

**FM 3-22.27**(FM 23.27)

**MK 19, 40-mm GRENADE  
MACHINE GUN, MOD 3**

**NOVEMBER 2003**

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Change 1

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## **MK 19, 40-mm GRENADE MACHINE GUN, MOD 3**

1. Change FM 3-22.27, 28 November 2003 as follows:

**Remove old pages:**

Contents  
5-39 through 5-40  
Glossary

References  
Index

**Insert new pages:**

Contents  
5-39 through 5-40  
Glossary  
New Appendix J: J-1 through J-18  
References  
Index  
Insert behind DA forms:  
MK 19, 40-mm Advanced Crew  
Gunnery; DA Form 7580-R  
through DA Form 7587-R  
(Gunnery Tables 1-8)

2. A star (\*) marks new or changed material.
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NO. 3-22.27

HEADQUARTERS  
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WASHINGTON, DC, 14 September 2006

# MK 19, 40-mm GRENADE MACHINE GUN, MOD 3

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## PREFACE

This manual discusses how to train the unit to use the MK 19, 40-mm grenade machine gun, model (MOD) 3, referred to in this manual as the MK 19. This manual highlights mechanical training, weapon capabilities, and gunnery principles, methods, techniques, and standards that apply to the MOD 3. It also includes preliminary gunnery, a gunnery skills test, gunnery tables, and qualification tables. If this information conflicts with an applicable technical manual (TM), revised TM, or TM update, the crew will follow the guidance in the most recently published document.

The primary audiences for this manual are soldiers, trainers, and staff officers. Units can modify the gunnery program to meet local training restraints. Although the gunnery tables are intended for use with live fire, trainers can use the tactical engagement simulator system (TESS), a video disc trainer (VDT), a multipurpose arcade combat simulator (MACS), or other training device, except on qualification tables.

In all cases, units must evaluate their training to ensure that it follows the building-block principle and adheres to sound training policy. Only a crew that is trained and does well in preliminary gunnery exercises is likely to do well in live-fire exercises (LFX) and in combat situations.

\*This publication applies to the Active Army, the Army National Guard (ARNG)/Army National Guard of the United States (ARNGUS), and the United States Army Reserve (USAR) unless otherwise stated.

The proponent for this publication is United States Army Training and Doctrine Command (TRADOC). Send comments and recommendations to the U.S. Army Infantry School [doctrine@benning.army.mil](mailto:doctrine@benning.army.mil) or on a DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to Commandant, U.S. Army Infantry School, ATTN: ATSH-ATD, Fort Benning, Georgia 31905-5593.

\*Chemical, biological, radiological, and nuclear (CBRN) now replaces, nuclear, biological, chemical (NBC), throughout this manual.

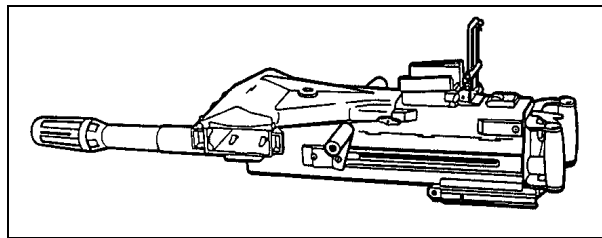
Unless this manual states otherwise, masculine nouns and pronouns do not refer exclusively to men.



## CHAPTER 1 INTRODUCTION

*Although the MK 19 is a recent entry into the Army's inventory, development began in 1963. The first version was a hand-cranked, multiple grenade launcher called the MK 18. In 1966 the need for more firepower inspired the development of a self-powered 40-mm machine gun called the MK 19, MOD 0. This model was neither reliable nor safe enough for use as a military weapon system. Product improvements begun in 1971 resulted in the 1972 MOD 1, of which only six were produced. The MOD 1 performed effectively in Navy riverine patrol craft and broader applications for the MK 19 were found. In 1973 the Navy developed the MOD 2, which featured improved reliability, safety, and maintainability. In 1976 a complete redesign resulted in the MK 19, MOD 3, which the Army adopted in 1983. The Army now uses the MK 19 within the tactical environment for defense, retrograde, patrolling, rear area security, urban operations, and special operations.*

*This chapter provides applications, training strategies, and descriptive, technical, and operational data for the MK 19 (Figure 1-1).*



**Figure 1-1. MK 19, 40-mm grenade machine gun, MOD 3.**

### 1-1. APPLICATIONS

The MK 19 supports the soldier in both the offense and defense. It gives the unit the capability of laying down a heavy volume of close, accurate, and continuous fire. The MK 19 can also:

- Protect motor movements, assembly areas, and supply trains in a bivouac.
- Defend against hovering rotary aircraft.
- Destroy lightly-armored vehicles.
- Fire on suspected enemy positions.
- Provide high volumes of fire into an engagement area (EA).
- Cover obstacles.
- Provide indirect fires from defilade positions.

