

# ROUTINE

MWO effective date is 30 August 2003 and completion date is 1 July 2012.

\*MWO 9-1010-221-30-4

## MODIFICATION WORK ORDER

### MODIFICATION OF M203 and M203A1 GRENADE LAUNCHER

(NSN 1010-00-179-6447 and NSN 1010-01-434-9028)

Headquarters, Department of the Army Washington, DC  
30 JUNE 2007

\*This manual supersedes MWO 9-1010-221-30-4, dated 30 August 2003.

#### REPORTING OF ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this MWO. If you find any mistakes, or if you know of a way to improve the procedures, please let us know. Submit your DA Form 2028 (Recommended Changes to Equipment Technical Publications), through the Internet, on the Army Electronic Product Support (AEPS) website. The Internet address is <http://aeeps.ria.army.mil>. If you need a password, scroll down and click on "ACCESS REQUEST FORM". The DA Form 2028 is located in the ONLINE FORMS PROCESSING section of the AEPS. Fill out the form and click on SUBMIT. Using this form on the AEPS will enable us to respond quicker to your comments and better manage the DA Form 2028 program. You may also mail, fax or E-mail your letter or DA Form 2028 direct to: TACOM Life Cycle Management Command, ATTN: AMSTA-LC-LPIT/TECH PUBS, 1 Rock Island Arsenal, Rock Island, IL 61299-7630. The email address is [ROCK-TACOM-TECH-PUBS@conus@army.mil](mailto:ROCK-TACOM-TECH-PUBS@conus@army.mil). The fax number is DSN 793-0726 or Commercial (309) 782-0726.

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- PURPOSE.** The purpose of this modification is to convert selected M203 and M203A1 grenade launchers (NSN: 1010-00-179-6447, NSN: 1010-01-434-9028, respectively), utilizing Modular Weapon System (MWS) selected components, to the M203A2 configuration. This modification permits the transfer of the grenade launcher from an M16 series rifle or an M4 series carbine, to an M16A4 Rifle or M4 series carbine equipped with, respectively, the M5 or M4 Adapter Rail System (ARS). The ARS are the primary components of the MWS. Only those M203s that will be mounted on MWS equipped M16A4 rifles or M4 series carbines will be modified under this MWO.
- PRIORITY.** This modification is classified ROUTINE.
- END ITEM(S) OR SYSTEM(S) TO BE MODIFIED.** See Table 1.

Table 1. End Item to be Modified

Nomenclature	LIN	NSN	Part Number	CAGEC	Model
Grenade Launcher	L44595	1010-00-179-6447	11838703	19204	M203
Grenade Launcher	L46007	1010-01-434-9028	12597125	19204	M203A1

- MODULE(S) (COMPONENTS, ASSEMBLIES, SUBASSEMBLIES) TO BE MODIFIED.** Not applicable.

**5. PART(S) TO BE MODIFIED.**

Nomenclature	NSN	Part Number	CAGEC
Barrel Stop	3040-00-438-7375	8448348	19204
Receiver (M203)	N/A	8448338-1	19200
Receiver (M203A1)	N/A	8448338-2	19200
Quadrant Sight	1010-01-122-9680	9346304	19200

**6. APPLICATION.**

**a. Time Compliance Schedule.** The effective date of this MWO is 30 August 2003 and its completion date is 1 July 2012.

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

**c. Work Force and Man-Hour Requirements for Application of this MWO to a Single Unit, End Item or System are as follows:**

**Table 2. Application Requirements**

ASSEMBLY/SUBASSEMBLY	WORK FORCE/SKILLS	MAN HOURS
See Table 3.	MOS: One - 45 Bravo	0.5*

\*Total man-hours required for a single application of this MWO is 0.5 hours.

**d. MWO's to be Applied Prior to or Concurrently with the Application of this MWO:** MWO 9-1005-319-20-1 and MWO 9-1005-319-20-2.

