE

SIKORSKY AIRCRAFT CORPORATION
P.O. BOX 9729
6900 MAIN STREET
STRATFORD, CONNECTICUT 06615-9129 U.S.A.
MAILSTOP: **S328A**
ATTENTION: SAS PRODUCT SAFETY MANAGER
SIKORSKY AEROSPACE SERVICES

Please complete the form on the reverse side and FAX to

FACSIMILE NUMBER (860) 998-7565

Or scan and email to:

EMAIL ADDRESS: GPSIKSASProductSafet@utc.com

or fold and return ENTIRE form to Sikorsky Aircraft Corporation