

URGENT

DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

**REPLACEMENT OF SPECIFIC SERIAL NUMBERED
MANUFACTURED TAIL ROTOR SERVO CYLINDER
ASSEMBLIES P/N 2227000-13 AND P/N 2227000-17
(ALL H-60 AIRCRAFT)**

**Headquarters, Department of the Army, Washington, D. C.
27 January 1997**

DISTRIBUTION STATEMENT A: Approved for public release; distribution is unlimited.

NOTE

THIS PUBLICATION IS EFFECTIVE UNTIL RESCINDED OR SUPERSEDED.

1. Priority Classification.

a. Aircraft in Use. Upon receipt of this Technical Bulletin (TB), the condition status symbol of cited aircraft will be changed to a red horizontal dash "_". The red horizontal dash a-n may be cleared when the inspection of paragraph 8 below is completed. The affected aircraft shall be inspected as soon as practical but no later than the task inspection suspense date. Failure to comply with the requirements of this TB within the applicable time frame will cause the status symbol to be upgraded to a red "X".

b. Aircraft in Depot Maintenance. Same as paragraph 1 a.

c. Aircraft Undergoing Maintenance. Same as paragraph 1 a.

d. Aircraft in Transit.

(1) Surface/Air Shipment. Same as paragraph 1 a.

(2) Ferry Status. Same as paragraph 1 a.

e. Maintenance Trainers (Category A and B). Same as paragraph 1 a.

f. Component/Parts in Stock Including War Reserves at All Levels (Depot and Others).

(1) Retail Stock Upon receipt of this TB all items listed in paragraphs 6 below shall be placed in condition code "D" and retagged with a test/modification tag/label. Material (blue color) DD Form

*This TB supersedes USAATCOM Aviation Safety Action Message 102105Z, JAN 97, UH-60-97-ASAM-07.

1576/1576-1. The authority block must reference inspection required per this message (TB 1-1520-237-20-188) (TB 1-1520-250-20-13). Items identified as serviceable IEW paragraph 8 shall be retagged with a serviceable IEW paragraph 8 shall be retagged with a serviceable tag label. Material DD Form 1574/1574-1 (yellow color). Indicate compliance with this message (TB 11520-237-20-188) (TB 1-1520-250-13) in the remarks block. Items identified as discrepant IAW paragraph 8 below will be retagged with unserviceable (reparable) tag Label DD Form 1577-2/1577-3 (green color). Annotate remarks block at indicate that the item is unserviceable IAW this message TB 1-1520-237-20-188 (TB 1-1520-250-20-13). Discrepant hems will be corrected IAW paragraph 9.

(2) Wholesale Stock. WA.

2. Task/Inspection Suspense Date. Review aircraft records within 10 hours/14days. Replacement of the Tail Rotor Servo Cylinder Assembly containing suspect seals (serial numbers listed in paragraph 8A) shall be accomplished at the next 30 hour inspection or within 60 days, whichever occurs first.

3. Reporting Compliance Suspense Date. No later than 4 February 1997 per paragraph 14a of this TB.

4. Summary of the Problem.

a. Tail Rotor Servo Cylinder Assemblies, P/N 2227000-9,13, 17. containing suspect seals were recently supplied by Parker Berteau Aerospace. These units may have been assembled with 0 rings which are not compatible with the hydraulic fluid used on H-60 series aircraft.

b. For manpower/downtime and funding impacts see paragraph 12.

c. The purpose of this TB is to remove from service all the Tail Rotor Servo Cylinder Assemblies with serial numbers listed in para 8a. These suspect Tail Rotor Servo Cylinder Assemblies will be returned to manufacturer for replacement of the suspect seals and then returned to service. Items will be identified as reworked upon completion by manufacture. Repaired items will be marked seals changed with permanent ink stamp on the flat surface on the input arm assembly, P/N 2227082-9 (TM 1 -1 520-237-23P, figure 746, item 37).

5. End Item to be Inspected. All H-60 series aircraft. Serial numbers 95-26659 and prior. Aircraft serial numbers 95-26660 and subsequent will be inspected/corrected by contractor during production and therefore records for aircraft serial numbers 95-2666and subsequent will not require identification of this action.