**e. Additional Information Deemed Necessary to Assist in the Application of this MWO:**

PUBLICATION NUMBER	DATE	TITLE
TM 9-1005-319-23&P, C8	May 1991	M16A2 Rifle and M4/M4A1 Carbine
TM 9-1010-221-10	October 1998	M203, 40MM, Grenade Launcher
TM 9-1010-221-23&P, C4	January 1993	M203, 40MM, Grenade Launcher

**NOTE: ALL WARNINGS AND CAUTIONS REFERENCED IN THE DOCUMENTS ABOVE WILL BE ADHERED TO.**

**7. TECHNICAL PUBLICATIONS AFFECTED/CHANGED.** The following technical publications are affected or changed as a result of this MWO:

PUBLICATION NUMBER	DATE
TM 9-1005-319-23&P	May 1991
TM 9-1010-221-10	October 1998
TM 9-1010-221-23&P	January 1993

**8. MWO PART(S) AND THEIR DISPOSITION.**

**a. Parts Needed to Apply this MWO:** See Table 3.

**Table 3. Parts and Security Classification**

<b>Nomenclature</b>	<b>NSN</b>	<b>Part Number</b>	<b>CAGEC</b>	<b>Security Classification</b>	<b>QTY</b>
Quick Release Bracket	1005-01-452-3528	12973116	19200	U	1
Leaf Sight and Rail Grabber Assembly	1005-01-453-5387	12598117	19200	U	1
Locking Bar*	5340-01-474-2845	12991254	19200	U	1
Quadrant Sight Assembly*	1010-01-442-2313	12598114	19200	U	1

\*Not needed for M203A1 to M203A2 modification.

**b. Bulk and Expendable Material:** Not applicable.

**c. Part Disposition:** See Table 4 below for list of parts removed during application of this MWO.

Disposition of parts is by demilitarization in accordance with DOD 4130.21-M-1.

**Table 4. Part Disposition**

<b>Nomenclature</b>	<b>NSN</b>	<b>Part Number</b>	<b>CAGEC</b>
Screw, Machine (2)	5305-00-455-2550	MS51959-28B	96906
Grenade Hand Guard	1010-00-438-7431	8448377	19204
Mounting Bracket	5340-01-376-0876	12011998	19200
Screw, Machine (2)	5305-00-150-9212	AN502-10-8	88044
Locking Bar	5340-01-440-7610	12012059	19200
Clamp, Quadrant Sight	5340-00-483-1156	12002879	19200
Bracket, Quadrant Sight	5340-01-149-1270	9346310	19200
Hand Guard Assembly	1010-01-470-7105	12990563	19200
Mounting Bracket Assembly	1010-01-442-0165	12957126	19200
Screw, Machine	5305-00-417-5264	MS51959-34B	96906
Screw, Cap Socket Head	5305-01-442-0157	12957129	19200
Bushings, Half Sleeve	3120-00-438-7332	8448320	19204

**9. SPECIAL TOOLS; TOOL KITS; JIGS; TEST, MEASUREMENT, AND DIAGNOSTIC EQUIPMENT (TMDE); AND FIXTURES REQUIRED.** Not applicable.

**10. MODIFICATION PROCEDURES.**

**WARNING**

**CLEAR BOTH WEAPONS BEFORE DISASSEMBLY AND ENSURE BOLT OF THE RIFLE/CARBINE IS FORWARD TO PREVENT INJURY TO PERSONNEL OR DAMAGE TO THE WEAPON.**

**a. Preparation:**

**(1)** Direct Support will receive/obtain the following items:

- M16/M203 and M4/M4A1/M203A1 weapons which have a requirement for the M203A2 grenade launcher to be transferred to an M16A4 rifle and M4 series carbine.
- M16A4 rifle and M4 series carbine.
- M203A2 modification parts.

(2) Perform M203 and M203A1 Preventive Maintenance Checks and Services (PMCS) (TM 9-1010-221-23&P, paragraph 2-7). NOTE: Exclude item 2 of the PMCS table.

(3) Perform M16A4 and M4/M4A1 PMCS (TM 9-1005-319-23&P, paragraph 2-7).

(4) Inventory M203A2 parts. See Table 3.

**b. M203 removal from M16 series rifle and M203A1 removal from M4 series carbine:**

(1) Remove the M203/M203A1 grenade launcher from the M16/M4 series rifle (TM 9-1010-221-23&P, paragraph 2-11, steps 1-11).

