

This copy is a reprint which includes current pages from Change 1.

**OPERATOR'S AND ORGANIZATIONAL  
MAINTENANCE MANUAL (INCLUDING REPAIR  
PARTS AND SPECIAL TOOLS LIST)**

**BLANK FIRING ATTACHMENT  
(BFA) M20  
NSN 1005-01-090-4246  
for  
CAL. .50 M85 MACHINE GUN**

**HEADQUARTERS, DEPARTMENT OF THE ARMY**

**APRIL 1981**

TM 9-1005-315-12&P  
C1

**CHANGE**

**HEADQUARTERS  
DEPARTMENT OF THE ARMY**

**No.1**

**WASHINGTON, DC,**

1 August 1986

**OPERATOR'S AND ORGANIZATIONAL  
MAINTENANCE MANUAL  
(INCLUDING REPAIR PARTS AND  
SPECIAL TOOLS LIST)**

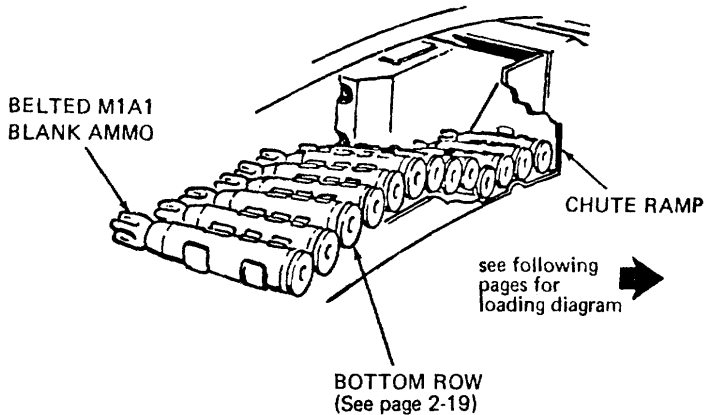
**BLANK FIRING ATTACHMENT (BFA) M20  
NSN 1005-01-090-4246  
for  
CAL. .50 M85 MACHINE GUN**

TM 9-1005-315-12&P, 15 April 1981, is changed as follows:

Page iii. REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS, change address to "Commander, US Army Armament, Munitions and Chemical Command, ATTN: AMSMC-MAS, Rock Island, 61299-6000."

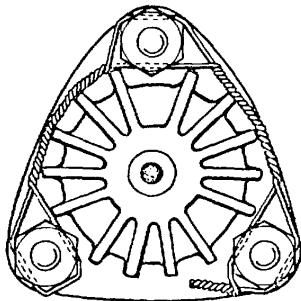
Page iv. REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR). Change address to "Commander, US Army Armament, Munitions and Chemical Command, ATTN: AMSMC-QAD, Rock Island, 61299-6000."

Page 2-17. Figure is changed as shown below:



Page 2-27. Change "SC 4933-95-CL-A07" and "(NSN 4933-00-357-7770) " to "SC 5180-95-CL-A07" and "(NSN 5180-00-357-7770) ".

Page 3-3. Figure is changed as shown below:



- Page A-1. Change "TM 38-750" to "DA PAM 738-750".  
Page C-8. Add NSN "5310-01-111-2785" for Item 1.  
Page C-8. Add NSN "5310200-05148627" for Item 6.  
Page C-8. Add NSN "5315-01-1219522" for Item 8.  
Page C-10. Change SMR Code "XAOZZ" to "PAOZZ" for Item 11.  
Page C-10. Add NSN "1005-01-158-8377" for Item 11.  
Page C-10. Add NSN "5305-00-715-1214" for Item 16.  
Page C-10. Change Par Number 'AN565FC416-5" to "MS 51981-47 for Item 16.  
Page C-11. Change FSCM "88044" to "96906" for Item 16.  
Page C-12. Add the following items at the bottom of page:

"5310-01-111-2785	1	1
5310-00-051-8627	1	6
5315-01-121-9522	1	8
1005-01-158-8377	1	11
5305-00-715-1214	1	16"

- Page C-13. Change Part Number "AN565FC416-5" to "MS 51981-47".

By Order of the Secretary of the Army:

**JOHN A. WICKHAM, JR.**  
*General, United States Army*  
*Chief of Staff*

Official:

**R. L. DILWORTH**  
*Brigadier General, United States Army*  
*The Adjutant General*

Distribution:

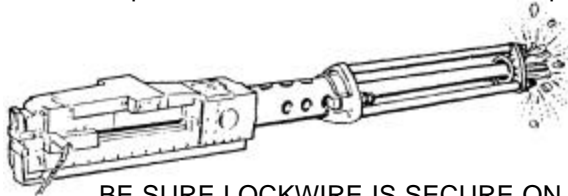
To be distributed in accordance with DA Form 12-40, Operator and Organizational maintenance requirements for Machine Gun, Cal .50 M85.

**WARNING**

**MAKE SURE CARTRIDGE GUIDE IS PROPERLY INSTALLED WHEN USING BLANK FIRING ATTACHMENT TO PREVENT LIVE AMMUNITION FROM ENTERING THE CHAMBER!!**

THE FOLLOWING CONDITIONS AND LIMITATIONS MUST BE MET TO MINIMIZE EXPOSURE TO TOXIC FUMES

1. A mission is limited 200 rounds fired at a low rate.
2. Personnel CAN NOT be exposed to more than three missions per day when the Vent Blower is off.



**BE SURE LOCKWIRE IS SECURE ON CHAMBER NUTS**



**WARNING**

**APPROVED EAR PLUGS OR HELMET DK 124 WILL BE WORN FOR EAR PROTECTION.**

**FIRING SHALL BE DONE BETWEEN 0° F and 120° F.**

**WHEN FIRING IN TRAINING EXERCISES TROOPS MUST BE NO CLOSER THAN 15 METERS DOWN RANGE FROM THE MUZZLE END OF THE MACHINE GUN.**

**TM 9-1005-315-12&P**

**TECHNICAL MANUAL**

**NO. 9-1005-315-12&P**

**HEADQUARTERS  
DEPARTMENT OF THE ARMY  
WASHINGTON, DC, 15 April 1981**

**OPERATOR'S AND ORGANIZATIONAL  
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(INCLUDING REPAIR PARTS AND  
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BLANK FIRING ATTACHMENT (BFA) M20  
NSN 1005-01-090-4246  
FOR  
CAL. .50 M85 MACHINE GUN**

**current as of August 1980**

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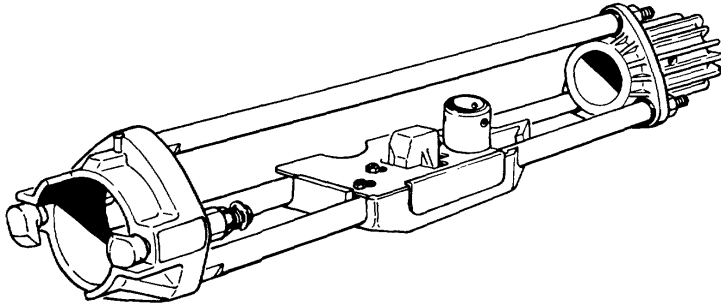
### **REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS**

You can help improve this manual. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Mail your letter, or DA Form 2028 (Recommended Changes to Publications and Blank Forms), direct to: Commander, US Army Armament Materiel Readiness Command, ATTN: DRSAR-MAS, Rock Island, IL 61299. A reply will be furnished to you.

## **REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR)**

If your Blank Firing Attachment needs improvement, let us know. Send us an EIR. You, the user, are the only one who can tell us what you don't like about your equipment. Let us know why you don't like the design. Tell us why a procedure is hard to perform. Put it on an SF 368 (Quality Deficiency Report). Mail it to us at Commander, US Army Armament Materiel Readiness Command, ATTN: DRSAR-MAO, Rock Island, IL 61299. We'll send you a reply.

