URGENT

TB 1–1520–240–20–137

DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

UNGROUNDING REQUIREMENTS FOR ALL CH–47D, MH–47D AND MH–47E AIRCRAFT WITH INCORRECTLY INSTALLED DROOP STOPS

Headquarters, Department of the Army, Washington, D. C.
23 February 2001

NOTE

THIS PUBLICATION IS EFFECTIVE UNTIL RESCINDED OR SUPERSEDED.

1. Priority Classification. Urgent

NOTE

In accordance with AR 95–1, paragraph 6-6A, MACOM Commanders may authorize temporary exception from ASAM message requirements. Exception may only occur when combat operations or matter of life or death in civil disasters or other emergencies are so urgent that they override the consequences of continued aircraft operation.

a. Aircraft in Use. Upon receipt of this Technical Bulletin, make the following entry on the DA Form 2408–13–1. Enter a red horizontal dash //**–**// status symbol with the following statement: "Inspect aircraft in accordance with SOF CH-47-01-03, (TB 1-1520-240-20-137) prior to next engine start (rotors turning) but no later than 23 FEB 01." Clear the red horizontal dash // **–** // entry when the procedures in accordance with paragraphs 8 and 9 are completed. Commanders who are unable to comply with the requirements of this Technical Bulletin within the time frame specified will upgrade the affected aircraft status symbol to a red //**X**//.

b. Aircraft in Maintenance Facility –

(1) Aircraft in AVUM, AVIM or Depot – Same as paragraph 1a.

(2) Aircraft at Contractor Facility – Boeing will inspect DD250 aircraft prior to those aircraft departing for ferry to final destination.

c. Aircraft in Transit – Same as paragraph 1a.

d. Maintenance Trainers (category A and B) – Same as paragraph 1a.

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

This TB supersedes USAAMCOM Message 161845Z FEB 01 SOF CH–47–01–03.

(1) Wholesale Stock – N/A

(a) Retail Stock – Report receipt of this Technical Bulletin in accordance with paragraph 14c (2). Upon receipt of this message, Commanders and Facility Managers maintaining retail stock at installation level and below shall contact the supported aviation unit to perform the procedures required in accordance with paragraphs 8 and 9 on suspect materiel. Commanders will ensure the materiel condition tags of all items in all condition codes listed in paragraphs 8 and 9 on suspect materiel. Commanders will ensure the materiel condition tags of all items in all condition codes listed in paragraphs 6 and 7 are annotated to read "CH–47–01–03 (TB 1–1520–240–20–137), inspection of droop stop not complied with." Dispose of discrepant materiel in accordance with paragraph 10. Report compliance with this Technical Bulletin in acordance with paragraph 14d(2).

f. Components/Parts in Work (Depot Level and Others) – Depot and other Maintenance Activity Commanders will ensure items listed in paragraphs 6 and 7 are not issued until they are in compliance with this Technical Bulletin.

2. **Task/Inspection Suspense Date.** Complete the inspection and correction procedures in accordance with paragraphs 8 and 9 prior to next engine start (rotors turning), but no later than 23 February 2001.

3. **Reporting Compliance Suspense Date**. Report compliance in accordance with paragraph 14a no later than 22 February 2001.

4. **Summary of the Problem**.

a. While conducting an accident investigation, incorrectly installed droop stops were discovered. Safety of Flight message CH–47–01–02 was issued calling for a one time inspection on forward and aft droop stops for proper installation.

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

c. The purpose of this Technical Bulletin is to –

(1) Identify an additional authorized aft droop stop configuration.

(a) Provide instructions for correcting those aircraft which have their droop stops installed incorrectly.

5. **End Items to be inspected**. All H–47 series aircraft.

6. **Assembly Components to be Inspected**.

NOMENCLATURE	PART NUMBER	NATIONAL STOCK NUMBER
FWD ROTOR HEAD	145R2003-All	N/A
AFT ROTOR HEAD	145R2004-All	N/A

7. **Parts to be Inspected**.

