

## ROUTINE

MWO effective date is 1 April 1993 and completion date is 31 March 1997.

**MWO 9-1005-201-30-4**

### MODIFICATION WORK ORDER

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## **MODIFICATION OF MACHINE GUN, 5.56MM, M249 (NSN 1005-01-127-7510) (EIC 4GB)**

Headquarters, Department of the Army, Washington, D.C.

17 December 1993

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#### **REPORTING ERRORS AND RECOMMENDING IMPROVEMENT**

You can help improve this MWO. If you find any mistakes or if you know of a way to improve these procedures, please let us know. Write a letter or complete and mail a DA Form 2028, Recommended Changes to Publications and Blank Forms, to Commander, U.S. Army Armament, Munitions and Chemical Command, ATTN: AMSMC-MAS, Rock Island, IL 61299-6000. A reply will be provided to you.

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**DESTRUCTION NOTICE:** For unclassified, limited documents, destroy by any method that will prevent disclosure of contents or reconstruction of the document.

**1. PURPOSE:** The purpose of this modification is to upgrade the weapon for combat effectiveness by the replacement of component parts to the rear sight of the M249 Machine Gun.

**2. PRIORITY:** This modification is classified ROUTINE.

**MWO 9-1005-201-30-4**

**3. END ITEM OR SYSTEM TO BE MODIFIED:** Machine Gun, 5.56MM, M249 (NSN 1005-01-127-7510), serial numbers less than 33,000 and between 91,000 and 100,971.

**4. MODULE(S) (COMPONENTS, ASSEMBLIES, SUBASSEMBLIES, BOARDS, AND CARDS) TO BE MODIFIED:** Not applicable.

**5. PARTS TO BE MODIFIED:** Not applicable.

**6. APPLICATION:**

**a. Time compliance schedule:** This MWO is effective 1 April 1993 and the completion date is 31 March 1997.

**b. Level of maintenance:** The lowest level of maintenance authorized to apply this MWO is Direct Support Maintenance.

**c. The total man-hours required for a single application of this MWO is 0.7 hours.**

**7. TECHNICAL PUBLICATIONS AFFECTED/CHANGED:** TM 9-1005-201- 10/ TM 08671A-10/1A and TM 9-1005-201-23&P/TM 08671A-23&P/2A/TO11W3-5-5-52, dated 14 December 1990, changes one, two, and three, dated 10 February 1992, 7 July 1992, and 22 June 1993, respectively.

**8. MWO KIT(S)/PARTS(S) AND THEIR DISPOSITION:**

**a. All parts needed to apply MWO:** Not applicable.

**b. Contents of MWO kits:**

NSN	Item Name and Part No.	Qty per End Item
1005-01-340-5932	Modification Kit, M249 (19200) 12557028 consisting of	1
5315-01-128-5622	Pin, Spring (19200) 9348240	2
5310-01-131-2089	Washer, Locking (19200) 9350020	2
5310-01-131-2084	Washer, Flat (19200) 9350022	2
5305-01-132-0439	Screw, Machine (19200) 9350023	2
9535-01-326-5390	Plate, Metal (19200) 12556975	1
1005-01-326-7291	Scale, Windage (19200) 12556978	1
5305-01-326-3791	Screw, Machine (19200) 12556979	2
1005-01-327-4583	Kit, Repair (19200) 12557030 consisting of	4
5360-01-225-8558	Spring, Helical, Comp (19200) 9350088	1
N/A	Spring, Helical, Comp (19200) 12556977	1
N/A	Plunger, Indexing (19200) 12556976	1
N/A	Bearing, Ball (96906) MS 19060-505	1

**c. Bulk and expendable material:** Not applicable.

**d. Parts disposition:** Disposition is done locally. Parts should be mutilated per DOD 4160.21-M-1 prior to disposal.

**9. SPECIAL TOOLS; TOOL KITS; JIGS; TEST, MEASUREMENT AND DIAGNOSTIC EQUIPMENT (TMDE); AND FIXTURES REQUIRED:**

Shop Set, Small Arms, Field Maintenance, SC 4933-95-CL-All.

**10. MODIFICATION PROCEDURES.**

**a.** Unpackage the Modification Kit.

**b.** Inspect modification kit for completeness and for damage before assembly, as follows:

(1) Inspect kit for correct quantities of contents.

(2) Visually inspect the machine screws for thread damage, the windage scale for bends or distortion, the metal (slack) plate for bends or distortion, and the helical springs for bent or collapsed coils.

