

ROUTINE

MWO effective date is **15 August 2005** and completion date is **28 February 2012**.

MWO 9-1005-201-30-6

MODIFICATION WORK ORDER

**MODIFICATION OF MACHINE GUN, 5.56MM, M249
(NSN 1005-01-127-7510) (EIC: 4BG) Automatic Rifle Role
(NSN 1005-01-451-6769) (EIC: 4BK) Light MG Role**

Headquarters, Department of the Army Washington, DC

15 August 2005

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MWO 9-1005-201-30-6
Change 3

By Order of the Secretary of the Army

MARTIN E. DEMPSEY
General, United States Army
Chief of Staff

Official:



JOYCE E. MORROW
Administrative Assistant to the
Secretary of the Army

1123601

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Change 2

By Order of the Secretary of the Army

George W. Casey, JR.
General, United States Army
Chief of Staff

Official:



JOYCE E. MORROW
Administrative Assistant to the
Secretary of the Army

1024323

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MWO 9-1005-201-30-6
Change 1

By Order of the Secretary of the Army:

Official:



SANDRA R. RILEY
*Administrative Assistant to the
Secretary of the Army*

0535701

PETER J. SCHOOMAKER
*General, United States Army
Chief of Staff*

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MWO 9-1005-201-30-6

1. **PURPOSE.** This MWO prescribes procedures to replace the M249 Machine Gun's handguard with a forward rail assembly. The new forward rail assembly provides the user a secure, easy to attach and use alternate MIL-STD-1913 rail surfaces for mounting optical or electronic devices.
2. **PRIORITY.** This modification is classified **ROUTINE**.
3. **END ITEM(S) OR SYSTEM(S) TO BE MODIFIED.** See Table 1 below.

Table 1. End Item(s) or System(s) To Be Modified

NOMENCLATURE	NSN	CAGE C	PART NUMBER	LINs
M249 MG (AR Role)	1005-01-127-7510	19200	9348199	M09009
M249 MG (LMG Role)	1005-01-451-6769	19200	12556999	M39263

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

5. **PART(S) TO BE MODIFIED.** Not applicable.

6. **APPLICATION.**

a. **Time Compliance Schedule:** The effective date of this MWO is 15 August 2005 and its completion date is 28 February 2012.

b. **Level of Maintenance:** Direct Support.

c. **Work Force and Man-Hour Requirements for Application of the MWO to a Single Unit, End Item, or System:** Total man-hours required for a single application of this MWO is: 0.3 hours.

Work Skills Force

Man-Hours

MOS 45B

0.3 hours

7. **TECHNICAL PUBLICATIONS AFFECTED/CHANGED.**

Operators Manual: ARMY TM 9-1005-201-10; MARINE CORPS TM 08671A-10/1A; AIR FORCE TO 11W3-5-5-51, dated 26 July 1991

Change number 2, dated 28 June 2002

MWO 9-1005-201-30-6

Maintenance Manual: ARMY TM 9-1005-201-23&P; MARINE CORPS TM 08671A-23&P/2A; AIR FORCE TO 11W3-5-5-52, dated 14 December 1990

Change number 7, dated 28 June 2002

DMWR: 9-1005-201, dated September 2007

8. MWO KIT(S)/PART(S) AND THEIR DISPOSITION.

a. Kits Needed to Apply this MWO: The Kit listed in Table 2 is required to accomplish this MWO.

Table 2. Kit List

NOMENCLATURE	NSN	CAGEC	PART NO.	QUANTITY	SMR CODE
Front Rail Kit	1005-01-490-9698	19200	12993770	1	KFOZZ

b. Contents of MWO kits: See Table 3.