NOMENCLATURE	PART NUMBER	NATIONAL STOCK NUMBER
DROOP STOP, FWD	114R2063-7	1615-00-967-9759
DROOP STOP, AFT	114R2087-2	1615-00-941-8730
DROOP STOP, AFT	114r2087-3	1615-01-199-1785
PITCH SHAFT	114R2088-7	1615-00-757-7115
PITCH SHAFT	114R2088-14	3040-00-919-1356
PITCH SHAFT	114R2088-15	1615-01-111-4313
PITCH SHAFT	114R2088-16	3040-01-105-1431
PITCH SHAFT	234R2088-1	1615-01-205-3921
PITCH SHAFT	234R2088-2	3040-01-206-3925

8. Inspection Procedures.

a. Inspect the aircraft DA Form 2408-13-1 for a red //**X**// entry which states, “Aircraft grounded in accordance with SOF CH-47-01–02 for improperly installed droop stop(s).” If this write–up exists, proceed to paragraph 9 for correction procedures.

NOTE

For a description of the inspectioin requirements of this Technical Bulletin, refer to the following wedsite –
http://safety.army.mil/messages/droopstopupdate.html

b. Aircraft which do not have the above restriction are not affected by this Technical Bulletin and red //**–**// may be cleared for flight and compliance with this Technical Bulletin will be noted.

9. Correction Procedures.

a. Prepare aircraft for safe ground maintenance.

WARNING

Numerous cases of improper stenciling of the droop stops have been identified. They range from improper marking, to missing/unreadable stenciling. The correct droop stop installation at this time shall be identified by the chamfered edge of the droop stop facing the radius of the pitch shaft droop stop boss. Separate instructions will be provided by the CH–47 PMO customer service department concerning the requirement to properly mark the droop stops.

b. If the red //**X**// entry identified in 8a above was required due to the forward droop stops being incorrectly installed, remove and replace rotor head assembly in accordance with Reference 13b, Task 5-8 and 5-9, Reference 13c, Task 5-9 and 5-10.

c. If the red //**X**// entry identified in 8a above was required due to the aft droop stops not meeting the configuration requirements identified in CH–47–01–02, paragraph 8c(1) (i.e. the droop stop does not have the two additional outboard holes required for droop stop shield), inspect as follows to determine if the 114R2087-2 stop which is an authorized configuration is installed. The 114R2087-2 aft droop stop has two chamfered edges, but only two holes used for droop stop installation. The two hole/two chamfer aft droop stopconfiguration (part number 114R2087-2) is authorized and must be installed correctly. The side with the mounting holes shall have the chamfer upward in the radius of the pitch shaft droop stop boss.

d. If the red //**X**// entry identified in 8a above was required due to aft droop stops being incorrectly installed, perform the following –

(1) Remove incorrectly installed droop stop in accordance with Reference 13b, Task 5-48 (CH/MH-47D) and Reference 13c, Task 5-59 (MH-47E). The droop stop bolts and washers shall be disposed of and not reused.

(2) Visually inspect the aft rotor head assembly as follows –

(a) Pitch shaft boss droop stop mounting holes for evidence of elongation or scoring. No elongation or scoring is allowed. Inspect per Reference 13.e, Paragraph 3-22. Hole diameter shall not exceed 0.287 inches.

(b) Pitch shaft droop stop boss radius for evidence of droop stop contact. No paint damage or denting in the radius area is allowed.

(c) Evidence of contact between the improperly installed droop stop and the hub web. No evidence of contact shall be permitted.

(d) If damage is found on the pitch shaft or hub, the rotor head is considered unserviceable and must be removed and replaced in accordance with Reference 13b, Task 5-8 and 5-9, Reference 13c, Task 5-9 and 5-10.

(3) If pitch shaft and hub are undamaged, install droop stop using new stop, bolts, and washers in accordance with Reference 13b, Task 5-48(CH/MH-47D) and Reference 13c, Task 5-59 (MH-47E). Install with chamfered edge in the radius of the pitch shaft droop stop boss.

e. Submit a category I deficiency report for all unserviceable rotor head assemblies removed via this message.

f. After completion of above corrective procedures the red //**X**// entry and the red //**–**// entry may be cleared and compliance with this Technical Bulletin noted.

10. **Supply/Parts and Disposition**.

a. Parts Required – Items cited in paragraphs 6 and 7 may be required to replace defective items.

b. Requisitioning Instructions – Requisition replacement parts using normal supply procedures. All requisitions shall use Project Code (CC 57-59) “X1A” (X-RAY-ONE-ALPHA).

NOTE

Project Code “X1A” is required to track and establish a data base of stock fund expenditures incurred by the field as a result of SOF actions.

c. Bulk and Consumable Materials – N/A.

d. Disposition – Dispose of removed parts/components using normal supply procedured. All turn–in documents must include Project code (CC 57-59) “X1A”.

e. Disposition of Hazardous Material – N/A.

