ROUTINE

MWO effective date is Oct 2008 and completion date is Oct 2013.

MWO 9-1005-213-30-1

MODIFICATION WORK ORDER

MODIFICATION OF M2, CALIBER .50, FLEXIBLE W/E, MACHINE GUN

(NSN 1005-00-322-9715) (EIC 4AG)

Headquarters, Department of the Army Washington, DC

31 October 2008

SUPERSEDURE NOTICE: This MWO supersedes MWO 9-1005-213-30-1, dated 15 February 2008.

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

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1. PURPOSE. The purpose of this modification is to install the Trigger Block Kit to all M2 Caliber .50, Flexible, Machine Guns (NSN 1005-00-322-9715) to prevent accidental firing of the weapons. The Modification Kit consists of the trigger block, flat spring, two shoulder screws, and safety wire.

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

3. 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	Serial #
M2 FLEX	L91975	1005-00-322-9715	7265636	19205	ALL

4. MODULE(S) (COMPONENTS, ASSEMBLIES, SUBASSEMBLIES) TO BE MODIFIED.
The Back Plate Assembly, NSN 1005-00-653-5477, PN 6535477. (Old Configuration)
After modification is applied, the new Back Plate Assembly with trigger block kit installed is NSN 1005-01-547-6523, PN 13016070.
This number does not appear in current TM, Change 2, dated February 2007.

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

6. APPLICATION.

a. Time compliance schedule: The effective date of this MWO is October 2008 and its completion date is October 2013.

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: See Table 3.

Table 3. Application Requirements

ASSEMBLY/SUBASSEMBLY	WORK FORCE/SKILLS	MAN HOURS
Trigger Block Kit	MOS 45B Small Arms Repairman	0.25

Total man-hours required for a single application of this MWO is 0.25 hours.

d. MWOs to be Applied Prior to or Concurrently with the Application of this MWO: None

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

TM 9-1005-213-23&P, Change 2 Machine Gun, Caliber .50, Heavy Barrel

NOTE

A small number of weapons (approximately 15%) could face interference conditions with the trigger or bolt latch release. The bolt latch release and/or trigger, that causes interference must be replaced, along with straight headless pin and two helical springs.

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

PUBLICATION NUMBER	DATE
TM 9-1005-213-10, Change 2	Feb 2007
TM 9-1005-213-23&P, Change 2	Feb 2007
DMWR 9-1005-213	Nov 2006

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

a. Kits needed to Apply this MWO:

(1) The kit listed in Table 4 is required to accomplish this MWO.

Table 4. Kits and Security Classification

Nomenclature	NSN	Part Number	CAGE C	Security Classification
Trigger Block Kit	1005-01-414-9706	2038	19200	Unclassified

(2) Kit shipping data: See Table 5.

Table 5. Kit Shipping Data

Kit Part Number	Weight	Dimensions	Cubic Displacement
2038	**0.5 LB**	**4.0” x 3.0” x 2.0”**	**24 CU IN**

(3) Content of MWO Kit: See Table 6.

Table 6. Content of MWO Kit *

Nomenclature	NSN	Part Number	CAGEC
Trigger Block	N/A	13018130	19200
Flat Spring	5360-01-415-3267	13018131	19200
Shoulder Screws (2)	5360-01-415-3269	13018132	19200
Safety Wire (2 pc)	9505-01-536-5728	NASM20995C32	96906

***NOTE -** Parts listed below may be required to apply the kit IAW MWO procedure when interference occurs:

Trigger, NSN 1005-01-547-6524,PN 13016069
Bolt Latch Release, NSN 5340-00-550-4071, PN 5504071
Straight Headless Pin, NSN 5315-00-500-9275, PN 5009275
Helical Spring, NSN 5360-00-500-9352, PN 5009352 (Quantity - 2)

(4) Turn in all excess/old configuration back plates (NSN 1005-00-653-5477) to supply system:

Defense Distribution Depot Anniston
Attn: DDAA-SW/ Bldg 360
7 Frankford Avenue
Anniston, AL 36201-4199 DODAAC: SW3120

b. Bulk and Expendable Material: See Table 7.