**c.** Clear the weapon as follows:

(1) Charge weapon (pull cocking handle to the rear). Be sure bolt is locked in the rear position. Push charging handle forward until you hear it click.

(2) Push safety to right (RED BAND not visible).

(3) Squeeze latches and open cover assembly.

(4) If present, remove ammo belt, loose links or magazine.

(5) Raise feed tray and look into chamber and assure it is empty.

(6) Lower feed tray assembly.

(7) Push safety to left (RED BAND visible).

(8) Pull and hold cocking handle to rear, pull trigger, and ride the bolt forward to close and lock.

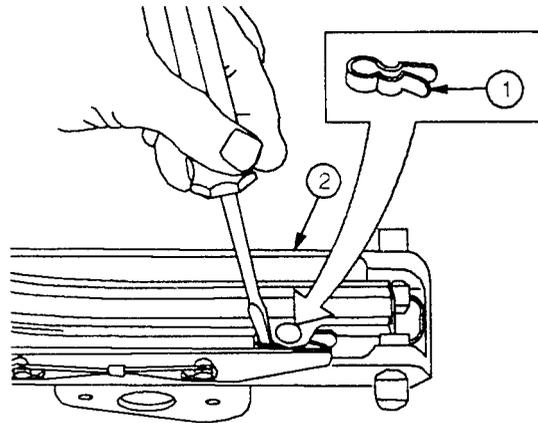
**NOTE**

**Cover and Feed Mechanism Assembly shown removed from weapon for clarity.**

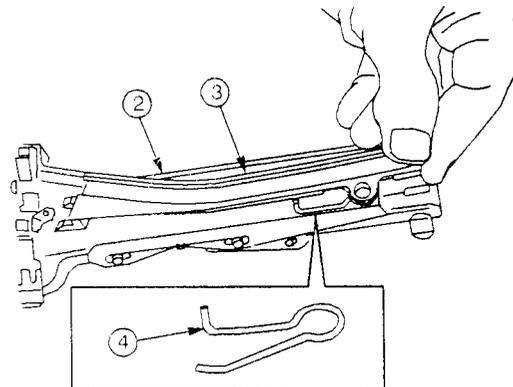
**d.** Disassemble Cover and Feed Mechanism Assembly as follows:

(1) To remove Feed Lever:

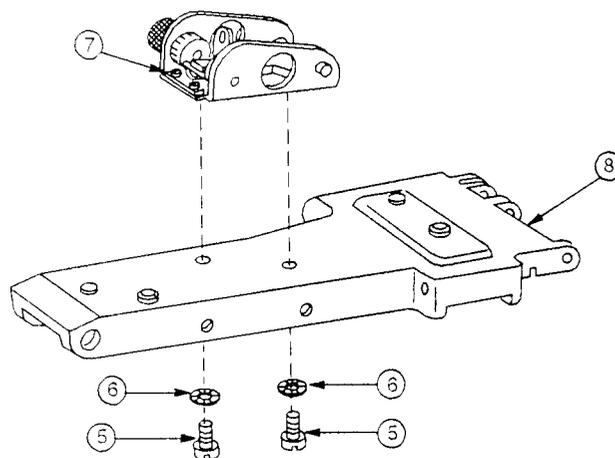
(a) Insert screwdriver into loop of Retaining Clip (1) and pull toward front of Cover and Feed Mechanism Assembly (2) and remove.



(b) Lift Feed Lever (3) up and out from rear. Separate Spring (4) from Cover and Feed Mechanism Assembly (2).

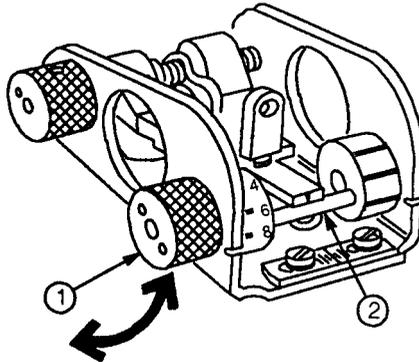


(2) To separate Old Style Rear Sight Assembly, remove two screws (5) and two lock washers (6) and discard. Separate Rear Sight Assembly (7) from Cover Assembly (8).