11. **Special Tools and Fixtures Required**. N/A.

12. **Application**.

a. Category of Maintenance – AVUM. Aircraft downtime will be charged to AVUM. Report aircraft non–mission capable maintenance (NMCM) while undergoing inspection and correction in accordance with this Technical Bulletin.

b. Estimated Time Required-

(1) Time required to complete inspection – Total of 1 man-hour using 1 person.

(2) Time required for droop stop replacement –

(a) Total of 8 man-hours using 2 persons.

(b) Total of 4 hours downtime for one end item.

(3) Time required for rotor head replacement –

(a) Total of 30 man-hours using 5 persons.

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

c. Estimated Cost Impact to the Field –

NOMENCLATURE	PART NO./NSN	QUANTITY	COST EACH	TOTAL
ROTOR HEAD, AFT	145R2004-20/ 1615-01-391-4399	1	$167,729.00	$167,729.00
ROTOR HEAD, FWD	145R2003-10/ 1615-01-391-4398	1	$167,729.00	$167,729.00
BOLT	NAAS624H7/ 5306-00-862-8202	12	$7.50	$90.00

DROOP STOP, AFT	114R2087-3/ 1615-01-199-1785	3	$134.12	$402.36
DROOP STOP, FWD	114R2063-7/ 1615-00-967-9759	3	$27.95	$83.85
WASHER	BACW10DH-C4/ 5310-01-143-6570	12	$0.21	$2.52

Maximum Cost Per Aircraft – $335,458.00
(This cost is the maximum cost per aircraft. If the rotor head is replaced, the additional parts listed above are included with the rotor head)

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 – TM 55-1520-240-23 and TM 1-1520-252-23 will be updated to reflect this message. A copy of this Technical Bulletin shall be inserted in the appropriate TM as authority to implement the change until the printed change is received.

13. **References.**

a. DA PAM 738–751.

b. TM 55-1520-240-23.

c. TM 1-1520-252-23.

d. SOF CH-47-01-02.

e. TM 1-1500-204-23-9

14. **Recording and Reporting Requirements**.

a. Reporting Compliance Suspense Date (Aircraft). Upon entering requirements of this Technical Bulletin on DA Form 2408-13-1 on all subject MDS aircraft, Commanders will forward a priority message, datafax or e-mail to Commander, AMCOM, ATTN: AMSAM–SF–A (SOF Compliance Officer), Redstone Arsenal, AL 35898-5000, in accordance with AR 95-1. Datafax number is DSN 897–2111 or commercial (256) 313–2111. E-Mail address is “safeadm@redstone.army.mil”. The report will cite this message and Technical Bulletin 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 the inspection/correction procedures, Commanders will forward a priority message to the logistics point of contact in paragraph 16b. The report will cite this Technical Bulletin, date of inspection, date of correction, aircraft serial number, aircraft hours, and results of the inspection/correction. Inspection/correction and reports will be completed no later than 14 days after completion of corrective action.

c. Reporting Message Receipt (SPARES).

(1) Materiel in Wholesale Depot Storage – N/A.

(2) Materiel in Retail Storage – Commanders and Facility Managers will report receipt of this Technical Bulletin by e-mail or datafax to the logistical point of contact listed in paragraph 16b no later than 22 February 2001. Provide local point of contact.

d. Task/Inspection Reporting Suspense Date (SPARES).

(1) Materiel in Wholesale Depot Storage – N/A.

(2) Materiel in Retail Storage – Commanders and Facility Managers will report compliance with this Technical bulletin to the logistical point of contact in paragraph 16b no later than 01 March 2001. Report the quantity inspected by condition code and the resulting condition code. Report by e-mail or datafax and provide local point of contact.

e. The following Forms are applicable and are to be completed in accordance with DA Pam 738–751, 15 Mar 99 –

NOTE
ULLS–A users will use applicable "E" Forms.

(1) DA Form 2408-5-1, Equipment Modification Record (Forward and Aft Rotor Heads)

(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.

(6) DA Form 222410, Component Removal and Repair/Overhaul Record (only if rotor head or pitch shaft is removed or replaced).

(7) DD Form 1577-2/DD Form 1577-3, Unserviceable (repairable) Tag/Label – Materiel (color green). Annotate remarks block with "Unserviceable in accordance with CH-47-01-03 (TB 1-1520-240-20-137)".