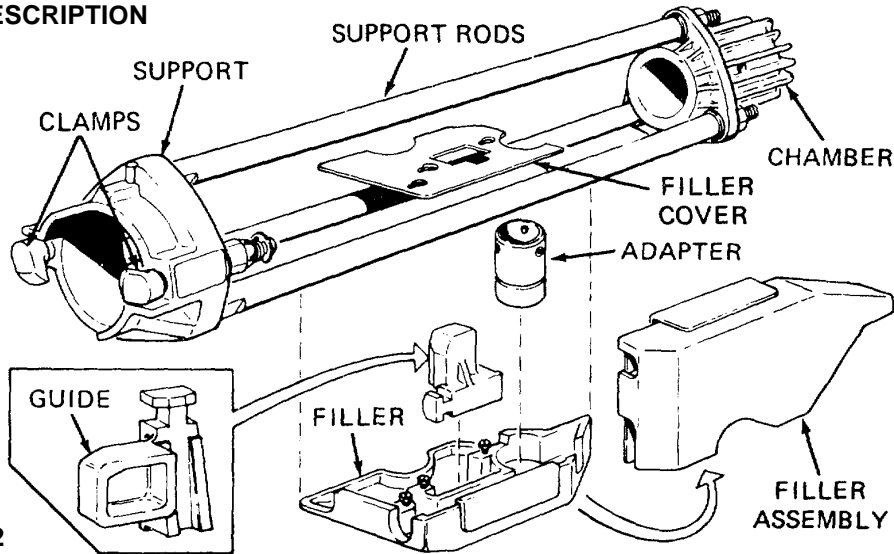
## CHAPTER 1. INTRODUCTION



The Blank Firing Attachment (BFA) clamps on the M85 machine gun to enable blank ammo to be fired and still provide enough back pressure to sustain continuous firing.

The BFA is used for training purposes where the use of live ammo is not possible. It is also used in conjunction with the Multiple Integrated Laser Engagement System (MILES).

DESCRIPTION



## CHAPTER 2. OPERATING INSTRUCTIONS

This chapter will tell you how to install and load the Blank Firing Attachment (BFA). Refer to TM 9-1005-231-10 (M85 Operators Manual) for operation of the machine gun.

### WARNING

#### THE FOLLOWING CONDITIONS AND LIMITATIONS MUST BE MET TO MINIMIZE EXPOSURE TO TOXIC FUMES

1. A mission is limited 200 rounds fired at a low rate.
2. Personnel CAN NOT be exposed to more than three missions per day when the Vent Blower is off.

APPROVED EAR PLUGS OR HELMET DK 124 WILL  
BE WORN FOR EAR PROTECTION.

FIRING SHALL BE DONE BETWEEN 0° F and 120° F.  
WHEN FIRING IN TRAINING EXERCISES TROOPS  
MUST BE NO CLOSER THAN 15 METERS DOWN  
RANGE FROM THE MUZZLE END OF THE MACHINE  
GUN.



The PMCS, which follows, is done after you've installed the BFA and before you fire the machine gun.

**PREVENTIVE MAINTENANCE  
CHECKS AND SERVICES (PMCS)**

- 2-1. *General.* The PMCS procedures are contained in the table below. Perform the procedures by the numbered sequence after you've installed the BFA and before you fire the machine gun.
- 2-2. *Item Number Column.* Checks and services are numbered in chronological order regardless of interval. This column shall be used as a source of item numbers for the 'TM Item Number' column on DA Form 2404, Equipment Inspection and Maintenance Worksheet, in recording results of PMCS.
- 2-3. *Interval Columns.* The columns headed 'B', 'D', and 'A' contain a dot (•) opposite the appropriate check. Thus, if a given check is performed before operation a dot is placed opposite the checks in the 'B' column; if the check is accomplished after operation, the dot is placed in the column headed 'A', and if the same check is made in two or more periods, a dot is placed in each applicable column.

- 2-4. *Item to Be Inspected and Procedure Column.* The items listed in this column are divided into groups indicating the portion of the equipment of which they are a part. Under these groupings, the items to be inspected are to be identified by as few words, usually the common name, as will clearly identify the item. This column contains a brief description of the procedure by which the check is to be performed. It contains all the information required to accomplish the checks and services.
- 2-5. *Equipment is not ready/available if Column.* This column shall contain the criteria that will cause the equipment to be classified as not ready/available because of inability to perform its primary mission.
- (1) Identify conditions that make the equipment not ready/available for readiness reporting purposes.
  - (2) Deny use of the equipment until corrective maintenance has been performed.

## Preventive Maintenance Checks and Services

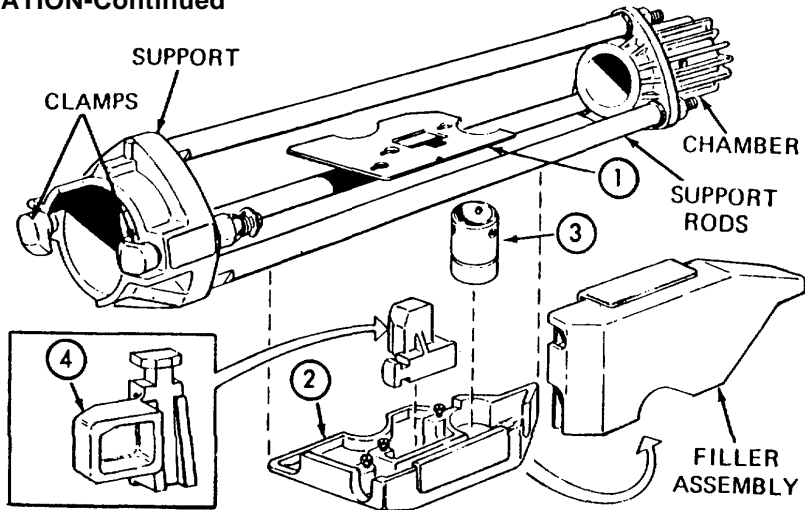
ITEM NO.	B - Before Operation			D - During Operation	A - After Operation
	INTERVAL			ITEM TO BE INSPECTED PROCEDURE	EQUIPMENT IS NOT READY/ AVAILABLE IF:
	B	D	A		
1	•			Check that threaded end rod nuts and clamp nuts are tight.	
2	•			Check that clamps are firmly in place in the barrel support cooling holes.	
3	•			Check all parts; replace any components that have cracks, breaks, or other damage that could affect operation.	

## **INSTALLATION OF BFA**

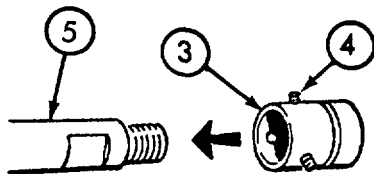
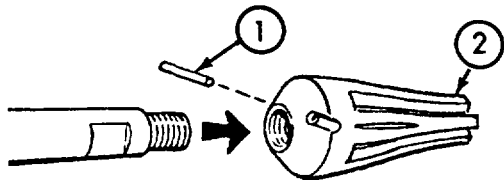
Effective use of the M20 BFA/M85 MG system is greatly dependent on strict adherence to the installation and maintenance procedures outlined in the instructions.

1. Loosen - do not remove screws to remove filler.
2. Slide back and lift cover (1) from filler (2).
3. Remove adapter (3) and guide (4).
4. Reinstall cover (1). Replace cover on filler and tighten screws before installing in ammunition box
5. Install in empty ammunition box.