Table 3. Contents of MWO Kit

NOMENCLATURE	NSN	CAGEC	PART NO.	QUANTITY	SMR CODE
*9 Rib Rail Cover Assy	1005-01-453-5383	19200	12973134	2	PAOZZ
Vertical Pistol Grip	1005-01-521-1618	19200	13008484	1	PAOOO
Grip, Rifle	1005-01-521-1618	19200	13008484	1	PAOZZ
Adapter Rail, LEFT	1005-01-559-1948	19200	12993773	1	PAOZZ
Adapter Rail, RIGHT	1005-01-559-1947	19200	12993772	1	PAFZZ
Cap, Socket Head Screw	5305-01-101-9426	80205	NAS1352-9	2	PAFZZ

*In future kits, the rail covers will no longer be a part of the kit nor required for turn-in.

c. Bulk and Expendable Material: Not Applicable.

d. Parts Disposition: The handguard should be turned-in through the normal channels for proper disposal.

Table 4. Parts Disposition

NOMENCLATURE	NSN	PART NUMBER	QUANTITY	CAGEC
Handguard	1005-01-324-9191	12556973	1	19200

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

Tool Kits: The following or equivalent basic tools will be used to perform the procedures: Shop Set, Small Arms – Field Maintenance, Basic, Less Power, NSN 4933-00-754-0664, LIN W51499, SC 4933-95-CL-A11.

10. MODIFICATION PROCEDURES.

a. Installation:

WARNING

Before starting an installation, **DO NOT** actuate the trigger until the weapon has been cleared. Inspect the chamber to be sure that it is empty and check to see that there are no obstructions in the barrel.

- (1) Open the top cover. Charge the weapon. Make sure the safety is on. Check for obstructions in the barrel. Close the top cover. Remove the barrel from the receiver assembly.

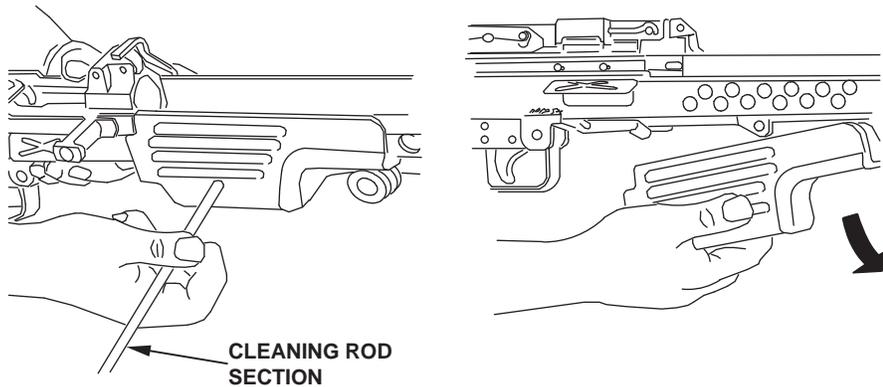


Figure 1

- (2) (Figure 1) Remove the handguard by pushing handguard retaining pin to the left using a cleaning rod section, then remove handguard downward.

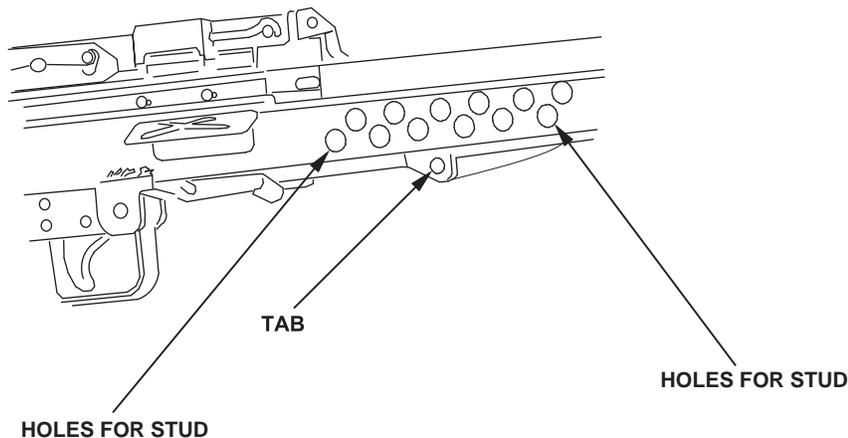


Figure 2

NOTE

Tapping with a rubber mallet may be necessary to seat the studs onto the receiver.

