URGENT

***TB 1–1520–210–20–45**

DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

ONE TIME INSPECTION OF FUEL QUANTITY TRANSMITTER FOR ALL UH–1H/V SERIES AIRCRAFT

Headquarters, Department of the Army, Washington, D. C.
3 September 1999

NOTE

The following areas have been corrected since transmission of message UH–1–99–ASAM–03: P/N in paragraphs 6, 12.c. and paragraph 9.d.

1. Priority Classification. URGENT

NOTE

See AR 95–1, paragraph 6–6.a., for noncompliance authority of major commanders.

a. Aircraft in Use. Upon receipt of this message/Technical Bulletin (TB), the condition status symbol of the cited aircraft will be changed to a **red horizontal dash //–//** The **red horizontal dash //–//** may be cleared when the inspection of paragraph 8 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 message/TB within the time frame will cause the status symbol to be upgraded to a **red X**.

b. Aircraft in Depot Maintenance. Aircraft will not be issued until compliance with this message/TB has been completed.

c. Aircraft Undergoing Maintenance. Aircraft will not be released until compliance with this message/TB has been completed.

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, B, and Others). N/A.

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

g. Components/Parts in Work. (Depot Level and Others) N/A.

* This TB supersedes USAAMCOM Aviation Safety Action Message 231839Z, Aug 99, UH–1–99–ASAM–03.

2. Task/Inspection Suspense Date. Within next 50 flight hours/60 days.

3. Reporting Compliance Suspense Date. No later than 14 Sept 1999 IAW paragraph 14.a. of this message/TB.

4. Summary of the Problem.

a. Electrical leads from the center aft fuel cell fuel quantity transmitter have been found chafing against the fuel quantity transmitter mounting bracket. The wire insulation was completely chafed through and electrical arcing was evident. Chafing in this area is a known problem. Although instructions are provided in the UH–1 maintenance manual to route wires correctly to preclude chafing, chafing continues to be a problem.

NOTE

Some aircraft are equipped with an external fuel system (EFS) that modified the access panel on which the fuel quantity transmitter is mounted. The EFS was installed on selected National Guard aircraft via an airworthiness release.

Although chafing has not been reported on aircraft equipped with the EFS, the fuel quantity probe is oriented similarly and the potential does exist for chafing. In light of this most recent report, a method has been developed to protect these leads from chafing.

b. For Manpower/Downtime and Funding Impacts. See paragraph 12.

c. The purpose of this TB is to:

(1) Require a one time inspection for chafing fuel quantity transmitter leads.

(2) Require a protective spiral wrap be installed to protect the fuel quantity transmitter leads from future chafing.

5. End Items to be inspected. All UH–1H/V series aircraft.

6. Assembly Components to be Inspected..

NOMENCLATURE	PART NUMBER	NATIONAL STOCK NUMBER
Fuel Quantity Transmitter	205–061–633–13	6680–00–758–2816

7. Parts to be Inspected. N/A.

8. Inspection Procedures.

NOTE

Items peculiar to the EFS are not identified in the UH–1 maintenance manual or the Repair Parts and Special Tools List. EFS peculiar items are identified and referenced in “EFS Maintenance Instruction UH–1 Helicopter” (TM 1–1560–311–23&P). This is a commercial publication and is not supported by, nor available through, normal Department of the Army publication distribution. This manual is provided to each EFS fielding location.

a. Defuel aircraft.

(1) Non–EFS – IAW chapter 1 of TM 55–1520–210–23–1.

(2) EFS – IAW EFS Maintenance Instruction UH–1 Helicopter, paragraph 5.4.

b. Gain access to aft center fuel cell access door.

(1) Non–EFS – TM 55–1520–210–23P–2, figure 328, item 84.

(2) EFS – IAW EFS Maintenance Instruction UH–1 Helicopter, figure 20, item 2.

c. Disconnect electrical leads and vent line from connectors on aft center fuel cell access door.

d. Non–EFS only.

(1) Remove access door, tilting and turning as necessary to allow attached fuel quantity transmitter and float switches to pass through access port.

(2) Cover exposed open port.

e. EFS only.

(1) Disconnect frangible fittings IAW EFS Maintenance Instruction UH–1 Helicopter, figure 19, items 2 and 3, from aft center fuel cell access door.

(2) Detach access door by removing four retainers, eight bolts, washers, sixteen screws and washers.

(3) Pull the access door out approximately 3 1/2 inches and remove bolts and washers (4 each) from upper and lower fuel quantity transmitter support brackets. Disconnect electrical leads and carefully remove access door. Remove fuel quantity transmitter and mounting brackets from fuel cell. Cover exposed open port.