INSTALLATION-Continued



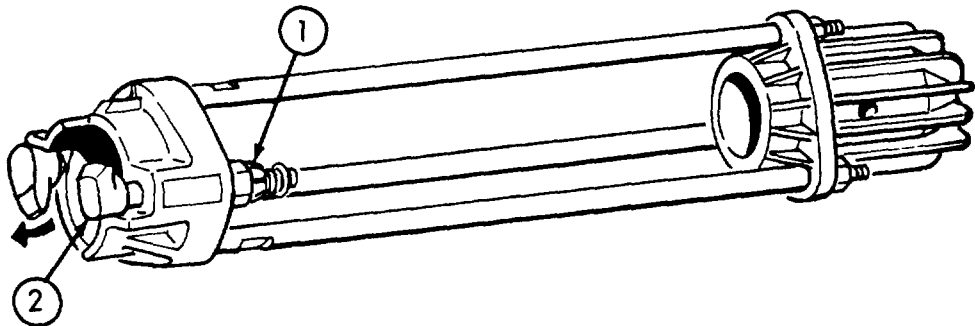
- Drive spring pin (1) from flash suppressor using 1/8 inch drift punch and unscrew flash suppressor (2) from end of M85 barrel with strap wrench. Save the flash suppressor and pin, and tag them for identification and replacement of the same barrel. When using MILES, store flash suppressor and pin in tank oddment tray.
- Screw an adapter (3) until bottomed and tighten three setscrews (4) against barrel (5) using 1/8 inch internal hex socket key wrench.



**Note**

**If flash suppressor cannot be removed contact direct support personnel.**

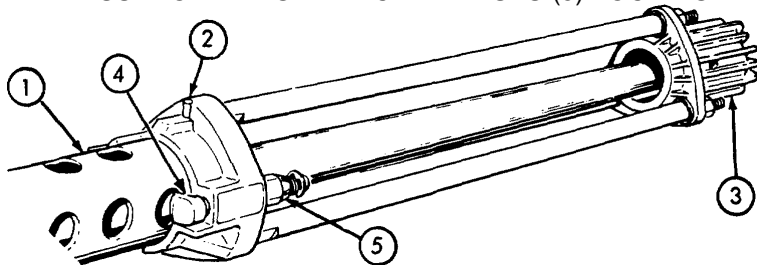
- 8 LOOSEN CLAMP NUTS (1) USING 15/16 INCH WRENCH AND TURN CLAMP HEADS (2) TO CLEAR BARREL SUPPORT.



- 9 FILE OFF ANY BURRS, ON MACHINE GUN BARREL SUPPORT, THAT MAY PREVENT ASSEMBLY OF BFA TO GUN.

**INSTALLATION-Continued**

- 10 SLIDE SUPPORT END OF BFA OVER THE MACHINE GUN BARREL SUPPORT (1) AS FAR AS IT WILL GO, TAKING CARE THAT KEYING PIN (2) IS LINED UP WITH KEYING SLOT AT TOP FRONT EDGE OF BARREL SUPPORT. BEFORE ENGAGING KEYSLOT, TURN BFA ON BARREL SUPPORT TO MAKE SURE ADAPTER IS NOT BINDING ON INSIDE OF CHAMBER (3).
- 11 TURN CLAMPS (4) INTO FRONT ROW OF COOLING HOLES IN SIDES OF BARREL SUPPORT. TIGHTEN CLAMP NUTS (5) LOCKING BFA IN PLACE.



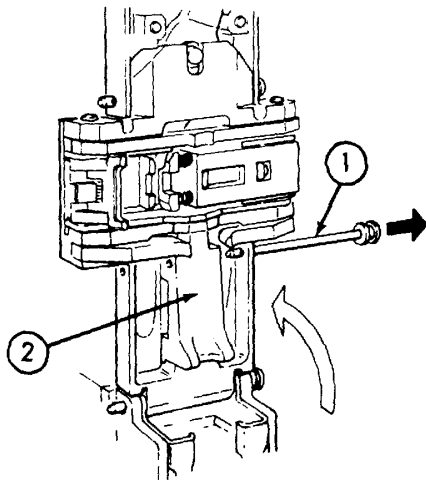


**WARNING**

Make sure cartridge guide is properly installed in M85 cover. When using blank firing attachment to prevent live ammunition from entering the chamber.

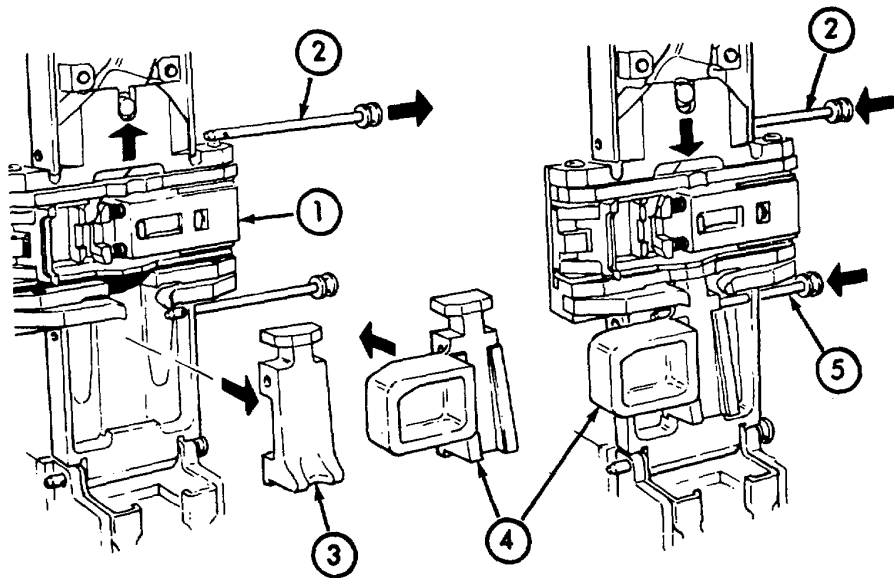
**INSTALLATION OF CARTRIDGE GUIDE**

1. LIFT COVER OF M85 AND REMOVE PIN (1) HOLDING CARTRIDGE GUIDE RAMP (2).



**INSTALLATION-Continued**

- 2 GRASP FEED MECHANISM (1) FIRMLY TO PREVENT PARTS FROM SPRINGING OUT AND REMOVE PIN (2) HOLDING FEED MECHANISM. SLIDE FEED MECHANISM UP ABOUT 1/16 INCH RELEASING CARTRIDGE GUIDE RAMP (3). REMOVE CARTRIDGE GUIDE RAMP AND SAVE.
  
- 3 PLACE CARTRIDGE GUIDE (4) IN CARTRIDGE GUIDE RAMP SLOT AND SLIDE FEED MECHANISM DOWN AGAINST CARTRIDGE GUIDE AND REPLACE PIN (2). REPLACE PIN (5) THRU COVER AND CARTRIDGE GUIDE (4).