- (3) (Figure 2) Install the right adapter rail (the one with two rails) on the right side of the receiver. This rail has a relief cut for the tab located on the bottom of the receiver to allow the rail to fit flush against the bottom of the receiver, and also allows the two studs to fit into the holes on the side of the receiver.

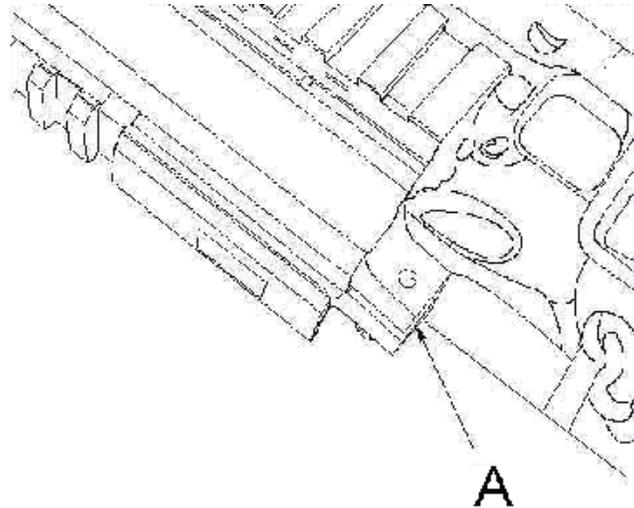


Figure 3

(4) (Figure 3) Install the left side adapter rail so the adapter fits on the bottom of the receiver and ends of the two adapter rails are aligning with each other. The two studs will also fit into the holes on the side of the receiver. Illustration above shows that the rails should be flush against the bottom of the receiver (A).

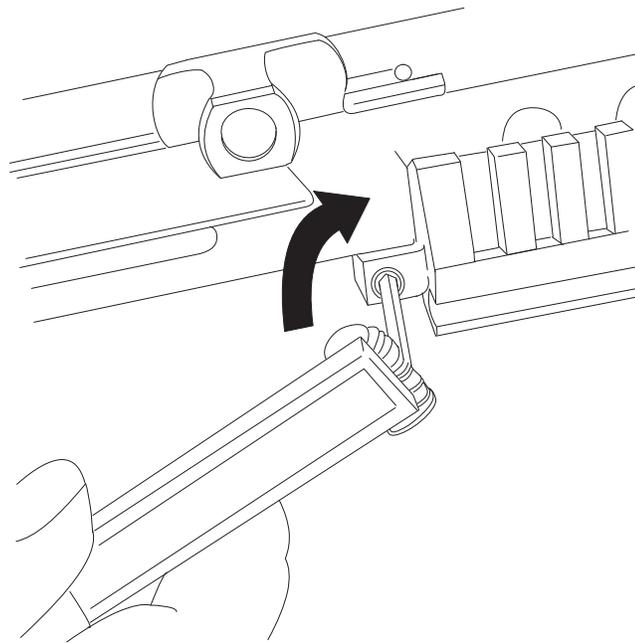


Figure 4

NOTE

Take care not to cross thread the screw.

(5) (Figure 4) Using a 9/64 hex key wrench, install the two screws (one at each end of the adapter rail) from the right side of the adapter rail and tighten snug. Do not over tighten.

