

ROUTINE

MWO effective date is 97 and completion date is Apr 01.

MWO 9-1005-201-30-5

MODIFICATION WORK ORDER

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

Headquarters, Department of the Army Washington, DC

21 May 1997

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

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. Mail your letter or DA Form 2028, Recommended Changes to Publications and Blank Forms, to Director, U.S. Army Armament and Chemical Acquisition and Logistic Activity (ACALA), ATTN: AMSTA-AC-NML, Rock Island, IL 61299-7630. A reply will be provided to you.

DISTRIBUTION STATEMENT C. Distribution authorized to U.S. Government agencies and their contractors on a need-to-know basis. This determination was made on 1 March 1997. Other requests for this document will be referred to Director, U.S. Army Armament and Chemical Acquisition and Logistic Activity (ACALA), ATTN: AMSTA-AC-NML, Rock Island, IL 61299-7630.

DESTRUCTION NOTICE. Destroy by any method that will prevent disclosure of contents or reconstruction of the document.

1. PURPOSE. The purpose of this modification is to fix the cocking handle pin hole in the receiver, reduce the possibility of receiver damage and enhance the ability to repair the cocking handle by: a) inspection of the receiver to ascertain that it is a candidate for the fix, b) ream the existing hole and drill a new hole, c) install a new cocking handle and securing with a block using two new oversized pins. In addition a new handguard assembly is provided.

2. PRIORITY. This modification is classified ROUTINE.

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3. END ITEM OR SYSTEM TO BE MODIFIED. Machine Gun, 5.56MM, M249 (NSN 1005-01-127-7510). Serial Numbers less than 33000 and 91000 to 100971.

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 March 1997 and the completion date is April 2001.

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 0.2 hours.

d. Military Occupational Specialty (MOS): None required. A team from TACOM-ACALA represented by small arms equipment specialists GS-1670 or equivalent, will train local personnel on the application of this MWO.

7. TECHNICAL PUBLICATIONS AFFECTED/CHANGED.

Operators Manual:

TM 9-1005-201-10/TM 08671A-10/1A, dated 26 July 1991

Change number 1, dated 25 November 1996

Maintenance Manual:

TM 9-1005-201-23&P/TM 08671A-23&P/2A, dated 14 December 1990

Change number 1, dated 10 February 1992

Change number 2, dated 07 July 1992

Change number 3, dated 22 June 1993

Change number 4, dated 14 January 1994

Change number 5, dated 03 March 1995

Change number 6, dated 15 March 1996

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

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

b. Contents of MWO kits are listed in table 1.

TABLE 1.

NSN	Nomenclature and Part No.	Qty per end Item
1005-01-328-5869	Modification Kit, Gun, M249 (19200) 12557029 consisting of:	1
1005-01-324-9191	Handguard Assembly (19200) 12556973	1
1005-01-213-9189	Stop, Cocking Handle (19200) 12556980	1
1005-01-324-9192	Cocking Handle Assembly (19200) 12556981	1
5315-00-690-0544	Pin, Spring (19200) MS39086-93	2

c. Bulk and expendable material are listed in table 2.

TABLE 2.

MATERIAL	Part No.	NSN
Lubricant, Solid Film	MIL-L-23398	9150-01-260-2534
Dry Cleaning Solvent (SD)	A-A-711	8135-00-281-1985
Sealing Compound (SD) (or equivalent)	290-21	8030-00-111-2763
Cutting Fluid (or equivalent)	MIL-F-46148	9150-00-231-6699
Drill, Twist 1/8 " dia	GGG-D-751	5133-00-227-9650
Keys, Socket Head Screw (not furnished with modification kit drilling fixture)	GGG-K-275 (9/64 In) GGG-K-275 (5/32 In) GGG-K-275 (3/16 In)	512000-889-2163 5120-00-198-5392 5120-00240-5300

d. Weapon Components/Parts Disposition is done locally. Parts shall be demilitarized IAW DOD 4160.21-M-1.