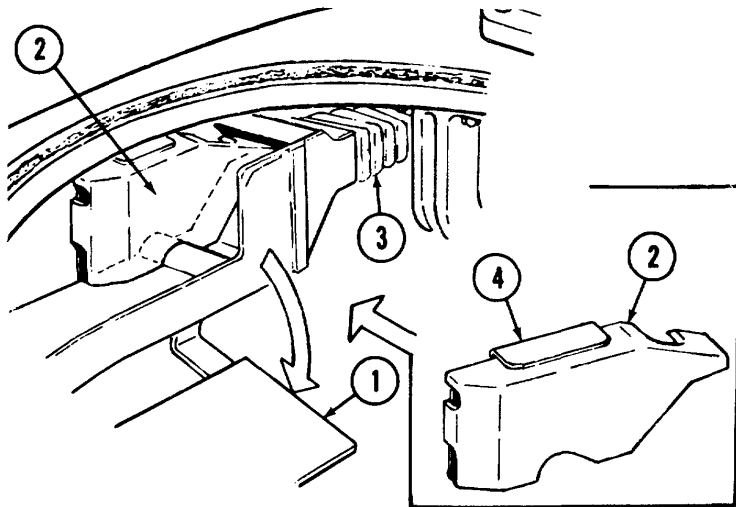


## INSTALLATION-Continued

### INSTALLATION OF FILLER ASSEMBLY

FOR USE WITH M1A1 CAL. .50 BLANK AMMUNITION

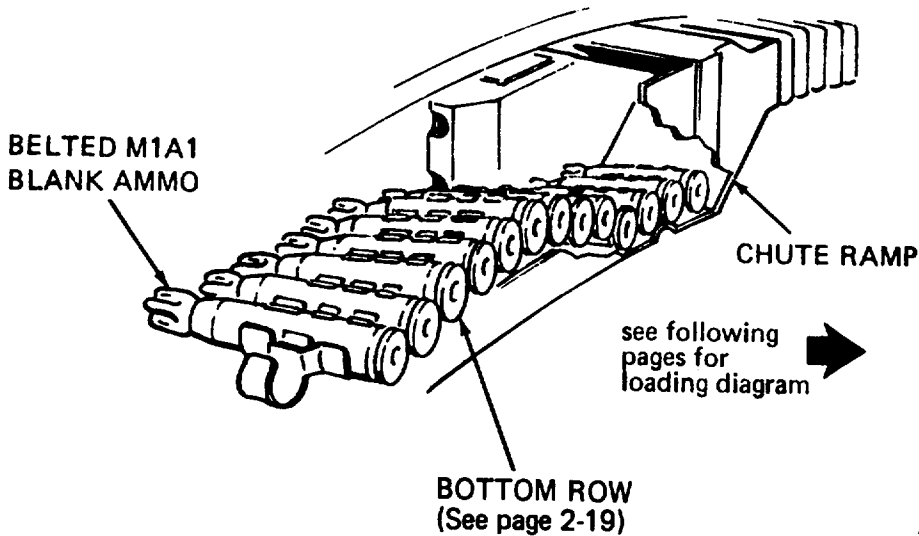
- 1 IN CUPOLA OF M60 SERIES TANKS WITH LEFT HAND FEED M85 MG, OPEN CAL. .50 LID OF AMMUNITION BOX (1). SLIDE FILLER (2) AGAINST BACK WALL OF AMMUNITION BOX WITH NARROW END TOWARD CHUTE (3).
- 2 HOOK LIP (4) OF FILLER OVER BACK EDGE OF AMMUNITION BOX.
- 3 LOAD BELT OF BLANK AMMO IN AMMUNITION BOX MAKING SURE LOWER LAYERS OF AMMO FILL AMMUNITION BOX TO CHUTE AREA.



## **LOADING**

**IMPORTANT:** Smooth functioning of the M85 machine gun is extremely dependent on correct loading of the ammunition box.

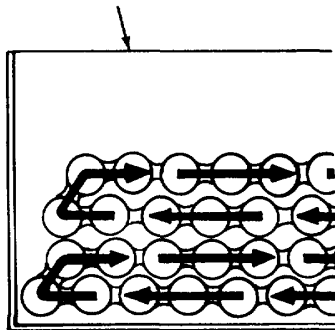
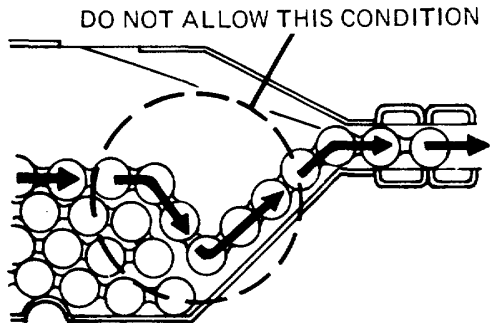
- 1 WHEN BEGINNING TO LOAD AMMUNITION BOX, POSITION END OF AMMO BELT FORWARD AGAINST BOTTOM OF CHUTE RAMP WITH OPEN SIDE OF LINK LOOPS FACING UP.



**LOADING - Continued**

- 2 LOAD BELT OF BLANK AMMUNITION IN AMMUNITION BOX SO EACH SUCCESSIVE LAYER IS FORWARD AGAINST CHUTE RAMP SO LOWER LAYERS PROVIDE SUPPORT FOR BELT ENTERING FEED CHUTE.

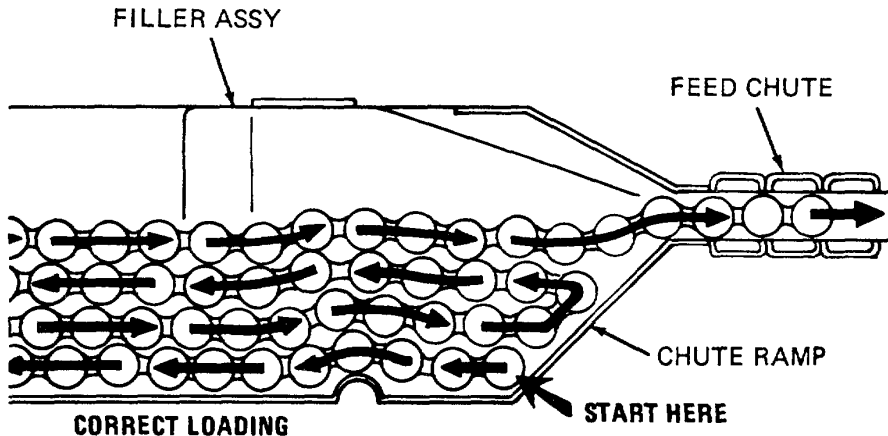
CAL..50 AMMUNITION BOX  
(M60 Series Tank)





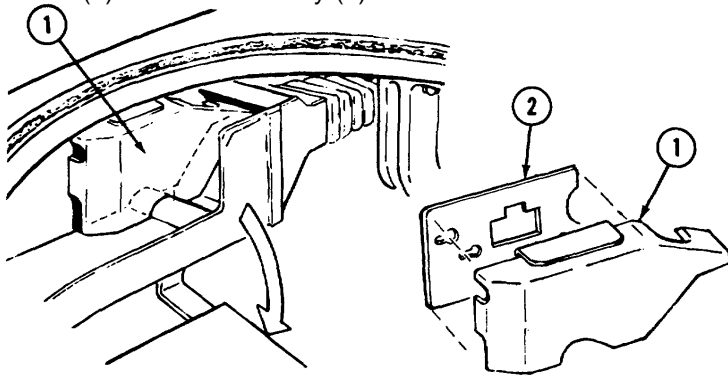
- 3 THE OPEN SIDE OF THE LINKS MUST FACE DOWN WHEN ENTERING THE FEED CHUTE.