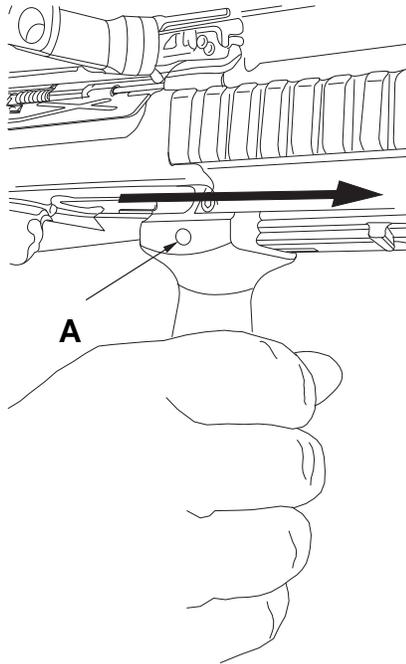


Figure 5

(6) Loosen the O-ring clutch on the bottom of the vertical pistol grip.

(7) (Figure 5) Install the vertical pistol grip on the bottom rail by sliding it from the rear to the front until the locking lug of the vertical pistol grip lines up with a slot on the adapter rail. Adjust accordingly to the length of the operator's arm. View rail slot through hole in vertical pistol grip (A).

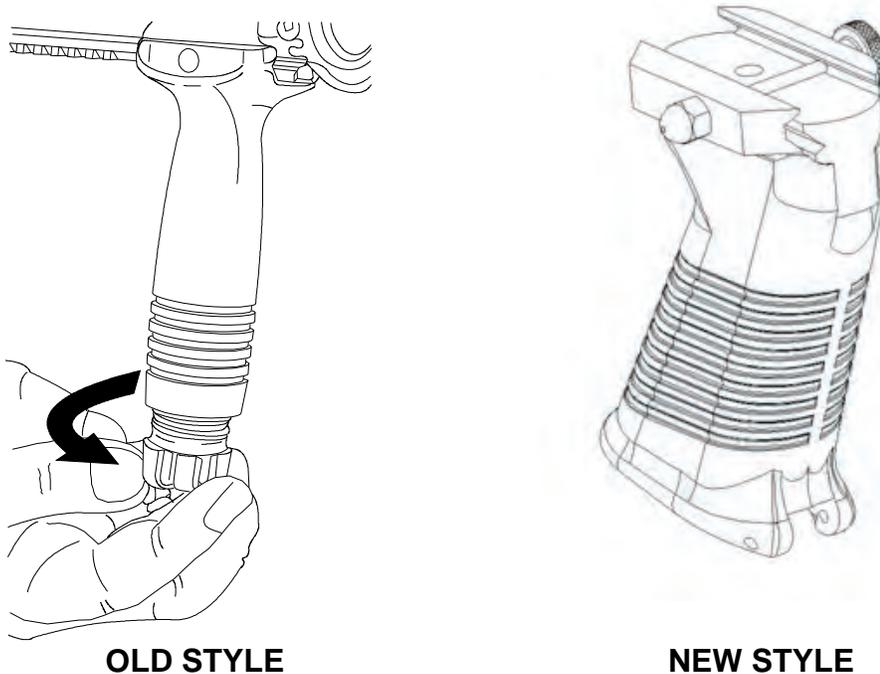


Figure 6

(8) (Figure 6) Tighten the O-ring clutch on the bottom of the vertical pistol grip by turning the clutch to the right.