Table 7. Bulk and Expendable Material

Nomenclature	NSN	Part Number	CAGEC	Quantity
Wire, Safety	9505-01-536-5728	NASM20995C32	96906	V

c. Part Disposition: Parts listed in Table 8, if replaced, will be turned-in for disposal or demilitarization in accordance with local standard operating procedures.

Table 8. Excess Parts *

Nomenclature	NSN	Part Number	CAGEC
Trigger	1005-00-600-8918	6008918	19200
Bolt Latch Release	5340-00-550-4071	5504071	19200
Straight Head Pin	5315-00-500-9275	5009275	19204
Helical Spring	5360-00-500-9352	5009352	19200

*** In the event there is interference-these parts will be replaced.**

9. SPECIAL TOOLS; TOOL KITS; JIGS; TEST, MEASUREMENT, AND DIAGNOSTIC EQUIPMENT (TMDE); AND FIXTURES REQUIRED. Special Tools not required. Tools required to apply this MWO are listed in Table 9.

Table 9. Tools Required*

Nomenclature	NSN	Part Number	CAGEC
Ball peen hammer, 8 oz *	5120-01-434-9537	69-404	03914
Wire Twist Pliers *	5120-01-487-3823	68-175	03914
Flat Tip Screwdriver, 3/16 inch *	5120-01-487-3824	66-265	03914
Long Nose Pliers *	5120-01-430-8332	25206	08292
Diagonal Cut Pliers	5110-00-239-8253	A-A-2330	58536

***NOTE –** Four (4) of these tools are available in the Small Arms Repairman Tool Kit - SC 5180-95-B71, 5180-01-506-8287, LIN W51910.

10. MODIFICATION PROCEDURES:

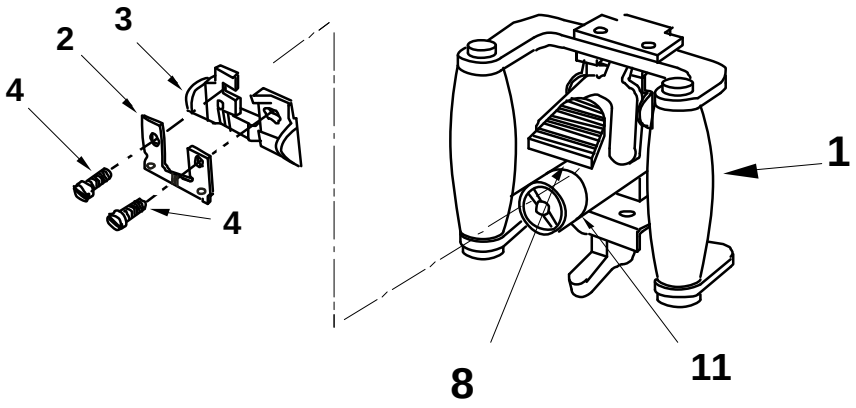
WARNING

WEAPON FIRE

Be sure weapon is clear before starting this task. Weapon can fire if loaded, causing serious injury or death to personnel. Ensure bolt is in forward position. Gun must be in single shot mode before removing back plate. Do not stand directly behind gun when removing back plate.

a. Installation of Trigger Block Kit:

(1) Remove back plate (1) from the M2 machine gun by pulling back plate latch lock straight back and lifting up on back plate latch. Raise back plate assembly straight up and remove from receiver.



(2) Align flat spring (2) and trigger block (3) on back plate (1). Install flat spring and trigger block. Thread two shoulder screws (4) by hand into threaded holes in back plate.

CAUTION

Do not over tighten shoulder screws (4). If the screws are over tightened, the material around the two screw holes in the flat spring (2) may be bent down into the slots in the trigger block (3), and make it more difficult to slide the trigger block between safe "S" and fire "F" position.

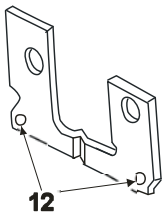
(3) Hold down bolt latch release (8) with thumb and using flat tip screwdriver, tighten two shoulder screws (4) against trigger block (3) and flat spring (2). Attempt to operate trigger block by sliding it from side to side. If trigger block does not operate freely, back off tension on shoulder screws as necessary to allow trigger block to function freely.