15. **Weight and Balance**. N/A.

16. **Points of Contact**.

a. Technical point of contact is Larry Wieschhaus, AMSAM-RD-AE-I-P-C, DSN 897-3341 or commercial (256) 313-3341, datafax is (256) 313-4348. E-mail is "larry.wieschhaus@redstone.army.mil".

b. Logistical point of contact is Mr. Bill Olson, SFAE-AV-CH-L, DSN 897-3379 or commercial (256) 313-3379, datafax is DSN 897-4348. E–mail is "william.olson@peoavn.redstone.army.mil".

c. Wholesale Materiel point of contact (SPARES) is Ms. Geri Reddy, AMSAM-MMC-AV-CA, DSN 897-1511 or commercial (256) 313-1511, datafax is DSN 897-1106. E-mail is "geri.reddy@redstone.army.mil".

d. Forms and Records point of contact is Ms. Ann Waldeck, AMSAM-MMC-MA-NM, DSN 746-5564 or commercial (256) 876-5564, datafax is DSN 746-4904. E–mail is "ann.waldeck@redstone. army.mil".

e. Safety points of contact are –

(1) Primary – Mr. Randall Rushing (SAIC), AMSAM-SF-A, DSN 897-2092 or commercial (256) 313-2092 datafax is DSN 897–2111 or commercial (256) 313-2111. E–mail is "randall.rushing@redstone.army.mil".

(2) Alternate – Mr. Russell Peusch, AMSAM-SF-A, DSN 788-8632 or commercial (256) 842–8632, datafax is DSN 897–2111 or commercial (256) 313–2111. E–mail is "russel.peusch@redstone.army.mil".

f. Foreign Military Sales recipients requiring clarification of action advised by this Technical Bulletin should contact:

(1) CW5 Joseph L. Wittstrom, Security Assistance Management, AMSAM-SA, DSN 897-0410 or commercial (256) 313-0410. E–mail is "joseph.wittstrom@redstone.army.mil"

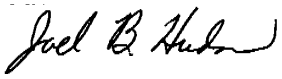
(2) Mr. Ronnie W. Sammons, AMSAM-SA-CS-NF, DSN 897-0408 or commercial (256) 313-0408, datafax is DSN 897-0411 or commercial (256) 313-0411. E–mail is "ronnie.sammons@redstone.army.mil".

g. After hours contact the AMCOM COMMAND OPERATIONS CENTER (COC) DSN 897-2066/7 or commercial (256) 313-2066/7. Huntsville, AL is GMT minus 6 hours.

By Order of the Secretary of the Army:

Official:

ERIC K. SHINSEKI
General, United States Army
Chief of Staff



JOEL B. HUDSON
Administrative Assistant to the
Secretary of the Army
0105402

DISTRIBUTION:
To be distributed in accordance with Initial Distribution Number (IDN) 313971, requirements for TB 1-1520-240-20-137.

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: <ls-lp-@redstone.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:*** 19–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.

PIN: 078919-000

RECOMMENDED CHANGES TO EQUIPMENT TECHNICAL PUBLICATIONS

THEN...JOT DOWN THE DOPE ABOUT IT ON THIS FORM. CAREFULLY TEAR IT OUT, FOLD IT AND DROP IT IN THE MAIL.

SOMETHING WRONG WITH PUBLICATION

FROM: (PRINT YOUR UNIT'S COMPLETE ADDRESS)

DATE SENT

PUBLICATION NUMBER	PUBLICATION DATE	PUBLICATION TITLE

BE EXACT PIN-POINT WHERE IT IS

PAGE NO.	PARA-GRAPH	FIGURE NO.	TABLE NO.

IN THIS SPACE, TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT.

PRINTED NAME, GRADE OR TITLE AND TELEPHONE NUMBER	SIGN HERE

TEAR ALONG PERFORATED LINE

DA FORM 1 JUL 79 2028-2

PREVIOUS EDITIONS ARE OBSOLETE.

P.S.--IF YOUR OUTFIT WANTS TO KNOW ABOUT YOUR RECOMMENDATION MAKE A CARBON COPY OF THIS AND GIVE IT TO YOUR HEADQUARTERS.