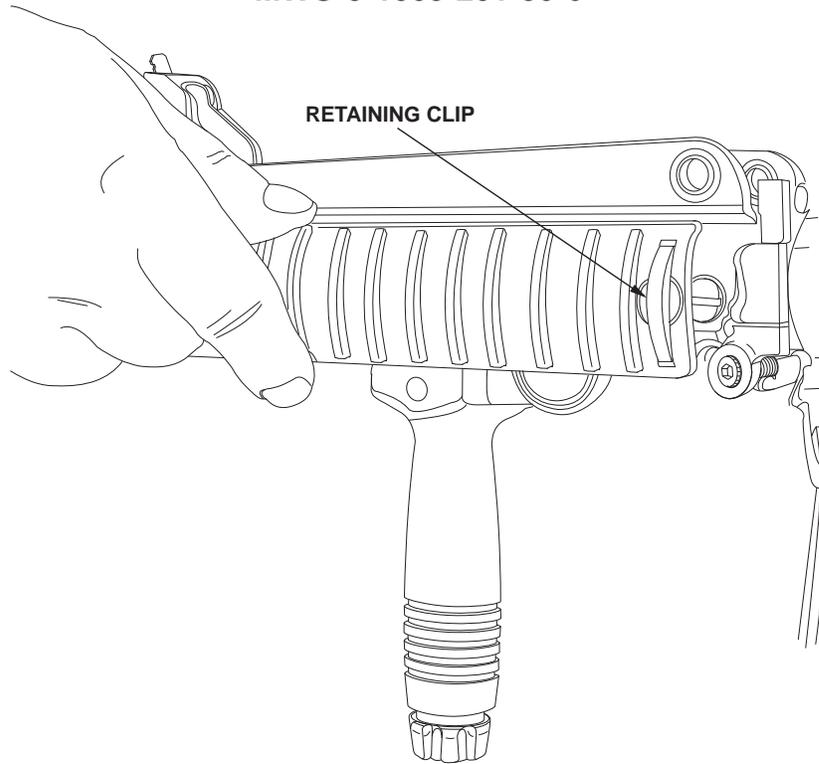


Figure 7

NOTE

(Figure 7) Rail covers are quickly attached and detached from the adapter rail. A retaining clip at one end of each rail cover automatically engages cutouts positioned at either end of the three rail sections. To slide a rail cover beyond a cutout, or to remove it, slide it in the desired direction while applying thumb pressure to the retaining clip. Illustration above shows rail cover in full rearward position.

(9) (Figure 7) To cover both side rail surfaces, install the rail covers from the muzzle end of the adapter rail with the retaining clip forward. To cover the bottom rail surface, install from the rear with the retaining clip forward.

(10) Replace the barrel assembly back into the receiver. Take the safety off. Pull the trigger by holding the charging handle back to allow the bolt to go forward.

11. CALIBRATION REQUIREMENTS. Not applicable.

12. WEIGHT AND BALANCE DATA. Not significantly affected.

13. QUALITY ASSURANCE REQUIREMENTS. Report all defects in material or workmanship on a Product Quality Deficiency Report (QDR) utilizing the Web Product Quality Deficiency Reporting (PDQR) site: <http://www.nslcptsmh.csd.disa.mil/webpqdr/webpqdr.htm>. New accounts can be established at the following address: <http://www.nslcptsmh.csd.disa.mil/accessforms/uarform.htm>. You may also submit your information using an SF 368 (Product Quality Deficiency Report). You can send your SF 368 using e-mail, regular mail, or fax using the addresses/fax numbers specified in DA PAM 750-8, The Army Maintenance Management System (TAMMS) Users Manual.

14. RECORDING AND REPORTING OF THE MODIFICATION.

a. Records and reports. The organization responsible for MWO application will report application information as follows:

(1) Reporting will be accomplished by electronic means. MWO application information can be input directly into the Modification Management Information System (MMIS) over the Internet. Entry into the MMIS system is password protected. New users can register on-line at <https://www.mmis.army.mil>. Passwords are normally approved and issued within 48 hours.

(2) Submission will be comprised of the twelve (12) data elements listed in Table 5. Elements 1, 2, 6, 7 & 11 are given for this MWO (as shown). The person reporting the MWO data, will acquire the remaining elements (3, 4, 5, 8, 9, 10 & 12), and input all twelve into MMIS.