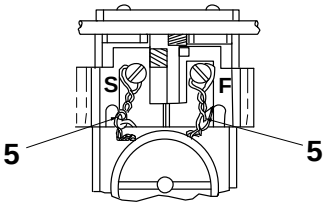
(4) Verify operation of trigger block by sliding it from side to side. Check to ensure that trigger block clicks into both the safe “S” and fire “F” position. Verify that when the “S” is visible, the trigger is locked. Verify that when “F” is visible, the trigger can be depressed. Perform the same check with bolt latch release locked in place with metallic tube (11). If the trigger block functions freely, without any interference condition, continue to step 5. **If trigger or bolt latch release causes interference with trigger block, remove the trigger block kit from back plate, go to paragraph 10-(b) below and replace the part(s) that cause(s) interference condition.**

(5) Cut an approximately 8 inch length of safety wire (Qty-2). Using needle nose pliers, install safety wire (5) through holes in each screw and through respective holes (12) in bottom corner of flat spring. Note - you may need to loosen screw 1/4 of a turn to access hole and thread safety wire. Using wire twister/pliers and being careful not to bend flat spring, twist safety wire to secure. Cut off excess safety wire with diagonal cut pliers with approximately 1/2 inch of twist remaining. Twist wire down with hand, as per illustration below.

CAUTION

Do not over tighten safety wire (5). If either of the two safety wires is over tightened, the corner of the flat spring next to the wire hole (12) may be bent away from the trigger block, reducing or eliminating the flat spring's ability to retain the trigger block in the "S" or "F" position.





(6) Reinstall the back plate with trigger block kit installed onto the gun.

(7) Perform Function Check.

(a) Place trigger block to 'S' (safe) position.
(b) Charge weapon. Pull charging handle until a click is heard, then ease bolt forward.
(c) Press trigger. Weapon should not fire.
(d) Place trigger block to 'F' (fire) position.
(e) Press trigger. Weapon should fire.

(8) The modification is complete.

(9) Record modification IAW paragraph 14 requirements.

b. Removal and replacement of Trigger and/or bolt latch release.

NOTE

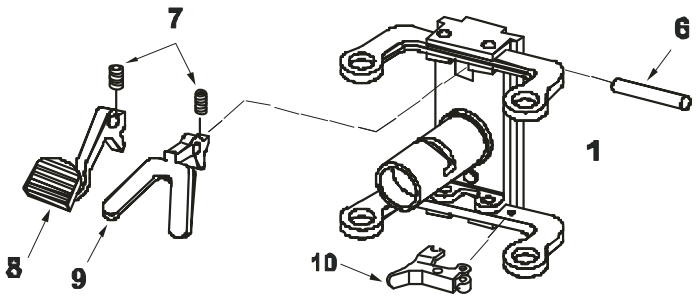
This procedure needs to be performed only if there is trigger block interference

(1) Remove Trigger Block Kit from back plate.

(2) Remove headless straight pin (6), two helical compression springs (7), bolt latch release (8), and trigger (9) from back plate (1). Discard springs and pins IAW standard operating procedures.

NOTE

Illustration not showing complete back plate assembly for clarity.



NOTE

Ensure helical compression springs (7) are in recesses of bolt latch release (8), back plate latch (10), and trigger (9).

(3) Install two helical compression springs (7), trigger (9), bolt latch release (8), and headless straight pin (6) in back plate (1). Peen metal of back plate over both ends of headless straight pin.