6. Assembly Components to be Inspected.

NOMENCLATURE	PART NUMBER	NATIONAL STOCK NUMBER
VENDOR P/N	SIKORSKY P/N	NSN
2227000-9	70410-06520-044	1650-01-127-7357
2227000-13	70410-06520-045	1650-01-125-5430
2227000-17	70410-06520-046	1650-01-305-6954
N/A	70410-06520-047	N/A

7. Parts to be Inspected. N/A.

8. Inspection Procedures.

a. On all H-60 aircraft checo aircraft records for installed Tail Rotor Servo Assemblies P/N 2227000 (All DASH numbers) to be identified by serial number. If the serial number of the installed Tail Rotor Servo Assembly is not included in the following list the inspection for that aircraft is complete and no corrective action is required.

SERIAL NUMBERS

B300-00027
B300-00047
B300-00062
B300-00474
B300-00091
B300-00092
B300-00130
B300-00137
B300-00150
B300-00176
B300-00195
B300-00254
B300-00272
B300-00309
B300-00364
B300-00376
B300-00385
B300-00397
B300-00406
B300-00486
B300-00559
B300-00561
B300-00563

SERIAL NUMBERS

B300-00567
B300-00571
B300-01680
B300-01757
B300-01768
B300-01944
B300-01946
B300-01854
B300-01981
B300-02126
B300-02259
B300-02310
B300-02486
B300-02541
B300-02568
B300-02676
B300-02687
B300-00573
B300-40612
B300-00620
B300-00641
B300-00665
B300-00697

SERIAL NUMBERS

B300-00716
B300-00768
B300-00814
B300-00893
B300-00936
B300-01005
B300-01048
B300-01074
B300-01076
B300-01089
B300-01127
B300-01226
B300-01768
B300-01378
B300-01379
B300-01405
B300-01517
B300-01530
B300-01554
B300-01557
B300-01579
B300-01587
B300-01651

b. If one of the specified serial numbers listed in para 8a is installed, the report identified in para 14b is required to be completed and forwarded to the logistical POC listed in para 16b. The logistical POC will contact you and supply shipping instructions and arrange for a replacement servo to be shipped to your unit at no cost.

9. Correction Procedures. Replace all serial numbered Tail Rotor Servo Cylinder Assemblies listed in para 8a at the next 30 hour inspection interval or within 60 days, whichever occurs first.

10. Supply/Parts and Disposition.

- a. Parts Required. Items cited in para 6 may be required to replaced defective items.
- b. Requisitioning Instructions. Complete the report identified in para 14b and forward to the logistical POC listed in para 16b. The logistical POC will contact you and supply shipping instructions and arrange for a replacement servo to be shipped to your unit.
- c. Bulk and consumable materials. IAW TM 1-1520-237-23 and TM 1-1520-250-23.

d. Disposition. A QDR is not required. Hold any suspect Tail Rotor Servo Cylinder Assembly pending disposition instructions from logistical point of contact per para 16b below.

e. Disposition of hazardous material. N/A.

11. Special Tools, Jigs and Fixtures Required. N/A.

12. Application.

a. Category of Maintenance. AVUM. Aircraft downtime will be charged to AVUM.

b. Estimated Time Required.

(1) Total of 12 man-hours using 2 persons.

(2) Total of 6 hours downtime for one end item.

c. Estimated cost impact of stock fund items to the field. N/A.

d. TB/MWOs to be Applied Prior to or Concurrently with this Inspection. N/A.

e. Publications Which Require Change as a Result of This Inspection. N/A.

13. References. TM 1-1520-237-23, TM 1-1520-237-23P, TM 1-1520-250-23, and TM 1-1520-250-23P.

14. Recording and Reporting Requirements.

a. Reporting Compliance Suspense Date (Aircraft). Upon entering requirements of this TB on DA Form 2408-13-1 on all subject MDS aircraft, forward a priority message, datafax or E-mail to Commander, ATCOM, ATTN: AMSAT-R-X (SOF compliance officer), per AR 95-3. Datafax number is DSN 693-2064 or commercial 314/263-2064. E-mail address is "amsatrxs@emh4.stl.army.mil". The report will cite this TB number, date of entry in DA Form 2408-13-1, the aircraft mission design series and serial numbers of aircraft ___ in numerical order.

b. Task Inspection Reporting Suspense Date (AIRCRAFT). Upon completion of inspection, units will forward a priority TB to the logistical point of contact listed in para 16b. The report will cite this TB number, date of inspection, aircraft serial number, aircraft total time since new (TSN), Tail Rotor Servo Cylinder Assembly serial number, Tail Rotor Servo Cylinder Assembly time since overhaul, unit designation and DODMC, point of contact for unit with commercial phone number. Inspection reports will be completed no later than 10 days after Task Inspection suspense date.

c. Reporting Compliance Suspense Data (SPARES). N/A.

d. Task Inspection Reporting Suspense Data (SPARES). Upon completion of the inspection depot commanders and others holding stock shall forward a priority message report or results of this inspection to logistical POC below NLT 10 days after receipt of this TB. The report shall include quantity on hand, quantity which passed inspection and quantity which failed inspection.

e. The following forms are applicable and are to be completed in accordance with DA PAM 738-751, dated 15 June 92.

