

URGENT

*TB 1-1520-244-20-50

DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

INSPECTION FOR RELAY, SOLID STATE, PART NUMBER 209-075-370-1, MANUFACTURED BY HI-G COMPANY, AH-1 SERIES AIRCRAFT

Headquarters, Department of the Army, Washington, D. C.
19 April 2000

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NOTE

THIS PUBLICATION IS EFFECTIVE UNTIL RESCINDED OR
SUPERSEDED.

1. Priority Classification. URGENT.

NOTE

IAW AR 95-1, paragraph 6-6.a., MACOM commanders may authorize temporary exception from ASAM message requirements. Exception may only occur when combat operations or matter or life or death in civil disasters or other emergencies are so urgent that they override the consequence of continued aircraft operation.

a. Aircraft in Use. Upon receipt of this TB, all cited aircraft with a condition status symbol of **Circled Red //X//** IAW AH-1-00-ASAM-05 (TB 1-1520-244-20-49), will have the **CIRCLED RED //X//** status cleared and changed to a **RED HORIZONTAL DASH //--//** IAW this TB. The **Red HORIZONTAL DASH //--//** entry shall state "Inspect for the Solid State Relay IAW AH-1-00-ASAM-07 (TB 1-1520-244-20-50) prior to the next flight, but NLT 15 May 2000 ." The **RED HORIZONTAL DASH //--//** may be cleared when the inspection IAW paragraph 8, and the correction procedures IAW paragraph 9 are completed. The affected aircraft shall be inspected prior to the next flight, but no later than 15 May 2000. Failure to comply with the requirements of this message within the time frame will cause the status symbol to be upgraded to a **RED //XI//**.

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

*This TB supersedes USAAMCOM Aviation Safety Action Message AH-1-00-ASAM-07 061207Z APR 00, and TB 1-1520-244-20-49, dated 3 March 2000.

c. **Aircraft Undergoing Maintenance.** Same as paragraph 1.b.

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).** Not applicable.

f. **Component/Parts in Stock at All Levels (Depot and Others) Including War Reserves.** Upon receipt of the message/TB, the material condition tags of all items in all condition codes listed in paragraph 7 shall be annotated to read "AH-1-00-ASAM-07, (TB 1-1520-244-20-50), AH-1 Series Aircraft, Relay, Solid State Part Number 209-075-370-1, Not Complied With".

(1) **Wholesale Stock.** Upon receipt of the message/TB, all serviceable items (condition codes A, B, C, D, and E) listed in paragraph 7 located in wholesale depot storage shall be placed in condition code "J" and tagged with a suspended tag/label - Materiel, DD Form 1575/DD Form 1575-1. Do not remove original condition tags.

(2) **Retail Stock.** Upon receipt of the message/TB, commanders and others maintaining retail stock at installation level and below shall contact the supported aviation unit to perform the inspection required by paragraph 8 and the correction procedures of paragraph 9 on discrepant materiel. Disposition of discrepant materiel will be IAW paragraph 10.

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

2. **Task/Inspection Suspense Date.** Inspection will be: .

a. Prior to next flight for all aircraft with ejection cartridges installed, TOW Missiles, Rockets, or 20mm ammunition on board, or the universal turret is active.

b. NLT 15 May 2000 for all other aircraft.

c. Report IAW paragraph 14.b.

3. **Reporting Compliance Suspense Date.** Report compliance IAW paragraph 14.a. no later than 27 April 2000.

4. **Summary of the Problem.**

a. ASAM AH-1-00-ASAM-05 (TB 1-1520-244-20-49) required the removal from service of all solid state relays manufactures by HI-G Company. The original logistics assessment used for that message was incorrect, and an unexpectedly large number of the suspect relays have been found installed on AH-1F aircraft. Supplies are not available to replace all affected relays at this time.

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

c. **The Purpose of this TB is to:**

(1) Provide additional guidance which will allow safe continued aircraft operation until replacement parts are available.

(2) Supersede AH-1-00-ASAM-05 (TB 1-1520-244-20-49).

5. **End Items to be inspected.** All AH-1 series aircraft.

6. **Assembly Components to be Inspected.** N/A.

7. **Parts to be Inspected.**

NOMENCLATURE	PART NUMBER	NATIONAL STOCK NUMBER
Relay, Hybrid	209-075-370-1	5945-00-177-2496

8. **Inspection Procedures.** The relay (P/N 209-075-370-1) manufactured by HI-G Company (Cage 02289) may be defective. The HI-G Company P/N 5600-S936 will also be found on the part.

NOTE

Other part number relays are not affected by this TB.

a. **Parts Installed on Aircraft.**

(1) Refer to TM 55-1520-236-23 series. Subject parts can be installed in the following locations:

- (a) 21K3 Jettison Switch Relay.
- (b) 19K82 Pilot Trigger Disable Relay.
- (c) 2K20 Reserve Current Control in Action Relay.

NOTE

No other relay positions are affected by this TB.

NOTE

Some AH-1F configurations do not use the relay, hybrid, P/N 209-075-370-1, in the 2K20 position. Verify the AH-1F configuration to determine if the relay, P/N 209-075-370-1, is applicable to that particular aircraft in the 2L20 location.