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

a. Special Tools (not furnished with modification kit drilling fixture): Cutter Assembly, consists of:

(1) Arbor assembly (quantity one each), consisting of:

(a) Screw, Cap, Hex Head, (1 1/2 inch long, 1/4 UNF), NSN 530500-267-8978, Ms 90726-12, quantity one each.

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(b) Washer, Flat (1/4 inch), NSN 5310-00-655-7420, MS 15795-10, quantity two each.

(c) Nut, Plain (1/4 UNF), NSN 5310-00-820-7344, MS 35690-421, quantity two each.

(2) Cut-off wheel, 2X1/16X1/4 Gemini Reinforced, Norton part no. 28042

b. Special tools (furnished with modification kit drilling fixture, see Figure 1):

(1) Locating pin: tapered pin, part number DF 010, for centering prior to clamping, reaming, and drilling.

(2) Clamping block, part number DF 009.

(3) File set (top and bottom) w/handles.

(4) Pliers (modified jaw).

(5) Punch Set (starter and finish).

c. Tool Kits:

(1) Shop Set, Small Arms: Field Maintenance, Basic, Less Power, NSN 4933-00-754-0664, LIN W51499, SC 4933-95-CL-A11.

(2) Shop Equipment, Small Arms Repair, Shelter Mounted, NSN 4940-00-209-6236, LIN T16597, SC 4940-95-CL-A60.

d. Jigs (furnished with modification kit drilling fixture, see Figure 1):

(1) Drill block, assembly, part number DF 013, used for drilling and reaming operations.

(2) Locating block, used for locating and supporting the cocking handle channel during drilling and reaming operations.

e. Test Measurement and Diagnostic Equipment (TMDE): none required.

f. Fixtures:

NOTE

The Fixture Assembly, Drill is a reportable hand receipt item. Upon completion of the modification, return the fixture to W52HIC B07 using the following address:

XR Transportation Officer
Rock Island Arsenal
Mark for: B14 Field Service Account
ATTN: MOP Shop, Mr. Billiet
DSN 793-0021
Rock Island, IL 61299-5000

(1) Drill Fixture (Fixture, Assembly, Drill, see figure 1), part number DF 011, NSN 1005-01-442-4811, provides capabilities of locating, clamping, reaming, and drilling receivers.

(2) Drill electric, NSN 5130-00-142-5325

(3) Rotary Tool Kit, Electric, NSN 5130-00-494-1132

10. MODIFICATION PROCEDURES.

NOTE

Prior to beginning any modifications, ensure that an 1/8 inch twist drill is available for each receiver to be modified.

- a. Unpack the Modification Kit.
- b. Inspect Modification Kit for completeness and for damage before assembly.
- c. Clear the weapon IAW pages 2-16 thru 2-19 of operators manual.
- d. Inspect Cocking Handle Channel for presence of a vee groove block held in place by two spring pins rather than a single solid pin (for illustration see pages 3-46 and 3-46.2 of the maintenance manual). If the vee groove block is in place, no further disassembly is required and no further application of this MWO is necessary.
- e. Disassemble weapon IAW pages 3-18 thru 3-20, 3-22, 3-26, 3-29 and 3-30 of operators manual.
- f. Inspect Receiver Assembly IAW pages 3-48 thru 3-48.2 of the maintenance manual.
- g. If it is determined after inspection of the receiver that the weapon should be replaced, no further disassembly is required and application of MWO is not to be accomplished, Reassemble weapon IAW pages 3-51, 3-55, 3-56, 3-59, 3-61, and 3-62 of operators manual.
- h. If the receiver is determined to be acceptable for MWO application, further disassembly can proceed IAW pages 3-25 and 3-31 of the operators manual and page 3-26 of the maintenance manual.
- i. Using the rotary tool and cutter assembly, remove Cocking Handle Stop Pin IAW page 3-46 of the maintenance manual.
- j. Separate Cocking Handle assembly and discard.