(1) DA Form 2408-5-1, Equipment Modification Record (Tail Rotor Servo Cylinder Assembly).

(2) DA Form 2408-13, Aircraft Status Information Record.

(3) DA Form 2408-13-1, Aircraft Inspection and Maintenance Record.

(4) DA Form 2408-15, Historical Record for Aircraft.

(5) DA Form 2408-16, Aircraft Component Historical Record (If replacement required). If the Tail Rotor Servo Cylinder is in stock complete DA Form 2410 Documenting Change from Serviceable to Unserviceable Condition per DA PAM 738-751 page 155.

(6) DA Form 2410, Component Removal and Repair/Overhaul Record (If Tail Rotor Servo Cylinder is Removed/Replace).

15. Weight and Balance. N/A.

16. Points of Contact.

a. Technical point of contact for this TB is Mr. Robert X. Tansey, AMSAT-R-ECU, DSN 693-0436 or commercial (314)263-0436.

b. Logistical point of contact for this TB is Mr. Joe Hoover, SFAE-AV-BH-L, DSN 693-0484 or commercial (314)263-0484, FAX: DSN 693-1898, E-Mail hoover4 peo2.stl.army.mil.

c. Forms and records point of contact for this TB is Ms. Ann Waldeck AMSAT-I-MDM, DSN 490-2318 or commercial (314)260-2318.

d. Material Management (SPARES) point of contact is Dan Delao, AMSAT-1-SABA, DSN 693-6058 or commercial 314/263-6058.

e. Safety point of contact for this TB is Mr. jim Walkins, AMSAT-R-X, DSN 693-2258 or commercial (314)263-2258.

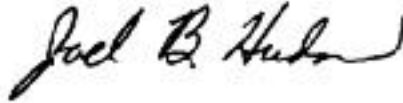
f. Foreign Military Sales (FMS) recipients requiring clarification of action advised by this TB should contact Mr. Ron Van Rees, AMSAT-D-IAF, DSN 693-3826/3659 or commercial (314)263-3826/3659.

g. After hours contact ATCOM Command Operations Center (COC) DSN 693-2066/2067 or commercial (314)263-2066/2067.

17. Reporting of Errors and Recommending Improvements. You can help improve this TB. If you find any mistakes or if you know of a way to improve these procedures, please let us know. Mail your letter or DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to: Commander, US Army Aviation and Troop Command, ATTN: AMSAT-I-MP, 4300 Goodfellow Blvd., St. Louis, MO 63120-1798. A reply will be furnished to you. You may also submit your recommended changes by E-mail directly to <mpmt%avma28@st-louis-emh7.army.mil>. A reply will be furnished directly to you. Instructions for sending an electronic 2028 may be found at the back of this manual.

By Order of the Secretary of the Army:

Official:



JOEL B. HUDSON
*Administrative Assistant to the
Secretary of the Army*
03243

DENNIS J. REIMER
*General, United States Army
Chief of Staff*

DISTRIBUTION:

To be distributed in accordance with DA Form 12-31-E, block no. 3648, requirements for TB 1-1520-237-20-188.

These are the instructions for sending an electronic 2028


The following format must be used if submitting an electronic 2028. The subject line must be exactly the same and all fields must be included; however only the following fields are mandatory: 1, 3, 4, 5, 6, 7, 8, 9, 10, 13, 15, 16, 17, and 27.

From: "Whomever" <whomever@avma27.army.mil>
To: mpmr/oavma28@st-louis-emh7.army.mil
Subject: DA Form 2028

1. **From:** Joe Smith
2. Unit: home
3. **Address:** 4300 Park
4. **City:** Hometown
5. **St:** MO
6. **Zip:** 77777
7. **Date Sent:** 1 9-OCT-93
8. **Pub no:** 55-2840-229-23
9. **Pub Title:** TM
10. **Publication Date:** 04-JUL-85
11. Change Number: 7
12. **Submitter Rank:** MSG
13. **Submitter FName:** Joe
14. **Submitter MName:** T
15. **Submitter LName:** Smith
16. **Submitter Phone:** 123-123-1234
17. **Problem:** 1
18. Page: 2
19. Paragraph: 3
20. Line: 4
21. NSN: 5
22. Reference: 6
23. Figure: 7
24. Table: 8
25. Item:9
26. Total: 123
27. **Text:**

This is the text for the problem below line 27.