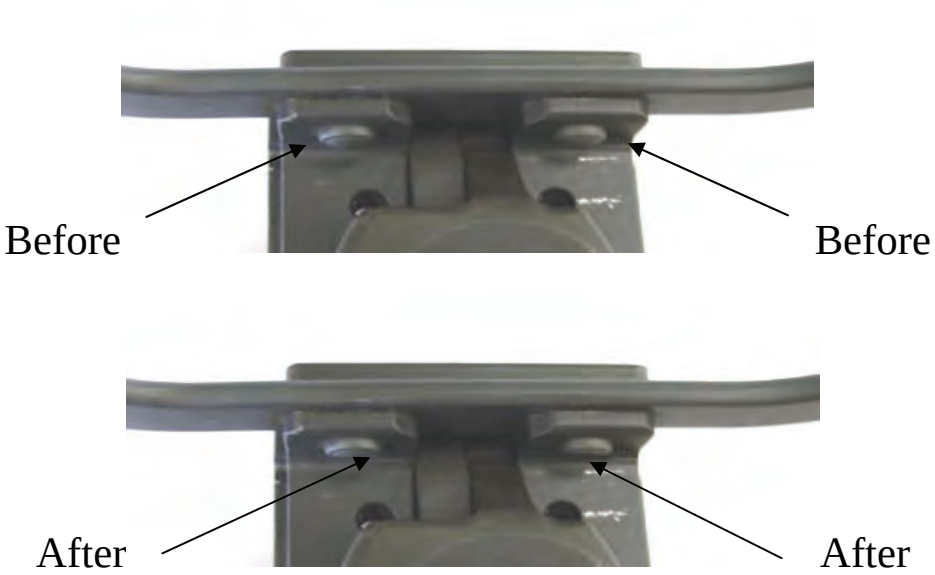
(4) Install trigger block assembly IAW the above paragraph 10.a., Paragraphs 2 thru 9.

10.1 POTENTIAL BACK PLATE RIVET INTERFERENCE PROBLEM

Subject: There is a potential interference problem with the rivets on the back plate handle with the upper frame handle when the trigger block is installed.

Problem: The concern is when the upper frame handles rivets are over-sized. Over-sized rivets will interfere with the trigger block operation. It prevents the trigger block from sliding between "fire" and "safe". This situation occurs only when the rivets are over-sized.

Solution: Small Arms Repairmen should file the rivet and apply SFL (NSN 9150-00-754-0064) to provide adequate clearance for trigger block operation. Only remove enough rivet material to allow the trigger block to slide freely from left to right. File between the face of the back plate and the rear side of the rivet. Perform function check below.

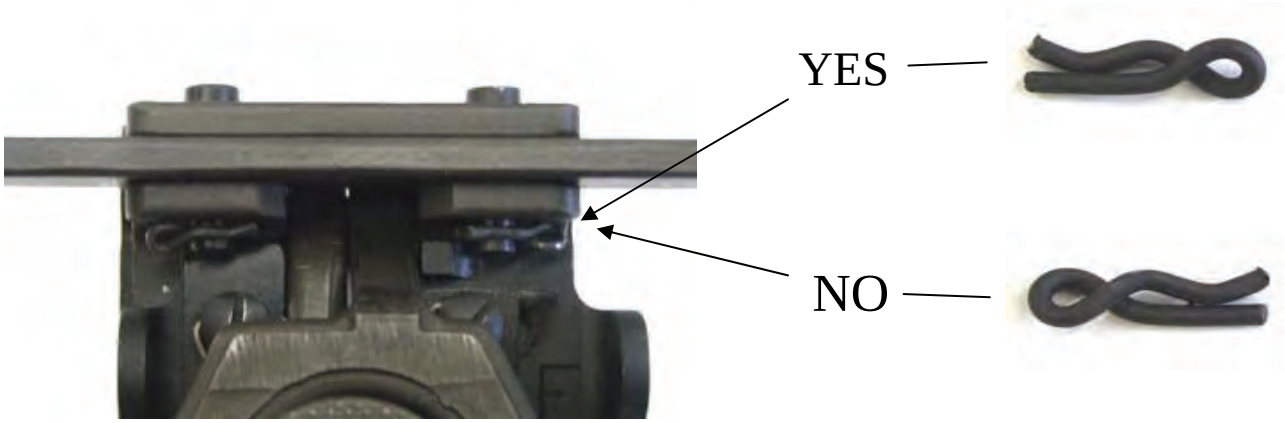


10.2 POTENTIAL BACK PLATE LOCK PIN INTERFERNCE PROBLEM

Subject: There is a potential problem with the lock pin on the back plate handle with the upper frame handle when the trigger block is installed.

Problem: The concern is when the upper right frame handle lock pin is installed with the loop end in the left to right position, it interferes with the trigger block operation. It prevents the trigger block from sliding between "fire" and "safe". This situation occurs only when the lock pin is installed from left to right.

Solution: Small Arms repairmen should install the lock pin loop from right to left as shown. Perform function check.



10.3 POTENTIAL TUBE, METALLIC HOOK INTERFERENCE PROBLEM

Subject: There is a potential problem with the hook on the tube, metallic lever, Manual Control NSN 3040-00-550-4060, when applying the trigger block.