(2) Inspect all relays located in the positions identified in paragraph 8.a.(1). on the aircraft and determine if the vendor marking can be read.

(a) Parts that can be identified as being other than P/N 209-075-370-1, manufactured by HI-G Company, are acceptable. The **RED HORIZONTAL DASH //** will be cleared and compliance with this TB 1-1520-244-20-50 (AH-1-00-ASAM-07) will be noted.

NOTE

This also applies to aircraft where P/N 209-075-370-1 relay is not used in the 2K20 position.

(b) Parts identified as being P/N 209-075-370-1, manufactured by HI-G Company, or where the source cannot be identified, are not acceptable for use. Proceed to paragraph 9.a. for corrective action.

b. **Parts in Stock.** Inspect all relays in stock.

(1) Parts that can be identified as being other than P/N 209-075-370-1, manufactured by HI-G Company, are acceptable. Compliance with TB 1-1520-244-20-50 (AH-1-00-ASAM-07) will be noted. The part will be returned to the original condition tag.

(2) Parts identified as P/N 209-075-370-1, manufactured by HI-G Company, or where the source cannot be identified, are not acceptable for use. Proceed to paragraph 9.b. for corrective action.

9. Corrective Procedures.

a. Parts Installed on Aircraft.

(1) Replace the suspect relay with a serviceable one from stock that is not P/N 209-075-370-1, manufactured by HI-G Company. When all of the suspect parts have been replaced with a serviceable one from stock, the **HORIZONTAL RED DASH // - //** will be cleared. Compliance with TB 1-1520-244-20-50 (AH-1-00-ASAM-07) will be noted. Removal and replacement of suspect parts will be per TM 55-1520-236-23. Disposition of suspect parts will be IAW paragraph 10.d.

(2) If replacement parts are not available, requisition replacement parts immediately. Until replacement parts can be obtained, the suspect part may remain on the aircraft under the following conditions:

(a) Reverse current control in action relay, 2K20 - The suspect part may remain on the aircraft and a **RED DIAGONAL //V//** entry will be made. The **RED DIAGONAL** entry **//V//** will state "Relay, Hybrid, P/N 209-075-370-1, is in position 2K20 and a replacement has been requisitioned IAW AH-1-00-ASAM-07 (TB 1-1520-244-20-50)." This **RED DIAGONAL //V//** may be cleared when the suspect relay has been replaced. The 2K20 relay locks the reverse current relay on during turret operation to prevent contact chatter in the reverse current relay. Failure of the 2K20 relay may cause power fluctuations during turret operation.

NOTE

If power anomalies occur during turret operation, cease turret operation and diagnose the problem. Replace the 2K20 relay prior to further turret operation, if that is the source of the problem.

(b) Pilot trigger disable relay, 19K82 - The suspect part may remain on the aircraft and the aircraft status will be changed to **CIRCLED RED //X//**. The **CIRCLED RED //X//** entry will state "Relay, Hybrid, P/N 209-075-370-1, is in position 19K82. Pilot control of the gun during TOW engagement is restricted to Fixed Mode. A replacement part has been requisitioned IAW AH-1-00-ASAM-07 (TB 1-1520-244-20-50)." This **CIRCLED RED //X//** may be cleared when the suspect relay has been replaced. This **CIRCLED RED //X//** will not preclude the aircraft from being reported as FMC. This relay prevents the pilot from operating the gun during TOW firing. If the relay fails closed, the pilot will be unable to operate the gun at all times. If the relay fails open, the pilot will be able to operate the gun during TOW firing and potentially detonate a TOW Missile near the aircraft with gunfire. The "WPN CONTR" switch on the pilot armament control panel must be set to "Gunner" or "Fixed" during TOW firing, and not to "Pilot", when a suspect relay is present in the 19K82 position.

CAUTION

When firing TOW missiles with a suspect relay in position 19K82, ensure that the gun is under copilot control, fixed forward, or inactive.

(c) Jettison switch relay, 21K3 - The suspect part may remain on the aircraft and the aircraft status will be changed to a **Circled Red //X//**. The **Circled Red //X//** entry will state "Relay, Hybrid, P/N 209-075-370-1, is in position 21K3. Aircraft is restricted from carrying wing stores or jettison cartridges. A replacement part has been requisitioned IAW AH-1-00-ASAM-07 (TB 1-1520-244-20-50)." The **Circled Red //X//** may be cleared when the suspect relay has been replaced. If this relay fails closed, the jettison cartridges are activated as soon as a stores position is selected (jettison select) on the pilot miscellaneous control panel, without activation of the jettison switch. The jettison select switches should be kept in the OFF position until the relay is replaced. If this relay fails open, the pilot is unable to jettison stores in an emergency.

b. Parts in Stock at All Levels. If the part has been identified as being P/N 209-075-370-1 manufactured by HI-G Company, or if the source of the part cannot be confirmed, the part is considered unserviceable (condemned). Tag with DD Form 1577 (Red) and dispose of unserviceable relays IAW paragraph 10.d.