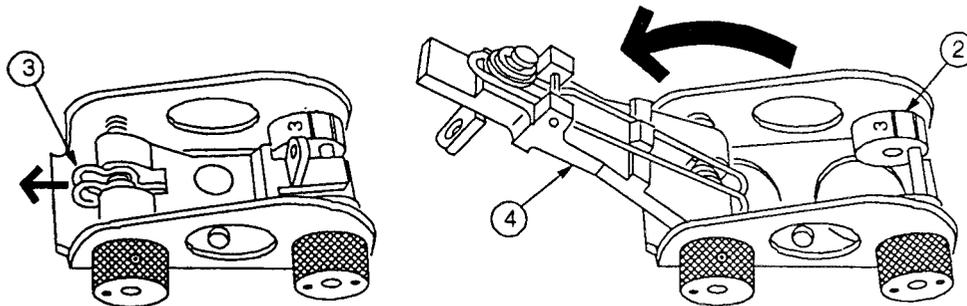


e. Disassemble Old Style Rear Sight Assembly as follows:

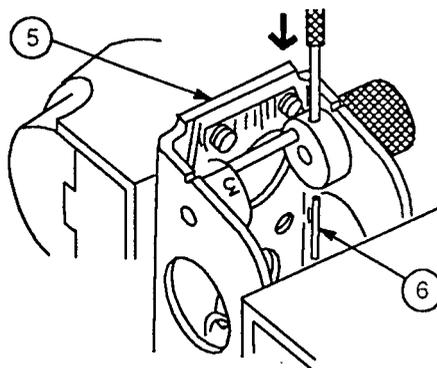
(1) Rotate Elevation Knob Assembly (1) so that cross bar of Elevator Assembly (2) is rearward.



(2) Push Lock Spring (3) to the front and lift Sight Leaf Assembly (4) up and away from Elevator Assembly (2).



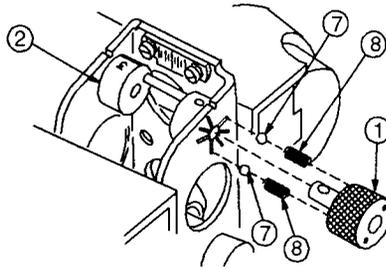
(3) Place Rear Sight Assembly (5) in protective jawed vise. Remove Spring Pin (6) and discard.



**WARNING**

**Ball Detent (7) along with Detent Spring (8) are under spring tension.**

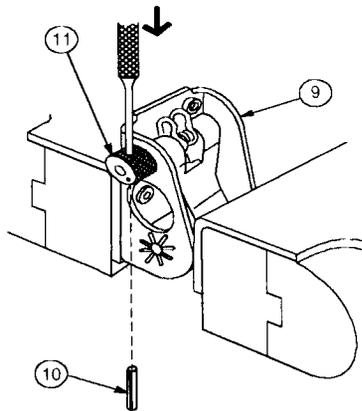
**(4)** Separate Elevation Knob Assembly (1) from Elevator Assembly (2). Separate and discard two Ball Detents (7) and two Detent Springs (8) from Elevation Knob Assembly (1).



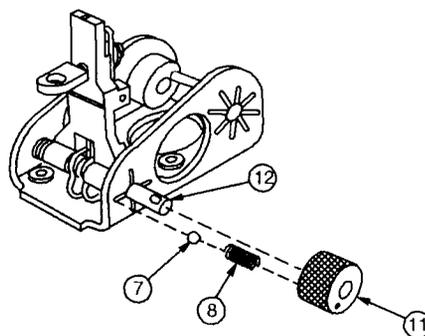
**NOTE**

**Windage and/or elevation knobs on some Rear Sight Assemblies may have a cylindrical detent rather than a ball detent.**

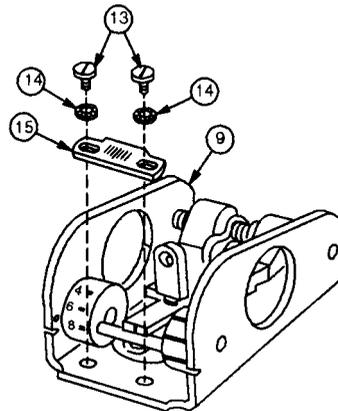
**(5)** Place Rear Sight Base (9) in protective jawed vise. Remove and discard Spring Pin (10) from Windage Knob (11).



**(6)** Remove Windage Knob (11) from Machine Screw Shaft (12). Separate and discard Ball Detent (7) and Detent Spring (8) from Windage Knob (11).