CAUTION

The receiver must freely slide on the drill fixture. Forcing the fixture past burrs can cause damage to the fixture by chipping the guide tabs. If a burr or minor deformation is present, use file set to remove the burr by minor filing. If the rails are slightly bent or constricted inward, use the modified pliers to carefully bend the rail outward.

- k. Place the receiver on the drill fixture, part number DF 011, by sliding the Cocking Handle channel over the locating block and forward to the drill block assembly (DF 013).

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l. Locate the approximate center of the existing hole in the channel and the front hole in the drill block. Use tapered pin, part number DF 010, to assist in the centering.

NOTE

Some minor adjustment of the toggle clamp spindles may be necessary.

m. Remove tapered pin and place clamping block, part number DF 009, in the rear of the receiver. The clamping block should set on top and between the slide rails inside the receiver, directly in line with the rear fixture clamp.

NOTE

Lubricate generously, using cutting fluid or substitute, while reaming/drilling.

n. Using twist drill and the drill block assembly as a guide, ream/drill out existing hole in cocking channel.

NOTE

Lubricate generously, using cutting fluid or substitute, while drilling.

o. Using twist drill and the rear hole in the drill block assembly as a guide, drill new hole in cocking channel, fully through.

p. Discard twist drill.

q. The drill block assembly is designed to be taken apart and reassembled in reverse. If the twist drill is broken during the drilling process, the broken portion of the drill bit can be removed by disassembling the drill block assembly: removing the receiver and block from the fixture, reassembling the drill block in reverse: turning receiver upside down on solid surface; drill the hole (back drill) thru the bottom rail (using a new drill bit). The broken portion of the bit should fall free. Then disassemble the drill block, remove from receiver, reassemble drill block and reinstall drill block on fixture.

r. Unclamp receiver, clean off cutting fluid or substitute.

s. Check for burrs. Light stoning is permitted.

t. Reassemble Cocking Handle Assembly IAW paragraph 8 of page 3-48.4 and paragraphs 14, 15, and 16 of page 3-49 of the maintenance manual using punch set.

u. Reassemble weapon IAW pages 3-49 thru 3-51, 3-54 thru 3-56, 3-59, 3-61, and 3-62 of the operators manual.

11. CALIBRATION REQUIREMENTS. Not applicable.

12. WEIGHT AND BALANCE DATA. Not significantly affected.

13. QUALITY ASSURANCE REQUIREMENTS. Submit Quality Deficiency Report (QDR) on SF 368 upon discovery of discrepancy to Commander, HQ, ARDEC, ATTN: AMSTA-AR-QAW-A (R), Rock Island, IL 61299-7300.

14. RECORDING AND REPORTING OF THE MODIFICATION.

NOTE

If you are required to use the DA Form 5504 because of automation at your location, please write your UIC and installation somewhere on the DA Form 5504.

a. Records and reports. Record and report accomplishment of the modification in accordance with DA PAM 738-750, The Army Maintenance Management System (TAMMS), Standard Army Maintenance System (SAMS). A DA Form 2407/5504 shall be completed and submitted within 3 days of accomplishment of modification. Specific instructions for use of DA Form 2407/5504 (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 2407/5504 will be distributed as follows:

- (1) Copy 1: Retained by using unit.
- (2) Copy 2: Director
ACALA
ATTN: AMSTA-AC-NMR
Rock Island, IL 61299-7630
- (3) Copy 3: Retained by unit

b. Marking equipment. Not applicable.

c. Identification data. Not applicable.