- 4 REFER TO TM 9-1005-231-10 FOR INSTRUCTIONS ON LOADING THE M85 MACHINE GUN

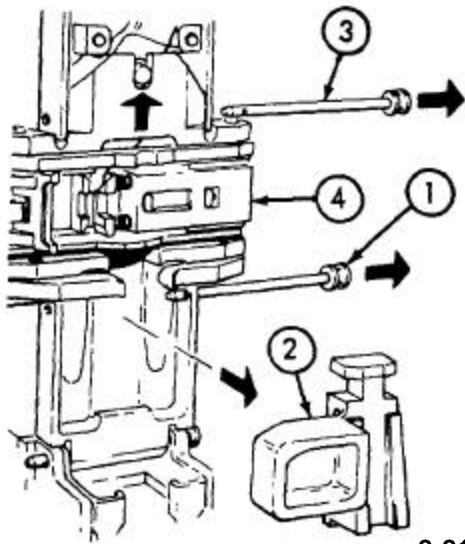


## REMOVAL OF BLANK FIRING ATTACHMENT

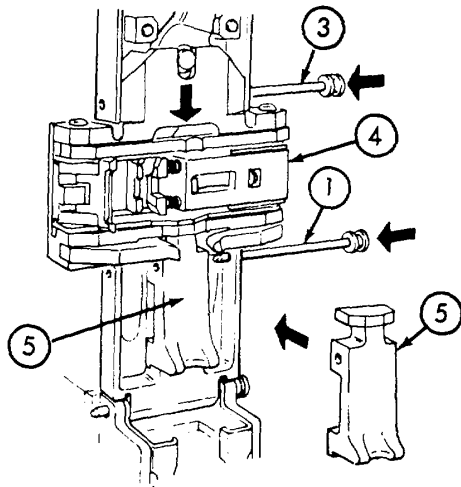
1. Remove filler assembly (1) from ammunition box.
2. Slide back cover (2) on filler assembly (1) and remove.



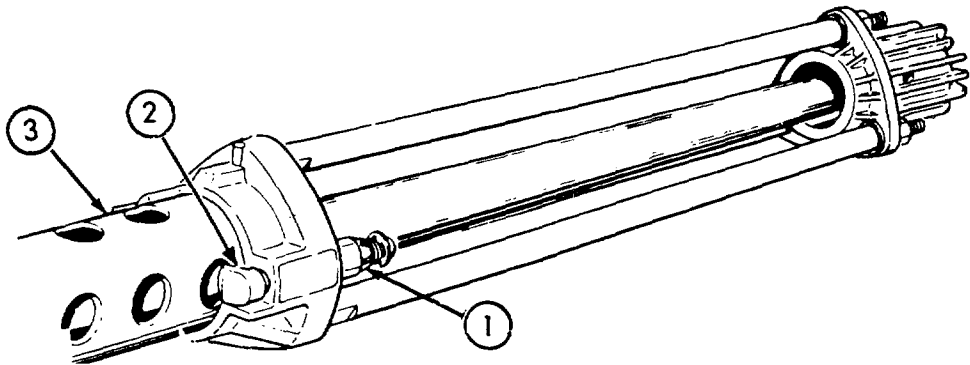
3. Remove pin (1) holding cartridge guide (2) and pin (3). Holding feed mechanism (4) secure, slide feed mechanism up 1/16 inch and remove cartridge guide.



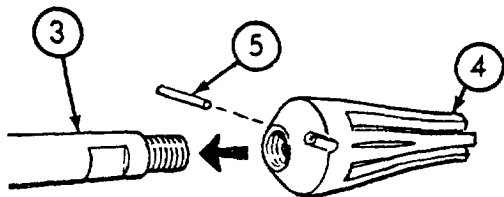
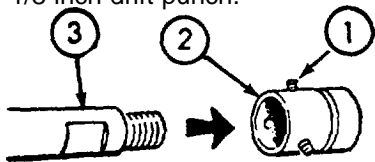
4. Install cartridge guide ramp (5) and slide feed mechanism (4) down. Install pin (1) and pin (3).



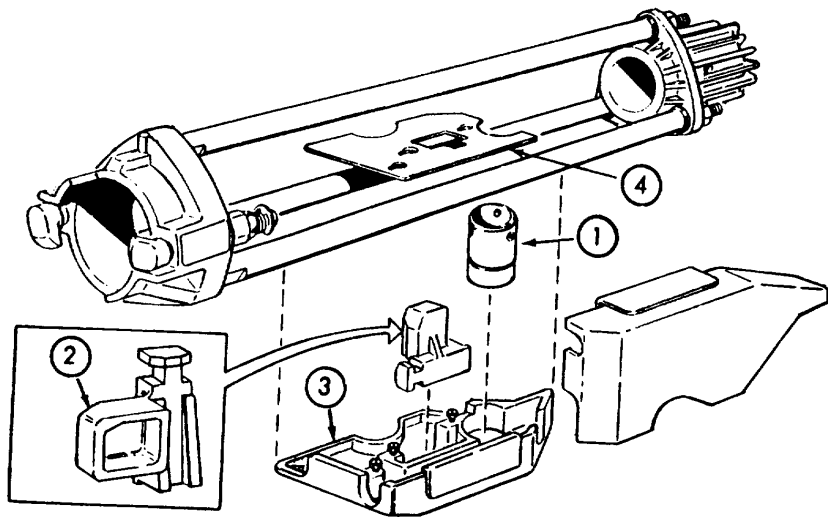
5. Loosen clamp nuts (1) using 15/16 inch wrench. Slide clamps (2) rearward and turn to disengage clamps from cooling holes in support.
6. Slide BFA forward over barrel support (3) and barrel.



7. Loosen three setscrews (1) in adapter (2) using 1/8 inch hex socket key wrench. Unscrew adapter (2) from barrel (3).
8. Remove flash suppressor and pin from tank oddment tray.
9. Screw flash suppressor (4) on barrel (3) using strap wrench making sure that the hole in flash suppressor and groove in barrel are aligned. Reinstall spring pin (5) using 1/8 inch drift punch.



10. Install adapter (1) and cartridge guide (2) in filler (3). (see following page)
11. Install filler (3) onto the two threaded end rods and slide on cover (4).



## TOOL LIST

### COMMON TOOLS NEEDED TO INSTALL, MAINTAIN, AND REPAIR BFA

1. Punch 1/8" (Remove Flash Suppressor)
2. Hammer, Ball Peen, 4 oz.
3. Wrench, Strap (Remove Flash Suppressor)
4. Wrench, Open-end or Box 3/4" (Chamber Nuts)
5. Key, Socket Head Screw 1/8" (Install Adapter)
6. Wrench, Open-end or Box 15/16" (Clamp Nuts)
7. Wrench, Adjustable 1/2" (Spacer Rods)
8. Drill, Electric 3/8" Capacity
9. Bit, Drill 5/16" (Cleaning Chamber Orifice)
10. Pliers ,Wire Twister
11. Screwdriver, Flat Tip (Retaining Rings)



- The required tools needed to maintain and repair M20 BFA are listed above and can be found in the following Tool Kits.

SC 4933-95-CL-A07 Tool Kit, Small Arms: Repairman (NSN 4933-00357-7770)

SC 4933-95-CL-ALL Tool Kit, Small Arms: Field Maintenance Post, Camp, and Station (NSN 493340-754-0664) Basic Issue Items in the Tank.

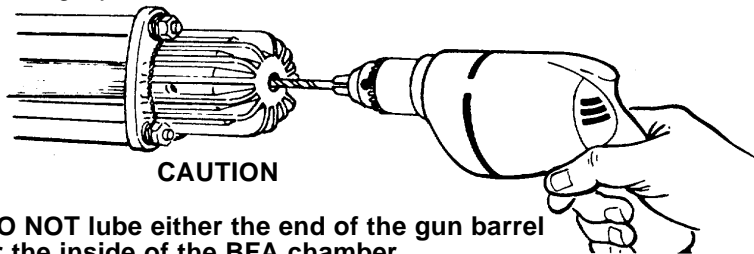
- Repair of the BFA consists only of replacing damaged components.

## CHAPTER 3. MAINTENANCE INSTRUCTIONS LUBRICATION

### BLANK FIRING ATTACHMENT

After every exercise (800-1000 rounds of M1A1 blank ammo has been fired thru BFA), drill out orifice hole at front end of chamber using a standard 5/16 inch diameter drill bit.