NOTE

Examples of chafing fuel probe wires can be found by accessing the utility helicopter web site at URL www.uhpo.redstone.army.mil. After accessing site, go to SAFETY, then Aviation Safety Action Messages (ASAM). Access to the web site is controlled. Procedures to obtain logon ID are accessible by clicking the register button.

f. Inspect both fuel quantity transmitter wire leads and the mounting bracket P/N 5340–UH–1–6821, (TM 55–1520–210–23P–2, figure 328, item 99) for signs of chafing. Because fuel quantity transmitters are sometimes replaced, chafing may not be evident on wire leads but brackets may show signs of chafing from a previous installation.

g. If wire leads exhibit worn or chafing insulation, accomplish the correction of paragraph 9.a.

h. Wire leads that do not exhibit worn or chafed insulation must still be protected from future chafing by accomplishing the corrections of paragraph 9.b.

9. Correction Procedures.

a. If wire leads exhibit worn or chafed insulation, replace fuel quantity transmitter, P/N 205–061–633–13, (TM 55–1520–210–23P–2, figure 328, item 107) with serviceable one from supply. Accomplish the installation of plastic spiral wrap tubing per paragraph 9.b. prior to installing the fuel quantity transmitter on the aircraft.

b. For all new and existing fuel quantity transmitters with wires not exhibiting worn or chafed insulation, install plastic spiral wrap tubing, identified in paragraph 10.c. as follows:

(1) Electrical connectors should be disconnected at the access panel.

(2) Install spiral wrap for the entire free length of both wire leads. Each wire is to be wrapped individually. The spiral wrap will have a more snug fit on the coax wire lead.

(3) To allow for some flexibility and movement of the spiral wrap, assure that a small gap is present between the wire connector and the end of the tubing.

NOTE

Pictures depicting proper wire routing are located on the Utility Helicopter web site at URL www.uhpo.redstone.army.mil.

(4) Route wire leads (spiral wrap installed) through the loop created by the electrical tie–down strap. P/N MS3367–1–9, (TM 55–1520–210–23P–2, figure 328, item 98) attaching the fuel quantity transmitter to the upper mounting bracket. This will prevent excessive movement of the wire caused by sloshing fuel.

(5) Non–EFS only – Re–attach electrical leads to connectors on access cover and reinstall access cover per instructions of paragraph 8–257, TM 55–1520–210–23–2.

(6) EFS only – Reinstall access cover per instructions of paragraph 9.27, EFS Maintenance Instruction UH–1 Helicopter. Make sure that electrical leads from the fuel quantity transmitter are reattached to the connectors on the access cover. This step has been erroneously left out of paragraph 9.27 for installation of the access cover.

c. Pressure test fuel cell per TM 55–1520–210–23–2, paragraph 10–19.

d. Test installation for leaks per TM 55–1520–210–23–2, paragraph 10–18.

10. Supply/Parts and Disposition.

a. Parts Required. Items cited in paragraph 6 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) **"XFY"** (X–RAY–FOXTROT–YANKEE).

NOTE

Project code "XFY" is required to track and establish a data base of stock fund expenditures incurred by the field as a result of ASAM/TB actions.

c. Bulk and Consumable Materials.

NOTE

The plastic spiral wrap tubing listed is fuel resistant. No substitutions authorized.

NOTE

The part number of the plastic spiral wrap tubing requisitioned through normal supply is different than the part number used by the manufacturer. They are, however, the same item. The manufacturer supplies the spiral wrap to another company, which in turn, sells it under its own part number to the government.

NOMENCLATURE	PART NUMBER	NATIONAL STOCK NUMBER
Preformed Packing	MS29513–270	5330–00–291–3272
Plastic Spiral Wrap Tubing	7148M86/P11	9330–01–288–4347

(1) Plastic spiral wrap tubing may be either requisitioned using normal supply procedures, or purchased directly from the manufacturer. Current stock levels at DLA will not support the required quantity re-

quired per this ASAM/TB, however, procurement actions are underway that will provide stock in the near future. If unavailable through normal supply procedures, direct purchase may be accomplished from the manufacturer by contacting M.M. Newman Corporation, 24 Tioga Way, P.O. Box 615, Marblehead, Ma. 01945, phone (800) 777–6309 or (781) 631–7100. Ask for the government sales representative and provide the following information –

Nomenclature	Part No.	Unit of Issue
Plastic Spiral Warp Tubing	HT 3/16T	100 FT. Rolls

(2) M.M. Newman Manufactures this tubing in several colors. To specify the color, simply add the color on the end of the part number (I.E., HT 3/16T BLACK). Black is the preferred color as it is the color in the government inventory. Clear (or natural) is acceptable if black is unavailable.

d. Disposition. Dispose of removed parts/components using normal supply procedures. All turn–in documents must include project code (cc 57–59) XFY.

e. Distribution of Hazardous Material. IAW environmental protection agency directives as implemented by your servicing environmental coordinator (AR 200–1).

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

12. Application.

a. Category of Maintenance. AVIM contractor team. Aircraft downtime will be charged to AVIM.

b. Estimated Time Required.