15. MATERIEL CHANGE (MC) NUMBER. This MWO is authorized by MC number 1-90-05-7882.

16. MODIFICATION IDENTIFICATION. Not applicable.

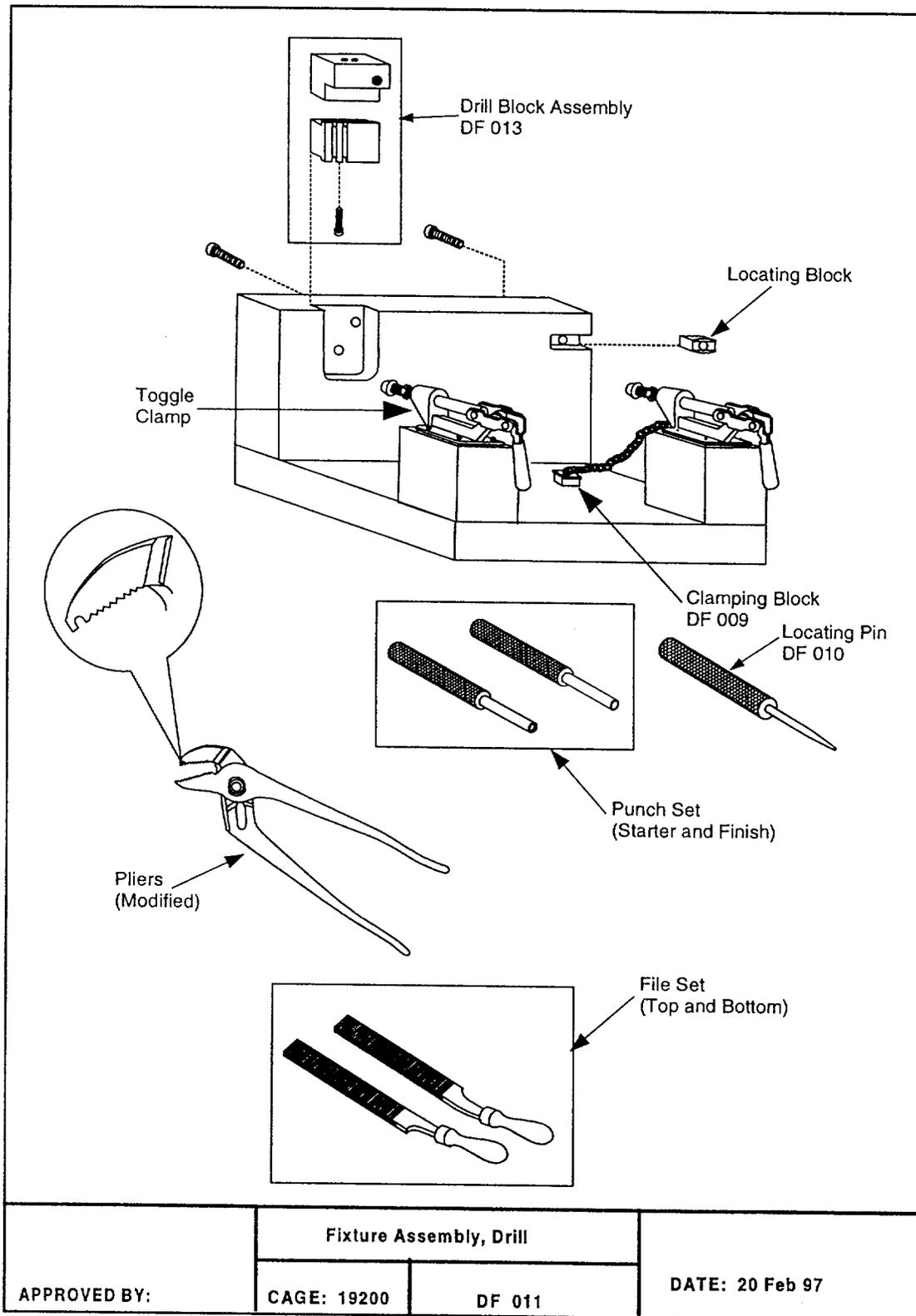
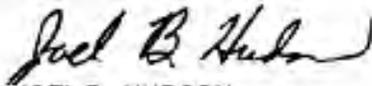


Figure 1.

By Order of the Secretary of the Army:

DENNIS J. REIMER
General, United States Army
Chief of Staff

Official:



JOEL B. HUDSON
Administrative Assistant to the
Secretary of the Army
03469

DISTRIBUTION: To be distributed in accordance with the initial distribution number (IDN) 401106 requirements for MWO 9-1005-201-30-5.

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