Table 5. MMIS Input Data

	<u>DATA ELEMENT</u>	<u>INPUT DATA</u>
1	Materiel Change Number (MCN)	1-04-05-0020
2	MWO Number	9-1005-201-30-6
3	Unit Identification Code (UIC)	
4	Unit Name	
5	Unit Location	
6	NSN of the End Item	1005-01-127-7510 or 1005-01-451-6769
7	Registration Number	N/A
8	Date of Application	
9	Man-hours Required for Application	
10	Applied By	
11	Software Version	N/A
12	Serial Number	

MWO 9-1005-201-30-6

b. Marking equipment. Not applicable.

c. Identification data. Not applicable.

15. MATERIEL CHANGE (MC) NUMBER. 1-04-05-0020.

16. MODIFICATION IDENTIFICATION. No change in NSN, nomenclature, LIN or model designator is made by this MWO. The application can be verified by visual examination of the receiver assembly for a MIL-STD-1913 Rail. See Figure 8 below for illustration of the M249 MG after completion of this MWO.

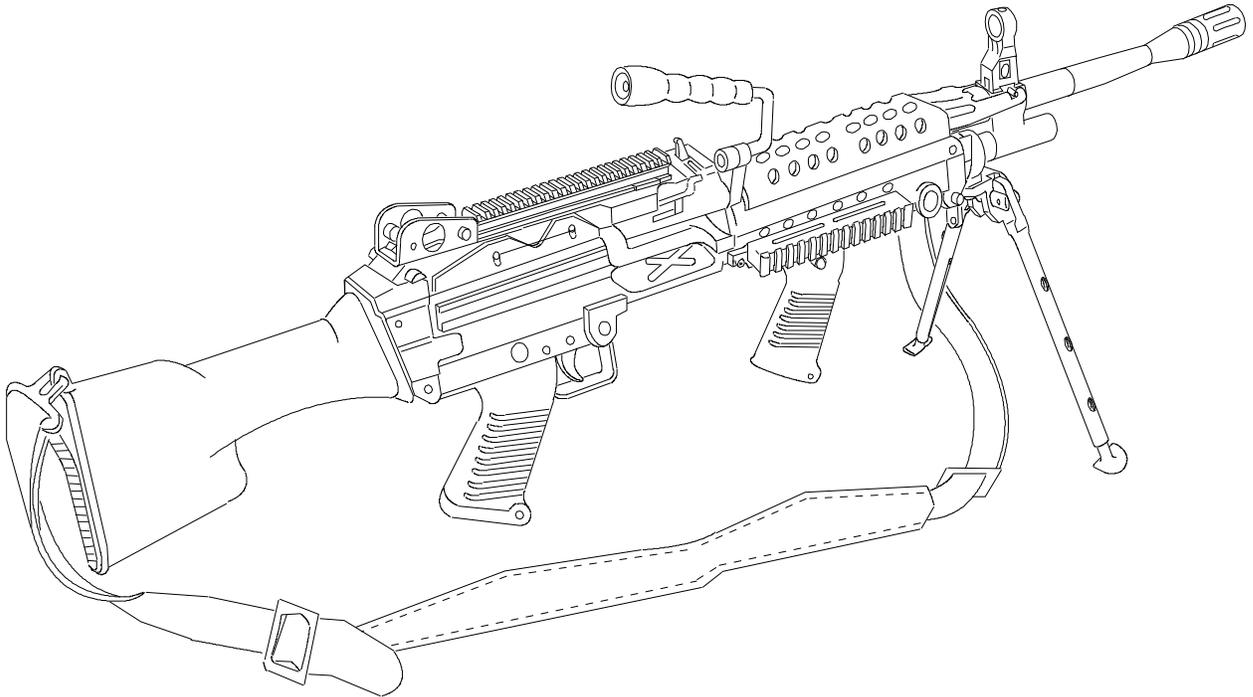


Figure 8

By Order of the Secretary of the Army:

Official:



SANDRA R. RILEY
*Administrative Assistant to the
Secretary of the Army*

0427401

PETER J. SCHOOMAKER
*General, United States Army
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