10. Supply/Parts and Disposition.

a. Parts Required. Items cited in paragraph 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) "XC7" (X-RAY-CHARLIE-SEVEN).

NOTE

Project Code "XC7" 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. Demilitarize/mutilate any part/component which does not meet inspection criteria IAW TM 1-1500-328-23.

NOTE

Do not destroy HI-G relays until after replacement parts have been received.

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 maintenance.

b. Estimated Time Required.

(1) Time required to conduct the inspections: Total of 0.5 man-hour using 1 person.

(2) Time required to replace the relays:

(a) Total of 1 man-hour using 1 person.

(b) Total of 1 hour downtime for one end item.

c. Estimated Cost Impact to the Field.

NOMENCLATURE	P/N	NSN	QTY.	COST EA.
Relay, Hybrid	209-075-370-1	5945-00-177-2496	3	\$288.31

Total cost per aircraft = \$864.93.

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.

a. TM 55-1520-236-23.

b. TM 1-1500-328-23.

- c. TB 1-1520-244-20-49 (AH-1-00-ASAM-05).
- d. DA PAM 738-751.

14. Recording and Reporting Requirements.

a. Reporting Compliance Suspense Date (Aircraft). Upon entering requirements of the message/TB on DA Form 2408-13-1 on all subject mission design series (MDS) aircraft, forward a priority message, datafax or E-mail to CDR, AMCOM, ATTN: AMSAM-SF-A (SOF Compliance Officer), Redstone Arsenal, AL 35898-5000 in accordance with (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 the message/TB number, date of entry on DA Form 2408-13-1, aircraft MDS, 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/TB Receipt (Spares). N/A.

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

e. The Following Forms are Applicable and are to be Completed in Accordance with DA Pamphlet 738-751, dated 15 March 1999:

NOTE

Unit Level Logistics System-Aviation (ULLS-A) users will use applicable electronic "-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.
- (4) DD Form 1574/DD Form 1574-1, Serviceable Tag/Label - Materiel (Color Yellow). Annotate Remarks Block with "Inspected Serviceable IAW AH-1-00-ASAM-07 (TB 1-1520-244-20-50)".
- (5) DD Form 1575/DD Form 1575-1, Suspended Tag/Label - Materiel (Color Brown). Annotate Remarks Block with "Suspended IAW AH-1-00-ASAM-07 (TB 1-1520-244-20-50)".
- (6) DD Form 1577/DD Form 1577-1, Unserviceable (Condemned) Tag/Label - Materiel (Color Red). Annotate remarks block with "Condemned IAW AH-1-00-ASAM-07 (TB 1-1520-244-20-50) and Mutilated IAW TM 1-1500-328-23".

15. Weight and Balance. N/A.

16. Points of Contact

a. Technical points of contact for this TB are:

(1) Primary - Mr. Gerald Johnson, AMSAM-RD-AE-I-D-O, DSN 645-9545 or Commercial (256) 955-9545, Datafax is DSN 645-9536. E-mail is <gerald.johnson@redstone.army.mil>.

(2) Alternate - Ms. Denise Bouchard, AMSAM-RD-AE-I-D-O, DSN 645-9736 or Commercial (256) 955-9736. Datafax is DSN 645-9536. E-mail is <denise.bouchard@redstone.army.mil>.

b. Logistical point of contact for this TB is Mr. Leonard Monk, AMSAM-DSA-AS-ASH-L, DSN 645-7605 or Commercial (256) 955-7605. Datafax is DSN 645-9536. E-mail is <leonard.monk@redstone.army.mil>.

c. Wholesale Materiel point of contact (Spares) is Mr. Michael Fowler, CDCB, DSN 850-7820 or Commercial (614) 692-7820. E-mail is <Michael_fowler@dsccl.dla.mil>.

d. Forms and Records point of contact for this 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 TB is: Mr. Howard Chilton, AMSAM-SF-A, DSN 897-2068 or Commercial (256) 313-2068. Datafax is DSN 897-2111 or Commercial (256) 313-2111. E-mail is <howard.chilton@redstone.army.mil>.

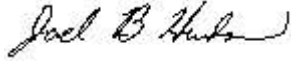
f. Foreign Military Sales recipients requiring clarification of action advised by this TB should contact: CW5 Joseph L. Wittstrom, Security Assistance Management, AMSAM-SA, DSN 897-0410 or Commercial (256) 313-0410. E-mail is <wittstromjl@redstone.army.mil> or Mr. Ronnie W. Sammons, AMSAM-SA-CS-NF, DSN 897-0408 or Commercial (256) 313-0408. Datafax is DSN 897-0411 or Commercial (256) 313-0411. E-mail is <sammonsrw@redstone.army.mil>. Huntsville, AL, is GMT minus 5 hours.

g. After hours contact the 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 at <ls-lp@redstone.army.mil>, or by datafax at DSN 788-6546 or commercial (256) 842-6546. Instructions for sending a DA Form 2028 by E-mail may be found at the back of most Technical Manuals.

By Order of the Secretary of the Army:

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