RECOMMENDED CHANGES TO EQUIPMENT TECHNICAL PUBLICATIONS

 <p style="font-size: 1.2em; font-weight: bold;">SOMETHING WRONG WITH PUBLICATION</p>		FROM: (PRINT YOUR UNIT'S COMPLETE ADDRESS)					
		DATE SENT					
PUBLICATION NUMBER	PUBLICATION DATE	PUBLICATION TITLE					
<p>BE EXACT PIN-POINT WHERE IT IS</p>				<p>IN THIS SPACE, TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT.</p>			
PAGE NO.	PARA-GRAPH	FIGURE NO.	TABLE NO.				
PRINTED NAME, GRADE OR TITLE AND TELEPHONE NUMBER				SIGN HERE			

The Metric System and Equivalents

Linear Measure

1 centimeter = 10 millimeters = .39 inch
 1 decimeter = 10 centimeters = 3.94 inches
 1 meter = 10 decimeters = 39.37 inches
 1 dekameter = 10 meters = 32.8 feet
 1 hectometer = 10 dekameters = 328.08 feet
 1 kilometer = 10 hectometers = 3,280.8 feet

Weights

1 centigram = 10 milligrams = .15 grain
 1 decigram = 10 centigrams = 1.54 grains
 1 gram = 10 decigrams = .035 ounce
 1 decagram = 10 grams = .35 ounce
 1 hectogram = 10 decagrams = 3.52 ounces
 1 kilogram = 10 hectograms = 2.2 pounds
 1 quintal = 100 kilograms = 220.46 pounds
 1 metric ton = 10 quintals = 1.1 short tons

Liquid Measure

1 centiliter = 10 milliliters = .34 fl. ounce
 1 deciliter = 10 centiliters = 3.38 fl. ounces
 1 liter = 10 deciliters = 33.81 fl. ounces
 1 dekaliter = 10 liters = 2.64 gallons
 1 hectoliter = 10 dekaliters = 26.42 gallons
 1 kiloliter = 10 hectoliters = 264.18 gallons

Square Measure

1 sq. centimeter = 100 sq. millimeters = .155 sq. inch
 1 sq. decimeter = 100 sq. centimeters = 15.5 sq. inches
 1 sq. meter (centare) = 100 sq. decimeters = 10.76 sq. feet
 1 sq. dekameter (are) = 100 sq. meters = 1,076.4 sq. feet
 1 sq. hectometer (hectare) = 100 sq. dekameters = 2.47 acres
 1 sq. kilometer = 100 sq. hectometers = .386 sq. mile

Cubic Measure

1 cu. centimeter = 1000 cu. millimeters = .06 cu. inch
 1 cu. decimeter = 1000 cu. centimeters = 61.02 cu. inches
 1 cu. meter = 1000 cu. decimeters = 35.31 cu. feet

Approximate Conversion Factors

<i>To change</i>	<i>To</i>	<i>Multiply by</i>	<i>To change</i>	<i>To</i>	<i>Multiply by</i>
inches	centimeters	2.540	ounce-inches	Newton-meters	.007062
feet	meters	.305	centimeters	inches	.394
yards	meters	.914	meters	feet	3.280
miles	kilometers	1.609	meters	yards	1.094
square inches	square centimeters	6.451	kilometers	miles	.621
square feet	square meters	.093	square centimeters	square inches	.155
square yards	square meters	.836	square meters	square feet	10.764
square miles	square kilometers	2.590	square meters	square yards	1.196
acres	square hectometers	.405	square kilometers	square miles	.386
cubic feet	cubic meters	.028	square hectometers	acres	2.471
cubic yards	cubic meters	.765	cubic meters	cubic feet	35.315
fluid ounces	milliliters	29.573	cubic meters	cubic yards	1.308
pints	liters	.473	milliliters	fluid ounces	.034
quarts	liters	.946	liters	pints	2.113
gallons	liters	3.785	liters	quarts	1.057
ounces	grams	28.349	liters	gallons	.264
pounds	kilograms	.454	grams	ounces	.035
short tons	metric tons	.907	kilograms	pounds	2.205
pound-feet	Newton-meters	1.356	metric tons	short tons	1.102
pound-inches	Newton-meters	.11296			

Temperature (Exact)

°F	Fahrenheit temperature	5/9 (after subtracting 32)	Celsius temperature	°C
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PIN: 075335-000