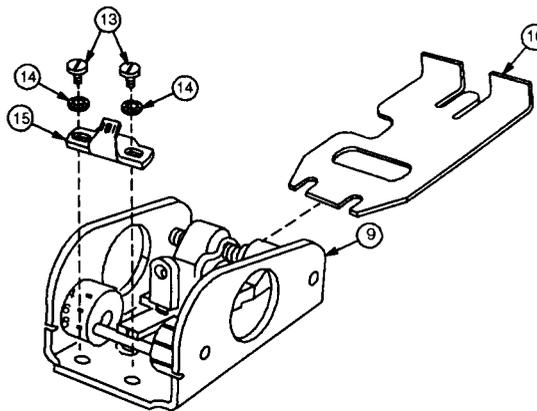


**(7)** Remove and discard two Screws (13) and two Lock Washers (14). Separate and discard Windage Scale (15) from Rear Sight Base (9).

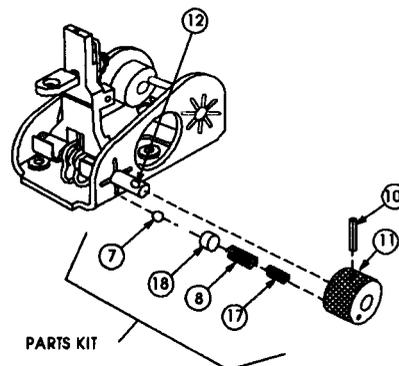


**f.** Reassemble New Style Rear Sight Assembly as follows:

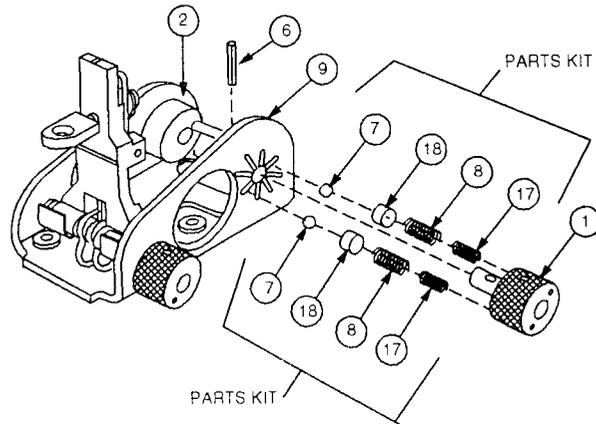
**(1)** Center Slack Plate (16) and NEW Windage Scale (15) on Rear Sight Base (9) and install two NEW Washers (14) and two NEW Screws (13) onto Rear Sight Base (9), and tighten securely.



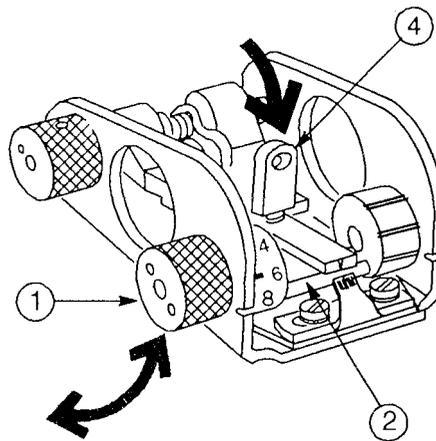
**(2)** Install NEW Detent Spring (8), Detent Spring (17) Plunger (18) and NEW Ball Detent (7) (Parts Kit) into Windage Knob (11) and install onto Machine Screw Shaft (12). Aline holes in windage knob and machine screw, and drive in NEW Spring Pin (10) flush.



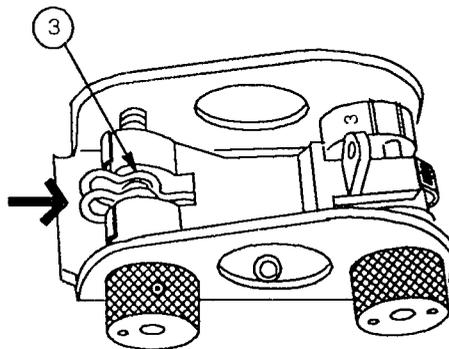
**(3)** Install two NEW Detent Springs (8), two Detent Springs (17), two Plungers (18) and two NEW Ball Detents (7) (Parts Kit) into Elevation Knob Assembly (1) and install through left rear hole of Rear Sight Base (9) and into Elevator Assembly (2). Aline holes in Elevation Knob Assembly (1) and Elevator Assembly (2), and drive in NEW Spring Pin (6) flush.