(1) Total of 6 man–hours using 1 person.

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

c. Estimated Cost Impact of Stock Fund Items to the Field.

NOTE

If purchased from the manufacturer, the cost of the plastic spiral wrap tubing is $213.68 per 100 ft. roll, plus a minimal shipping fee.

NOMENCLATURE	P/N	NSN	QTY.	COST EA.
Fuel Quantity Transmitter	205–061–633–13	6680–00–758–2816	1	$332.44
Preformed Packing	MS291513–270	5331–00–291–3272	1	$1.68
Plastic Spiral Wrap Tubing	7148M86	9330–01–288–4347	5 Ft.	$7.55

Total Cost Per Aircraft = $341.67

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 55–1520–210–23–2 and EFS Maintenance Instruction UH–1 Helicopter shall be changed to reflect this message/TB. A copy of this message/TB shall be inserted in the appropriate TM as authority to implement the change until the printed change is received.

13. References.

a. TM 55–1520–210–23–2.

b. TM 55–1520–210–23P–2.

c. EFS Maintenance Instruction UH–1 Helicopter.

14. Recording and Reporting Requirements.

a. Reporting Compliance Suspense Date (Aircraft). Upon entering requirements of this message/TB on DA Form 2408-13-1 on all subject MDS aircraft, forward a priority message, datafax or E–mail to CDR, AMCOM, ATTN: AMSAM–SF–A (SOF Compliance Officer) Redstone Arsenal, AL. 35898–5222**,** IAW 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/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). No special report of the results of this inspection is required.

c. Reporting Message Receipt Date (Spares).

(1) **Material in Wholesale Depot Storage.** N/A.

(2) **Material in Retail Storage.** N/A.

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

(1) **Material in Wholesale Depot Storage.** N/A.

(2) **Material in Retail Storage.** N/A.

e. The following forms are applicable and are to be completed in accordance with DA PAM 738-751, 15 March 1999:

NOTE

ULLS–A users will use applicable “E” forms.

(1) DA Form 2408–13, Aircraft Status Information Record.

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

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

15. Weight and Balance. N/A.

16. Points of Contact.

a. Technical point of contact for this message/TB is Mr. Ralph Vemmer, AMSAM–AR–E–I–B–U, DSN 645–0663 or commercial (256) 955–0663. Datafax is DSN 645–6590 or (256) 955–6590, E–mail is <ralph.vemmer@uh.redstone.army.mil>.

b. Logistical point of contact for this message/TB is Mr. Howard Reeves, AMSAM–DSA–UH–U, DSN 645–0624 or commercial (256) 955–0624. Datafax is DSN 645–6590 or (256) 955–6590. E–mail is <howard.reeves@uh.redstone.army.mil>.

c. Wholesale Materiel point of contact (Spares) is Ms. Brenda J. Cammon, AMSAM–MMC–VS–UN, DSN 897–1088 or commercial (256) 313–1088, Datafax is DSN 897–1558 or (256) 313–1558. E–mail is <cammon–bj@exchange1.redstone.army.mil>.

d. Forms and records point of contact for this message/TB is Ms. Ann Waldeck, AMSAM–MMC–RE–FF, DSN 746–5564 or commercial (256) 876–5564. Datafax is DSN 746–4904 or (256) 876–4904. E–mail is <waldeck–ab@redstone.army.mil>.

e. Safety point of contact for this message/TB is Mr. Robert Brock, AMSAM–SF–A, DSN 788–8632 or commercial (256) 842–8632, Datafax is DSN 897–2111 or (256) 313–2111. E–mail is <bob.brock@redstone.army.mil>.

f. Foreign Military Sales (FMS) recipients requiring clarification of action advised by this message/TB should contact either CW5 Joseph L. Wittstrom, Security Assistance Management, AMSAM–SA, DSN 897–0681 or commercial (256) 313–0681; E–mail is <wittstrom–jl@redstone.army.mil> or Mr. Ronnie W. Sammons, AMSAM–SA–CS–NF, DSN 897–0869 or (256) 313–0869; datafax is DSN 897–0411 or (256) 313–0411, E–mail is <sammons–rw@redstone.army.mil> (Huntsville, AL. is GMT minus 6 hrs).

g. After hours contact AMCOM Command Operations Center (COC) DSN 897–2066/2067 or commercial (256) 313–2066/2067.

17. Reporting of Errors and Recommending Improvements. You can 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 Missile Command, ATTN: AMSAM–MMC–LS–LP, Redstone Arsenal,Alabama 35898–5230. A reply will be furnished to you. You may also send in your comments electronically to our E–mail address: <is–lp@redstone.army.mil> or by datafax: DSN 788–6546 or commercial (256) 842–6546. Instructions for sending a 2028 by E–mail may be found at the back of some TM's.

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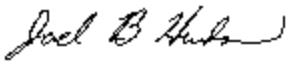

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