THE METRIC SYSTEM AND EQUIVALENTS

'NEAR MEASURE

. Centimeter = 10 Millimeters = 0.01 Meters = 0.3937 Inches
1 Meter = 100 Centimeters = 1000 Millimeters = 39.37 Inches
1 Kilometer = 1000 Meters = 0.621 Miles

'VEIGHTS

Gram = 0.001 Kilograms = 1000 Milligrams = 0.035 Ounces
1 Kilogram = 1000 Grams = 2.2 lb.
1 Metric Ton = 1000 Kilograms = 1 Megagram = 1.1 Short Tons

LIQUID MEASURE

1 Milliliter = 0.001 Liters = 0.0338 Fluid Ounces
1 Liter = 1000 Milliliters = 33.82 Fluid Ounces

SQUARE MEASURE

1 Sq. Centimeter = 100 Sq. Millimeters = 0.155 Sq. Inches
1 Sq. Meter = 10,000 Sq. Centimeters = 10.76 Sq. Feet
1 Sq. Kilometer = 1,000,000 Sq. Meters = 0.386 Sq. Miles

CUBIC MEASURE

1 Cu. Centimeter = 1000 Cu. Millimeters = 0.06 Cu. Inches
1 Cu. Meter = 1,000,000 Cu. Centimeters = 35.31 Cu. Feet

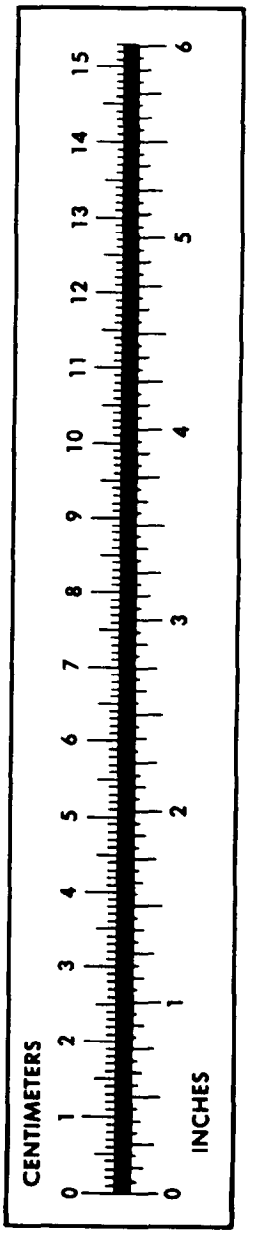
TEMPERATURE

5/9(°F - 32) = °C
212° Fahrenheit is evuivalent to 100° Celsius
90° Fahrenheit is equivalent to 32.2° Celsius
32° Fahrenheit is equivalent to 0° Celsius
9/5C° + 32 =°F

APPROXIMATE CONVERSION FACTORS

TO CHANGE	TO	MULTIPLY BY
Inches	Centimeters	2.540
Feet	Meters	0.305
Yards	Meters	0.914
Miles	Kilometers	1.609
Square Inches	Square Centimeters	6.451
Square Feet	Square Meters	0.093
Square Yards	Square Meters	0.836
Square Miles	Square Kilometers	2.590
Acres	Square Hectometers	0.405
Cubic Feet	Cubic Meters	0.028
Cubic Yards	Cubic Meters	0.765
Fluid Ounces	Milliliters	29.573
ıts	Liters	0.473
arts	Liters	0.946
allons	Liters	3.785
Ounces	Grams	28.349
Pounds	Kilograms	0.454
Short Tons	Metric Tons	0.907
Pound-Feet	Newton-Meters	1.356
Pounds per Square Inch	Kilopascals	6.895
Miles per Gallon	Kilometers per Liter	0.425
Miles per Hour	Kilometers per Hour	1.609

TO CHANGE	TO	MULTIPLY BY
Centimeters	Inches	0.394
Meters	Feet	3.280
Meters	Yards	1.094
Kilometers	Miles	0.621
Square Centimeters	Square Inches	0.155
Square Meters	Square Feet	10.764
Square Meters	Square Yards	1.196
Square Kilometers	Square Miles	0.386
Square Hectometers	Acres	2.471
Cubic Meters	Cubic Feet	35.315
Cubic Meters	Cubic Yards	1.308
Milliliters	Fluid Ounces	0.034
Liters	Pints	2.113
Liters	Quarts	1.057
ers	Gallons	0.264
ms	Ounces	0.035
ograms	Pounds	2.205
Metric Tons	Short Tons	1.102
Newton-Meters	Pounds-Feet	0.738
Kilopascals	Pounds per Square Inch	0.145
lometers per Liter	Miles per Gallon	2.354
meters per Hour	Miles per Hour	0.621



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