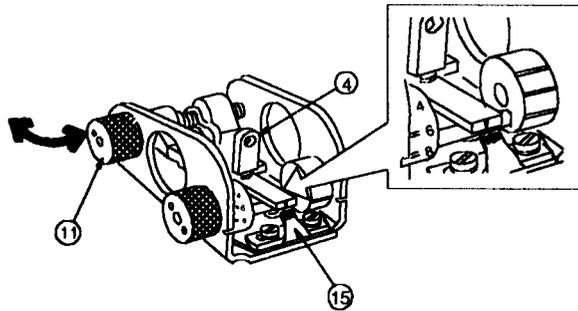
**(4)** Rotate Elevation Knob Assembly (1) so that cross bar of Elevator Assembly (2) is rearward. Rotate Sight Leaf Assembly (4) down on Elevator Assembly (2).



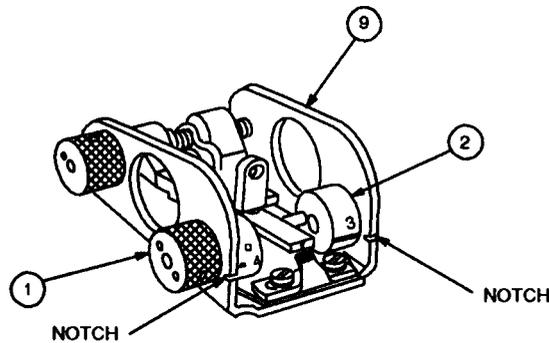
**(5)** Push Lock Spring (3) to the rear.



(6) Rotate Windage Knob (11) to align mark of Sight Leaf Assembly (4) with center mark on Windage Scale (15).

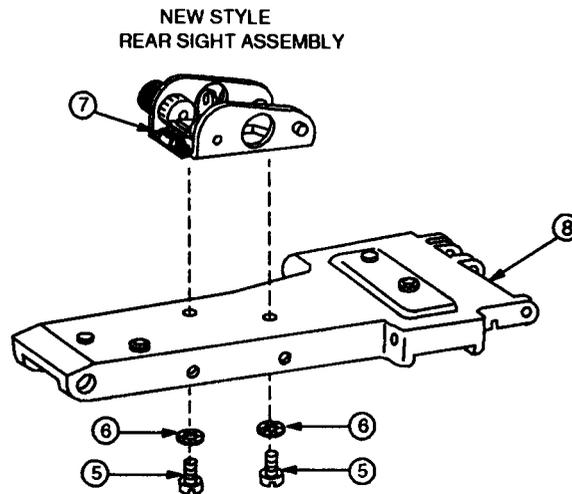


(7) Rotate Elevation Knob Assembly (1) to align the 300 meter mark (numeral 3) of the Elevator Assembly (2) with the NOTCH on the vertical leg of Rear Sight Base (9).



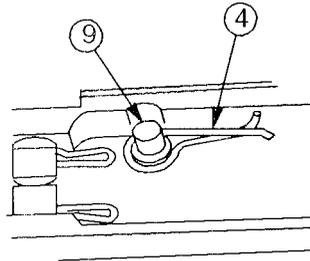
**g. Reassemble Cover and Feed Mechanism Assembly as follows:**

(1) Position Rear Sight Assembly (7) onto Cover (8) with peep sight to the rear. Install two NEW Screws (5) with two NEW Lock Washers (6) through bottom of Cover (8) and tighten securely.