Problem: The back plate metallic hook is used to engage the bolt latch release lever for automatic mode. The concern is when the trigger block is applied, and the hook on the tube, metallic secures the bolt latch release, and may prevent the trigger block from sliding between "fire" and "safe" because of excessive pressure. This situation occurs only when the hook on the tube, metallic is bent so that it holds the bolt latch release too tightly against the trigger assembly. This is an issue during automatic mode only and not an issue in single shot mode.

Solution: Small Arms Repairmen should slightly bend the hook of the tube, metallic outward, so the hook maintains the bolt latch release lever in the full-down position for Auto Mode, but still allows the trigger block assembly to function correctly. The bending of the hook should be performed in very small increments and function checked as described below after each bend until the trigger block is free to slide between "fire" and "safe". If the hook is opened too much, other function issues may occur.

FUNCTION CHECK

1. Push the bolt latch release lever in completely during AUTO MODE.
2. Make necessary adjustments to the tube, metallic hook to ensure the trigger block assembly slides from "fire" to "safe" while in AUTO MODE and the bolt stop clears the bolt during repeat-fire operation.
3. If the hook could not be bent into position then the tube, metallic NSN 4710-00-726-5562 should be changed.
4. This information is in PS Magazine, AEPS and the TACOM EIR Digest.

11. CALIBRATION REQUIREMENTS. Not applicable.

12. WEIGHT AND BALANCE DATE. 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 twelve (12) data elements listed in Table 10. Elements 1, 2, 6, 7 and 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 and 12) and input all 12 elements into MMIS.

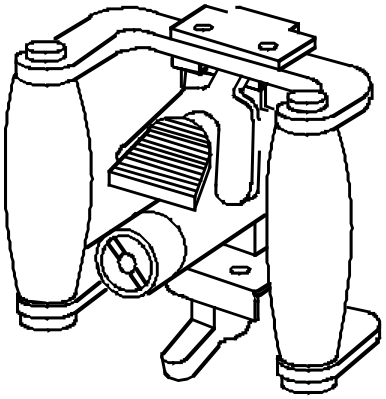
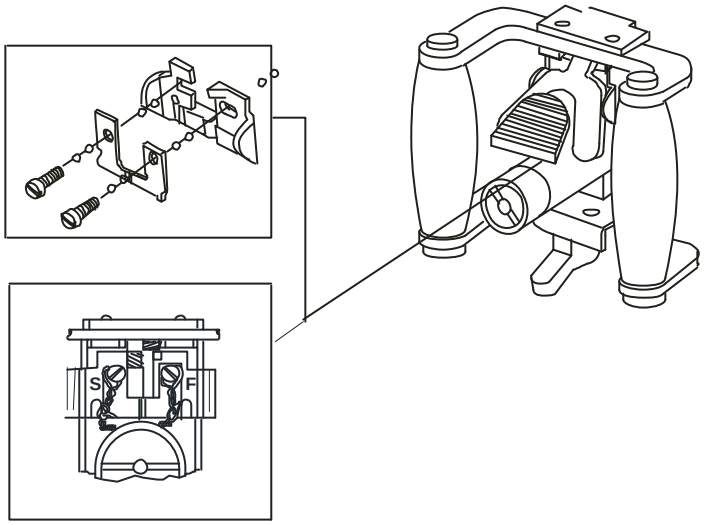
Table 10. MMIS Input Data

	DATA ELEMENT	INPUT DATA
1	Materiel Change Number (MCN)	1-07-05-0001
2	MWO number	9-1005-213-30-1
3	Unit Identification Code (UIC)	
4	Unit Name	
5	Unit Location	
6	NSN of the End Item	1005-00-322-9715
7	Registration Number	N/A
8	Date of application	
9	Man-hours required for application	0.25 hrs
10	Applied By (Name)	
11	Software Version	N/A
12	Serial Number	

b. Marking equipment. None

15. MATERIEL CHANGE (MC) NUMBER. This MWO is authorized by MC number **1-07-05- 0001**

16. MODIFICATION IDENTIFICATION. Visual verification of application can be made as shown in illustration.

BEFORE	AFTER
	

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General, United States Army
Chief of Staff

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