(2) Return M16/M4 series rifle to original configuration in accordance with local standing operating procedures.

**c. M4/M4A1 Carbine Modification:**

(1) Remove the sling from the front swivel (TM 9-1010-221-23&P, paragraph 2-11, step 2).

**NOTE**

The side sling swivel mount needs to be on the right side of the M4/M4A1 when mounting the M203A2 grenade launcher (to avoid interference between the sling and the M203 barrel release mechanism).

(2) Disassemble side swivel mount (TM 9-1005-319-23&P, paragraph 2-16, steps 5A thru 5C).

(3) Secure the side swivel mount on the right side of the carbine with the new locking bar, PN 12991254 (TM 9-1005-319-23&P, paragraph 2-16, steps 4B thru 4D).

**NOTE**

Retain quadrant sight assembly for reuse when modifying M203A1 to M203A2.

**d. M203/M203A1 Modification if installing on M4 series carbines:**

**NOTE**

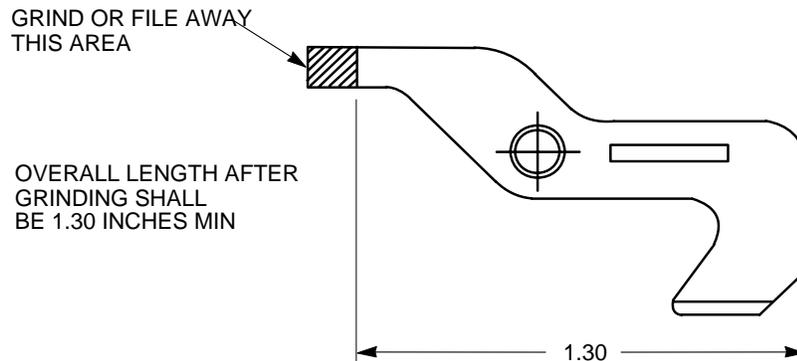
The following modifications are required if installing an M203 receiver. If installing an M203A1, delete paragraphs 1 thru 3. All referenced paragraphs are located in TM 9-1010-221-23&P, unless otherwise specified.

(1) Disassemble the barrel stop from the M203 receiver (TM 9-1010-221-23&P, paragraph 3-10, step 1).

(2) Modify barrel stop, as follows:

**WARNING**  
**TO PREVENT EYE INJURY APPROPRIATE EYE PROTECTION IS RECOMMENDED**  
**WHEN CLEANING YOUR WEAPON AND/OR ITS PARTS.**

- (a) Grind or file excess material from barrel stop as shown in illustration below.

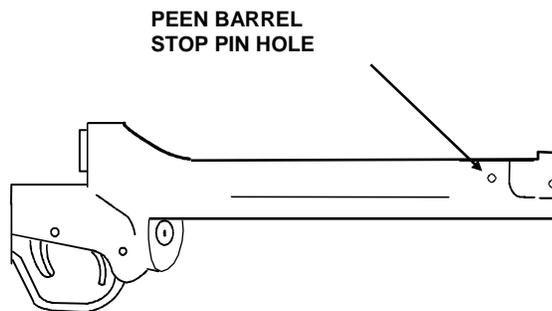


- (b) File burrs and sharp edges from barrel stop.
- (c) Touch up area of bare metal with solid film lubricant (TM 9-1010-221-23&P, Appendix D, item 11).
- (d) Reassemble barrel stop in M203 receiver (TM 9-1010-221-23&P, paragraph 3-10, step 14).

**NOTE**

The M5/M4 Adapter Rail Systems do not cover and hold the barrel stop pin like the old M203 handguard did.

- (3) Using a center punch, peen metal over barrel stop pin holes in receiver. See illustration below. One stake on each side of the receiver is required to retain barrel stop pin.



- (4) Mark the M203 receiver with permanent letters and numbers using 1/8" metal stamping dies. Stamp "A2" immediately after the existing "M203", such that it reads "M203A2". If you have a M203A1, stamp out the "1" with an "X" and stamp "2" next to the "X". Be careful **NOT** to stamp the "A2" beside the weapon serial number!