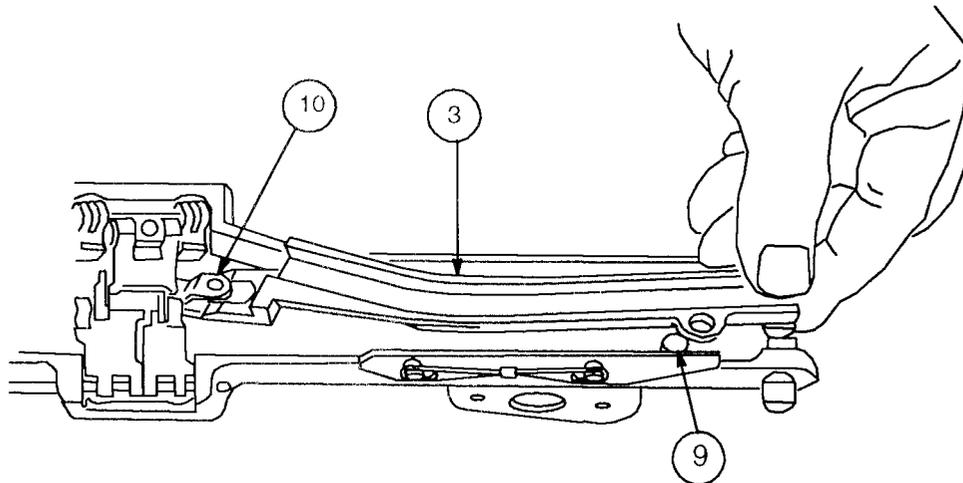


**(2) Reassemble Feed Lever as follows:**

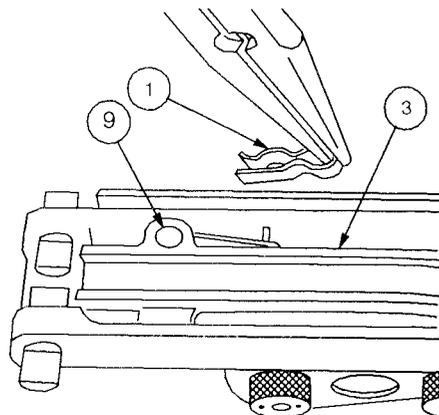
**(a)** Lift straight leg over hooked leg of Spring (4). Install loop of Spring (4) over the base of Feed Lever Pivot (9) with legs of Spring (4) pointing forward and down. It may be necessary to use a screwdriver to force loop over base of Feed Lever Pivot (9).



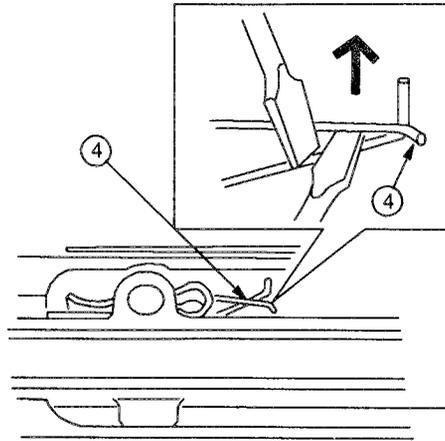
**(b)** Engage Feed Lever (3) on Roller (10). Place on Feed Lever Pivot (9) and drop in place. Be sure Feed Lever (3) is flush with top of Feed Lever Pivot (9).



**(c)** Position Retaining Clip (1) with legs pointed rearward and straight leg of clip toward Feed Lever (3) and push into position on Feed Lever Pivot (9).



(d) Unhook straight leg of Spring (4) by holding hooked leg in place with screwdriver and prying up straight leg with another screwdriver.



h. Close cover assembly.

**11. CALIBRATION REQUIREMENTS:** Not applicable.

**12. WEIGHT AND BALANCE DATA:** Not significantly affected.

**13. QUALITY ASSURANCE REQUIREMENTS:** Physical Inspection: After completion of the MWO, verify completeness of the assembly, positive click action of the windage, and elevation knobs without binding.

**14. RECORDING AND REPORTING OF THE MODIFICATION:**

**a. Records and reports:** Record and report accomplishment of the modification in accordance with DA PAM 738-750, The Army Maintenance Management System (TAMMS). A DA Form 2407 shall be completed and submitted within 3 days of accomplishment of modification. Specific instructions for use of DA Form 2407 to report a modification are contained in paragraph 3-8 and figure 3-12 of DA PAM 738-750. After completion, copies of DA Form 2407 will be distributed as follows:

- (1) Copy 1: Retained by using unit.
- (2) Copy 2: Commander  
HQ, AMCCOM  
ATTN: AMSMC-MAE-M  
Rock Island, IL 61299-6000
- (3) Copy 3: Retained by unit.

**NOTE**

**If you are required to use the DA form 5504 because of automation at your location, please write your installation as well as your UIC somewhere on the DA 5504.**

**MWO 9-1005-201-30-4**

**b. Marking equipment:** Not applicable.

**c. Identification data:** This MWO does not affect the nomenclature, model number, part number, NSN, or LIN of the end item.

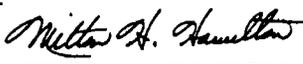
**15. MATERIAL CHANGE (MC) NUMBER:** This MWO is authorized by MC Number - 1-90-05-7882.

**16. MODIFICATION IDENTIFICATION:** Not applicable.

By Order of the Secretary of the Army:

**GORDON R. SULLIVAN**  
*General, United States Army*  
*Chief of Staff*

Official:

  
**MILTON H. HAMILTON**  
*Administrative Assistant to the*  
*Secretary of the Army*  
05686

**DISTRIBUTION:**

To be distributed in accordance with DA Form 12-40-E, block 1068 requirements for MWO 9-1005-201-30-4.