After firing, clean exterior surfaces with a rag dampened in rifle bore cleaner (RBC). Wipe dry and lightly oil with LSA.



**CAUTION**

**DO NOT** lube either the end of the gun barrel or the inside of the BFA chamber.

## **LUBRICATION - Continued**

### **M85 MACHINEGUN**

Gun should be fully cleaned and oiled after every exercise (200 600 rounds fired). Moving parts in the receiver and cover should be wiped down and a light coating of LSA applies.

### **TROUBLESHOOTING**

There are no troubleshooting procedures provided in this TM. The BFA is an extremely simple device. When a component fails, you'll know which one it is without having to follow a troubleshooting logic tree.

### **MAINTENANCE PROCEDURES REPAIR OF BFA**

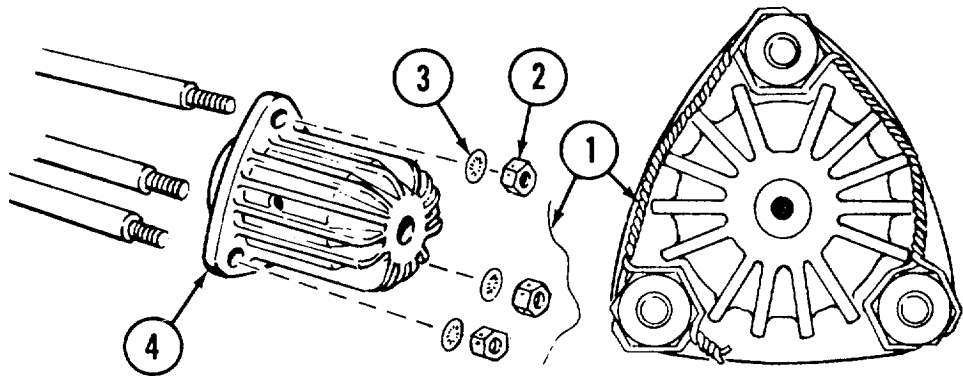
The required tools needed to maintain and repair the M20 BFA are listed on page 2-26.

Repair of the BFA consists only of replacing damaged components.

## REPAIR-Continued

### REPLACING OF CHAMBER

- 1 REMOVE LOCKWIRE (1).
- 2 REMOVE NUTS (2) AND LOCKWASHERS (3).
- 3 REMOVE CHAMBER (4) AND REPLACE WITH NEW CHAMBER.
- 4 REINSTALL EXISTING NUTS WITH NEW LOCKWASHERS.
- 5 ALTERNATELY TIGHTEN EACH NUT 1/2 TURN UNTIL FULLY TIGHTENED. VISUALLY CHECK TO SEE THAT SUPPORT RODS REMAIN PARALLEL.
- 6 INSTALL NEW WIRE, NONELECTRIC (LOCKWIRE) (MS20995NC51).

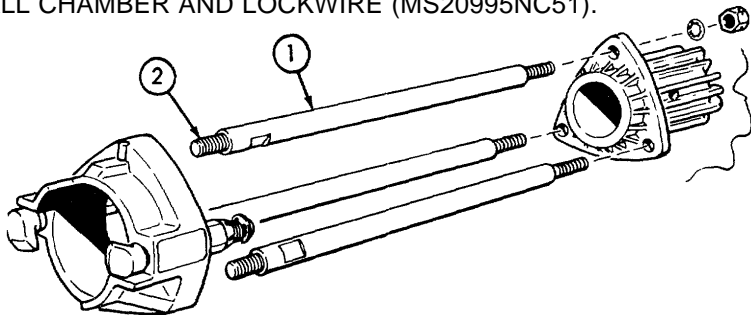


**WARNING**

Be sure lockwire is secure on chamber nuts.

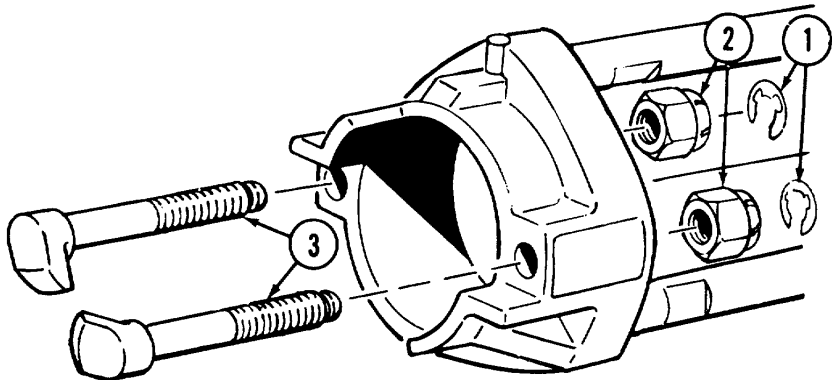
**REPAIR-Continued****REPLACING SPACER RODS**

- 1 REMOVE CHAMBER.
- 2 REMOVE SPACER RODS (1) FROM SUPPORT.
- 3 APPLY SEALING COMPOUND, GRADE A MIL-S-22473, TO THREADS (2) OF REPLACEMENT ROD BEFORE INSTALLING IN SUPPORT. INSTALL AND TIGHTEN SECURELY.
- 4 REINSTALL CHAMBER AND LOCKWIRE (MS20995NC51).

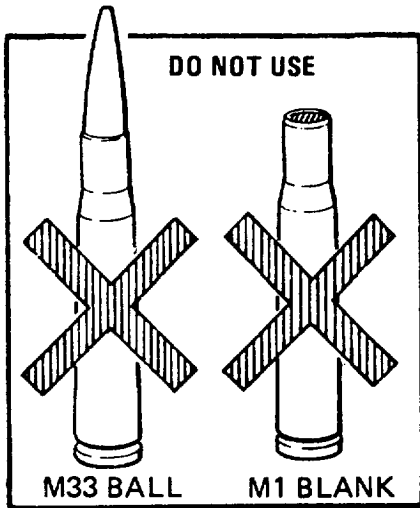


## REPLACING SUPPORT CLAMPS

- 1 REMOVE RETAINING RING(S) (1) AND CLAMP NUT(S) (2).
- 2 REMOVE DAMAGED CLAMP(S) (3) AND REPLACE WITH NEW CLAMP (S).
- 3 INSTALL CLAMP NUT(S) AND RETAINING RING(S).

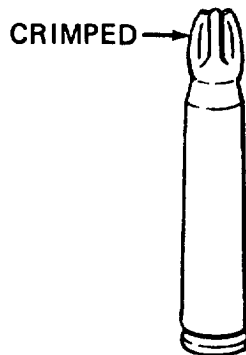


CHAPTER 4. AMMUNITION



4-0

**USE THIS AMMO ONLY**



M1A1 BLANK



## APPENDIX A. REFERENCES

### A-1. SCOPE

This appendix lists all forms and technical manuals referenced in this manual.

### A-2. FORMS

Recommended Changes to Publications  
and Blank Forms

DA Form 2028

Quality Deficiency Report

SF 368

### A-3. TECHNICAL MANUALS

Operators Manual for M85 Machine Gun

TM 9-1005-231-10

The Army Maintenance Management  
System (TAMMS)

TM 38-750

## APPENDIX B. MAINTENANCE ALLOCATION CHART (MAC)

**B-1. General.** This appendix provides a general explanation of all maintenance functions authorized at the proper level.

### **B-2. Maintenance Functions.**

a. **Inspect.** To determine the serviceability of an item by comparing its physical, mechanical, and/or electrical characteristics with established standards through examination.

b. **Service.** Operations required periodically to keep an item in proper operating condition, i.e., to clean (includes decontaminate, when required) , to preserve, drain, paint, or replenish fuel, lubricants, chemical fluids or gases.

c. **Install.** The act of emplacing, seating, or fixing into position an item, part, or module (component or assembly) in a manner to allow the proper functioning of an equipment or system.