**e. Installation of Quick Release Bracket (QRB) onto the M203A2 receiver:**

Quick Release Bracket preparation and installation onto M203A2 receiver (TM 9-1010-221-23&P, paragraph 2-17, steps 1-11).

**f. Mounting:**

- (1) M203A2 w/QRB to the M4/M4A1 Carbine (TM 9-1010-221-23&P, paragraph 2-17e, steps 1-10).

- (2) M203A2 w/QRB to the M16A4 Rifle (TM 9-1010-221-23&P, paragraph 2-17f, steps 1-10).

**g. Engage trigger guard (TM 9-1010-221-23&P, paragraph 2-11, step 16).**

**NOTE:** Retain quadrant sight assembly for reuse when modifying M203A1 to M203A2.

**h. Final Assembly.**

(1) Install M203 barrel (TM 9-1010-221-23&P, paragraph 2-11, steps 20 and 21).

(2) Install sling in front swivel (TM 9-1010-221-23&P, paragraph 2-11, step 23).

**i. Function check the M203A2, in accordance with TM 9-1010-221-10, WP 0028 00-1.**

**j. Re-zero the M4/M4A1 carbine or M16A4 Rifle, because grenade launcher installation will change zero.**

**11. CALIBRATION REQUIREMENTS.** After MWO application, the M16A4 Rifle or M4/M4A1 Carbine must be zeroed.

**12. WEIGHT AND BALANCE DATA.** Not applicable.

**13. QUALITY ASSURANCE REQUIREMENTS.** Not applicable.

**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 15 data elements listed in Table 5. Elements 1, 2, 6, 7, 8 & 12 are given for this MWO (as shown). The person reporting the MWO data, will acquire the remaining elements (3, 4, 5, 9, 10, 11, 13, 14 & 15), and input all 15 into MMIS.

**Table 5. Modification Management Information System Input Data**

Data Element	Input Data
1) MCN	1-02-05-0011
2) MWO Number	9-1010-221-30-4
3) UIC (BN level)	
4) Unit Name	
5) Unit Location	
6) NSN of End Item (Old) M203	1010-00-179-6447
(Old) M203A1	1010-01-434-9028
7) NSN of End Item (New) - M203A2	1010-01-495-8511
8) Registration Number	N/A
9) Date of Application	
10) Man-Hours Required for Application	
11) Applied by (name)	
12) Software Version	N/A
13) Serial Numbers (M203/M203A1/M203A2)	
14) Your e-mail address	
15) Comments	

(3) Property Book Officers (PBO) shall begin reporting grenade launchers, which have been modified in accordance with this MWO, as the M203A2 model (LIN: L69012/NSN: 1010-01-495-8511). It is required that the Army Small Arms Registry at LOGSA be notified through your local Unique Item Tracking (UIT) Serialization Officer (SO) of conversion from the old NSN to the new NSN. The PBO can identify, if unknown, their local UIT SO by contacting LOGSA via e-mail at: [uit@logsa.army.mil](mailto:uit@logsa.army.mil).

**b. Marking equipment.** M203/M203A1 receivers shall be stamped with "A2" or "AX2" immediately after the existing "M203" marking, as specified above in paragraph 10d(4).

**c. Identification data.** See Table 6.

**Table 6. Identification**

	Before Modification	After Modification
<b>Nomenclature</b>	Launcher, Grenade, 40MM	Launcher, Grenade, 40MM
<b>Model No.</b>	M203/M203A1	M203A2
<b>CAGEC/Part No.</b>	19204/11838703/12597125	19204/12999553
<b>NSN</b>	1010-00-179-6447 1010-01-434-9028	1010-01-495-8511
<b>Line Item Number (LIN)</b>	L44595 L46007	L69012

**15. MATERIEL CHANGE (MC) NUMBER.** This MWO is authorized by MC number 1-02-05-0011.

**16. MODIFICATION IDENTIFICATION.** Modified grenade launcher receivers will have "A2" or "AX2" stamped immediately after the "M203", as discussed in paragraphs 10d(4) and 14b above.

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*  
0717002

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