### 1-2. DESCRIPTION

The MK 19 is an air-cooled, blowback-operated machine gun with five major assemblies (Figure 1-2). A disintegrating metallic link belt feeds ammunition through the left side of the weapon. Tables 1-1 and 1-2 provide MK 19 technical and operational data, respectively.

a. **Receiver Assembly.** Holds the barrel and other parts of the gun. Ammunition is fed into the left side of the receiver through the feed throat assembly. The MK 19's barrel will not overheat, even after prolonged firing.

b. **Feed Slide Assembly and Tray.** Holds the rounds in the feeder and indexes the ammunition into position for delinking.

c. **Top Cover Assembly.** Holds the feed slide assembly and tray. It is opened by a latch (left side) for loading or to clean and inspect feeder area. A blade-type front sight is attached to the top cover assembly (Figure 1-3).

d. **Sear Assembly.** Holds the receiver sear. Trigger action releases the sear and allows the bolt to go forward. The safety is attached to the sear assembly.

e. **Bolt and Backplate Assembly.** The bolt fires the round when the sear is depressed by trigger action. The recoil springs drive the bolt forward on the receiver rails. The guide rods hold the springs in position. Trigger and handgrips are located on the backplate assembly.

f. **Feed Throat Assembly.** Allows smooth feeding of 40-mm ammunition. It attaches to the forward left side of the receiver by two sets of spring-loaded retaining pins. Without a feed throat, machine gun stoppages may occur because of twisted or misaligned rounds.

g. **Leaf-Type Rear Sight (with adjustable range plate).** Is marked in 100-meter intervals from 300 to 1,500 meters. The sight is mounted on a spring dovetail base to the receiver assembly (Figure 1-4). Before moving the weapon, the gunner folds the sight forward to a horizontal position. The rear sight can be adjusted for range and windage.

(1) **Range.** Different adjustments can be made to the range. Use the rear sight slide release to make *major adjustments* to the range. Use the elevation wheel to make *fine adjustments* to the range.

(2) **Windage.** Use the rear sight to adjust for windage. One click equals a 1-mil change. To move the sight to the *right*, turn the windage screw clockwise. To move the sight to the *left*, turn the windage screw counterclockwise.

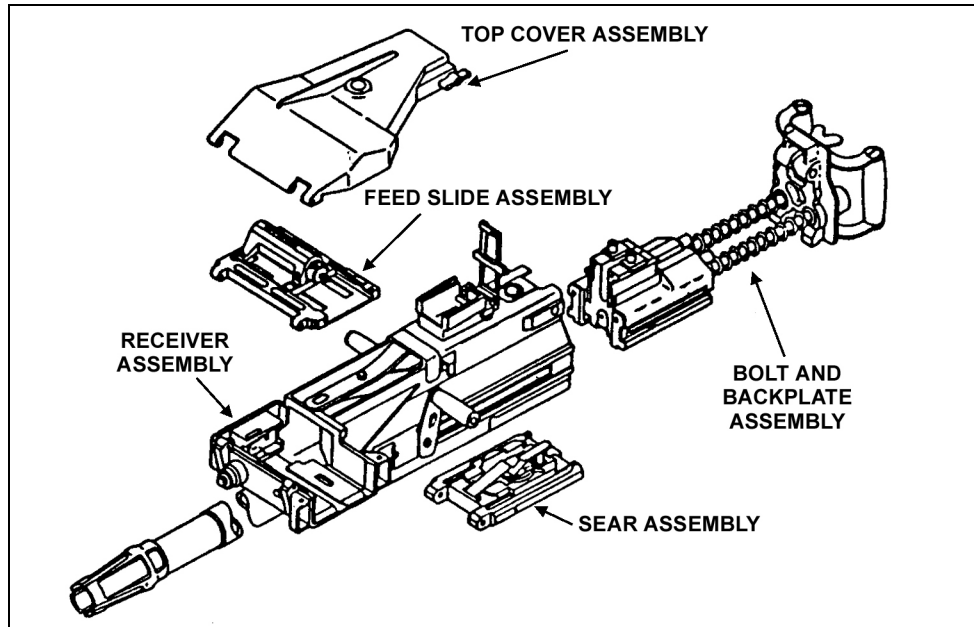


Figure 1-2. Five major assemblies.

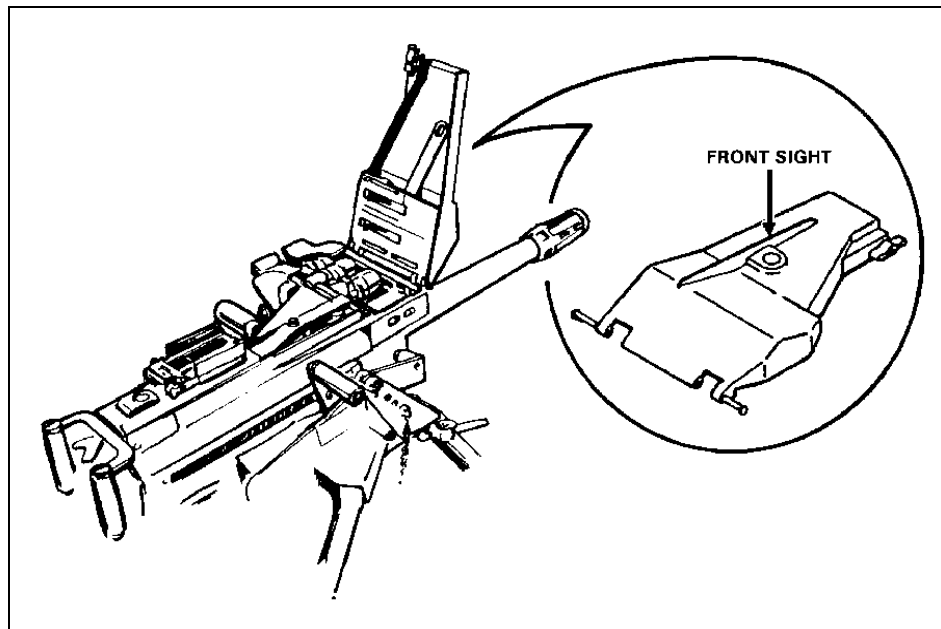


Figure 1-3. Front sight on top cover assembly.