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d. Replace. The act of substituting a serviceable like type part, subassembly, or module (component or assembly) for an unserviceable counterpart.

e. Repair. The application of maintenance services or other maintenance actions to restore serviceability to an item by correcting specific damage, fault, malfunction, or failure in a part, subassembly, module (component or assembly) , end item, or system.

### **B-3. Explanation of Columns in the Maintenance Allocation Chart (MAC).**

a. Column 1. Group Number, lists functional group code numbers, the purpose of which is to identify components, assemblies, subassemblies, and modules with the next higher assembly.

b. Column 2. Component/Assembly, contains the names of components, assemblies, subassemblies, and modules for which maintenance is authorized.

c. Column 3. Maintenance Function, lists the functions to be performed on the item listed in column 2.

d. Column 4. Maintenance Category, specifies by the listing of a work time figure in the appropriate subcolumn(s) , the category of maintenance authorized to perform the function listed in Column 3. This figure represents the active time required to perform that maintenance function at the indicated category of maintenance. If the number or complexity of the tasks within the listed maintenance function vary at different maintenance categories, appropriate work time figures will be shown for each category. The work time figure represents the average time required to restore an item (assembly, subassembly, component, module, end item; or system) to a serviceable condition under typical field operating conditions. This time includes preparation time, troubleshooting time, and quality assurance/quality control time in addition to the time required to perform the specific tasks identified for the maintenance functions authorized in the maintenance allocation chart. The symbol designations for the various maintenance categories are as follows:

- C .....Operator or crew.
- O ..... Organizational maintenance.

## MAINTENANCE ALLOCATION CHART

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE CATEGORY	
			C	O
00	M20 BLANK FIRING ATTACHMENT	Inspect	0.1	
		Service	0.2	
		Install	0.6	
		Replace		0.5
		Repair		1.0
01	ADAPTER ASSEMBLY	Inspect	0.1	
		Service	0.1	
		Install		0.2
		Replace		0.2
		Repair		0.2

## MAINTENANCE ALLOCATION CHART

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE CATEGORY	
			C	O
02	FILLER ASSEMBLY	Inspect Service Install Replace Repair	0.1 0.1 0.2	0.2 0.3

NO SPECIAL TOOLS REQUIRED.

## APPENDIX C. REPAIR PARTS AND SPECIAL TOOLS LIST

### C-1. Scope.

This manual lists spares and repair parts required for performance of organizational maintenance of the Blank Firing Attachment (BFA). It authorizes the requisitioning and issue of spares and repair parts as indicated by the source and maintenance codes.

### C-2. General.

This Repair Parts and Special Tools List is divided into the following lists:

*a. Repair Parts List.* A list of spares and repair parts authorized for use in the performance of maintenance. The list also includes parts which must be removed for replacement of the authorized parts. Parts lists are composed of functional groups in numeric sequence, with the parts in each group listed in figure and item number sequence.

*b. National Sock Number and Part Number Index.* A list, in National item identification number (NIIN) sequence, of all National stock numbers (NSN) appearing in the listings, followed by a list in alphanumeric sequence of all part numbers appearing in the listings. National stock numbers and part numbers are cross-referenced to each illustration figure and item number appearance. This index is followed by a cross-reference list of reference designators to figure and item numbers.

### **C-3. Explanation of Columns.**

*a. Illustration.* This column is divided as follows:

(1) *Figure Number.* Indicate the figure number of the illustration on which the item is shown.

(2) *Item Number.* The number used to identify item called out in the illustration.

*b. Source, Maintenance, and Recoverability (SMR) Codes.*

(1) *Source Code.* Source codes indicate the manner of acquiring support items for maintenance, repair, or overhaul of end items. Source codes are entered in the first and second positions of the Uniform SMR Code format as follows:



<i>Code</i>	<i>Definition</i>
PA	- Item procured and socked for anticipated or known usage.
XA	- Item is not procured or socked because the requirements for the item will result in the replacement of the next higher assembly.

(2) *Maintenance Code.* Maintenance codes are assigned to indicate the levels of maintenance authorized to USE and REPAIR support items. The maintenance codes are entered in the third and fourth positions of the Uniform SMR Code format as follows:

(a) The maintenance code entered in the third position will indicate the lowest maintenance level authorized to remove, replace, and use the support item. The maintenance code entered in the third position will indicate one of the following levels of maintenance:

<i>Code</i>	<i>Application/Explanation</i>
O	- Support item is removed, replaced, used at the organizational level.

(b) The maintenance code entered in the fourth position indicates whether the item is to be repaired and identifies the lowest maintenance level with the capability to perform complete repair (i.e., all authorized

maintenance functions). This position will contain one of the following maintenance codes:

<i>Code</i>	<i>Application/Explanation</i>
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Z	- Nonrepairable. No repair is authorized.
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(3) Recoverability Code. Recoverability codes are assigned to support items to indicate the disposition action on unserviceable items. The recoverability code is entered in the fifth position of the Uniform SMR Code format as follows:

*Recoverability*

<i>Codes</i>	<i>Definition</i>
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Z	- Nonrepairable item. When unserviceable, condemn and dispose at the level indicated in position 3.
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*c. National Stock Number.* Indicates the National stock number assigned to the item and which will be used for requisitioning.

*d. Part Number.* Indicates the primary number used by the manufacturer (individual, company, firm, corporation, or Government activity), which controls the design and characteristics of the item by means of its engineering

drawings, specifications, standards, and inspection requirements to identify an item or range of items.

#### NOTE

**When a stock numbered item is requisitioned, the item received may have a different part number than the part being replaced.**

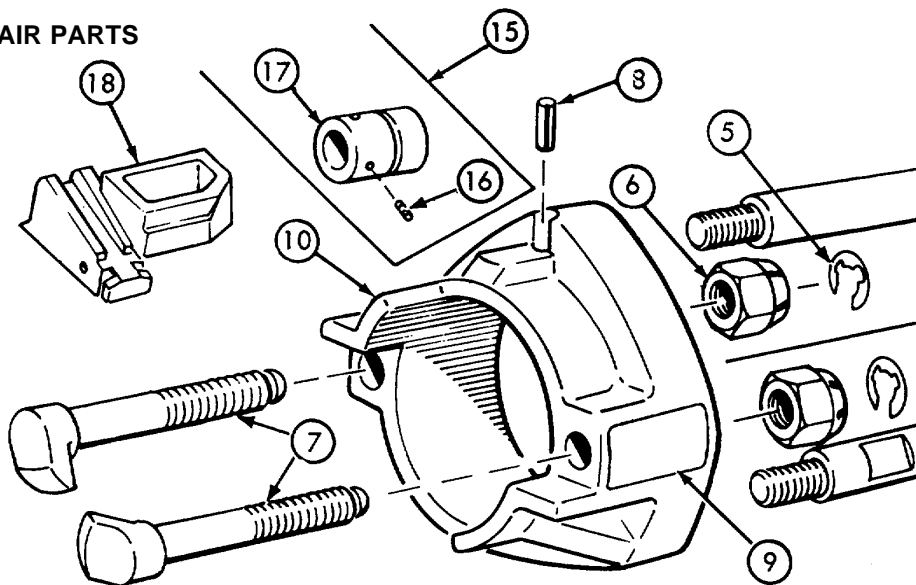
*e. Federal Supply Code for Manufacturer (FSCM).* The FSCM is a 5-digit numeric code listed in SB 708-42 which is used to identify the manufacturer, distributor, or Government agency, etc.

*f. Description.* Indicates the Federal item name and, if required, a minimum description to identify the item.

*g. Unit of Measure (U/M).* Indicates the standard of the basic quantity of the listed item as used in performing the actual maintenance function. This measure is expressed by a two-character alphabetical abbreviation (e.g., ea, in, r, etc.). When the unit of measure differs from the unit of issue, the lowest unit of issue that will satisfy the required units of measure will be requisitioned.

*h. Quantity Incorporated in Unit.* Indicates the quantity of the item used in the breakout shown on the illustration figure, which is prepared for a functional group, subfunctional group, or an assembly. A "V" appearing in this column in lieu of a quantity indicates that no specific quantity is applicable, (e.g., shims, spacers, etc.).

REPAIR PARTS



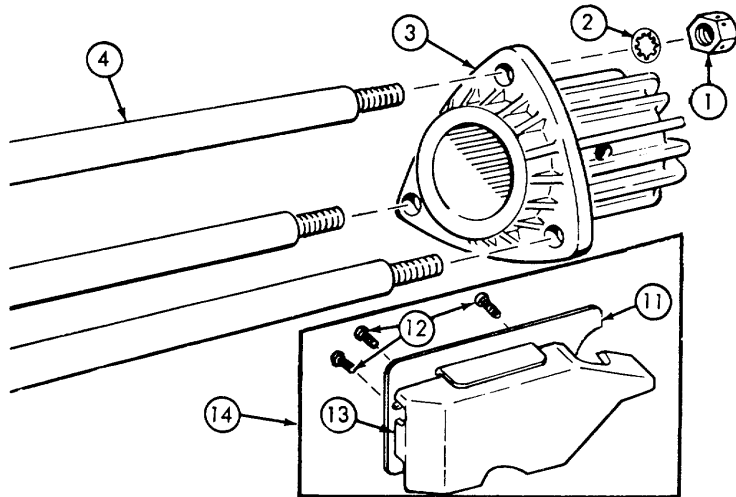


Figure 1. Blank Firing Attachment (BFA) M20.

(1) ILLUSTRATION		(2)	(3)	(4)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER

GROUP 00- M20 BLANK FIRING ATTACHMENT -9327231

GROUP 01 ADAPTER ASSEMBLY

GROUP 02 FILLER ASSEMBLY

1	1	PAOZZ		MS9882-14
1	2	PAOZZ	5310-00-261-7156	MS35333-78
1	3	PAOZZ	1005-01-097-6724	11833416
1	4	PAOZZ	5306-01-096-1754	11833418
1	5	PAOZZ	5365-00-442-4845	MS16633-1050
1	6	PAOZZ		11833430
1	7	PAOZZ	1005-01-092-9522	11833417
1	8	PAOZZ		MS35674-45

(5)  FSCM	(6)  DESCRIPTION  <i>usable on code</i>	(7)  U/M	(8) QTY INC IN UNIT
96906	Nut, Hexagon	EA	3
96906	Washer, Lock	EA	3
19200	Chamber, gas restrictor	EA	1
19200	Rod, Threaded end	EA	3
19200	Ring, Retaining	EA	2
19200	Nut	EA	2
19200	Clamp, Retainer	EA	2
96906	Pin, Grooved, Headless	EA	1

(1) ILLUSTRATION		(2)	(3)	(4)
(a) FIG NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	PART NUMBER
1	9	XAOZZ		11833437
1	10	PAOZZ	1005-01-092-7900	11833415
1	11	XAOZZ		11833415
1	12	PAOZZ	5305-00-179-8946	MS51849-66
1	13	XAOZZ		11833423
1	14	PAOZZ	1005-01-095-5649	11833422
1	15	XAOZZ		11833426
1	16	PAOZZ		AN565FC416-5
1	17	PAOZZ	1005-01-092-9521	11833419
1	18	PAOZZ	1005-01-098-8354	11833420



(5)  FSCM	(6)  DESCRIPTION  <i>usable on code</i>	(7)  U/M	(8) QTY INC IN UNIT
19200	Plate Identification	EA	1
19200	Support, rod	EA	1
19200	Cover	EA	1
96906	Screw, Machine	EA	3
19200	Filler	EA	1
19200	Filler Assembly	EA	1
19200	Adapter	EA	1
88044	Setscrew, Hexagon	EA	3
19200	Adapter Firing Attachment	EA	1
19200	Guide, Cartridge	EA	1

## NATIONAL STOCK NUMBER AND PART NUMBER INDEX

Stock Number	Figure No.	Item No.
5305-00-179-8946	1	12
5310-00-261-7156	1	2
5365-00-442-5845	1	5
1005-01-092-7900	1	10
1005-01-092-9521	1	17
1005-01-092-9522	1	7
1005-01-095-5649	1	14
5306-01-096-1754	1	4
1005-01-097-6724	1	3
1005-01-098-8354	1	18

## NATIONAL STOCK NUMBER AND PART NUMBER INDEX

Part Number	FSCM	Figure No.	Item No.
AN565FC416-5	88044	1	16
MS16633-1050	96906	1	5
MS35333-78	96906	1	2
MS35674-45	96906	1	8
MS51849-66	96906	1	12
MS9882-14	96906	1	1
11833415	19200	1	10
11833416	19200	1	3
11833417	19200	1	7
11833418	19200	1	4
11833419	19200	1	17
11833420	19200	1	18
11833422	19200	1	14
11833423	19200	1	13
11833424	19200	1	11
11833426	19200	1	15
11833430	19200	1	6
11833437	19200	1	9

## APPENDIX D. EXPENDABLE SUPPLIES AND MATERIALS LIST

### D-1. SCOPE

This appendix lists expendable supplies and materials you will need to operate and maintain the Blank Firing Attachment (BFA). These items are authorized to you by CTA 50-970, Expendable Items (Except Medical, Class V, Repair Parts, and Heraldic Items).

### D-2. EXPLANATION OF COLUMNS

a. Column 1 - Item number. This number is assigned to the entry in the listing and is referenced in the narrative instructions to identify the material (e.g., "Use cleaning compound, item 5, App. D").

b. Column 2 - Level. This column identifies the lowest level of maintenance that requires the listed item.

C - Operator/Crew

O - Organizational Maintenance

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c. Column 3 - National Stock Number. This is the National stock number assigned to the item; use it to request or requisition the item.

d. Column 4 - Description. Indicates the Federal item name and, if required, a description to identify the item. The last line for each item indicates the Federal Supply Code for Manufacturer (FSCM) in parentheses followed by the part number.

e. Column 5 - Unit of Measure (U/M). Indicates the measure used in performing the actual maintenance function. This measure is expressed by a two-character alphabetical abbreviation (e.g., ea, in, pr). If the unit of measure differs from the unit of issue, requisition the lowest unit of issue that will satisfy your requirements.

## APPENDIX D. EXPENDABLE MATERIALS LIST

(1) ITEM NO.	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) DESCRIPTION	(5) U/M
1	C	6850-00-224-6656	CLEANING COMPOUND, SOLVENT: rifle bore cleaner (RBC) MIL-C-372 (81349) 2 oz can	OZ
2	C	6850-00-224-6657	6 oz can	OZ
3	C	6850-00-224-4663	1 gal can	GL
4	C	9150-00-889-3522	LUBRICATING OIL, WEAPONS: semi-fluid, (LSA) MIL-L-46000 (81349) 4 oz bottle RAG, WIPING cotton DDD-R-30 (81348)	OZ

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(1) ITEM NO.	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) DESCRIPTION	(5) U/M
5	C	7920-00-205-1711	50 lb. bundle SEALING COMPOUND Grade A MIL-S-22473	LB
6	C	8030-00-822-3505	2 cc tube	TU
7	O	9525-00-618-6724	Wire Nonelectric MS20995NC51	LB

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