

Rifle, 7.62-MM, M14 Nomenclature



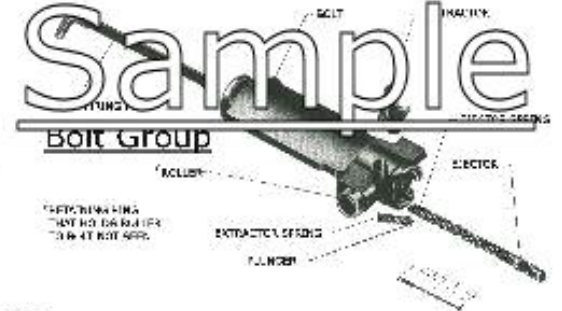
Major M14 Groups

U. S. RIFLE, 7.62-MM, M14

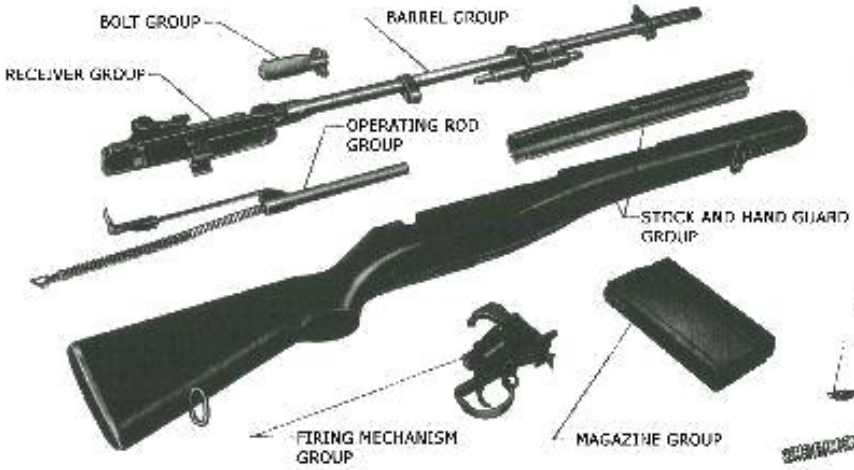
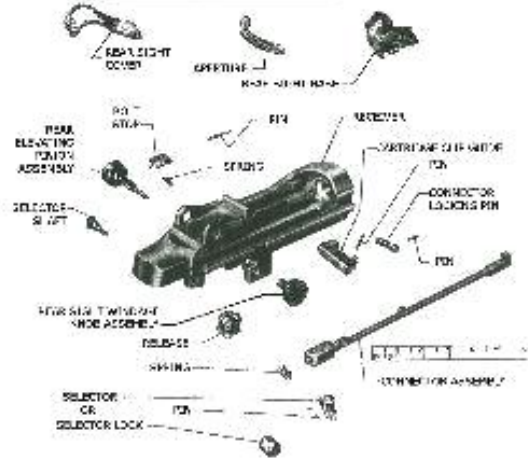
- 100 METERS, AIR COOLER, GAS OPERATED,
- MAGAZINE FEED, SHOULDER MOUNTED,
- WEIGHT 10.0 POUNDS, 4.5 KILOGRAMS,
- LENGTH 40.0 INCHES, 1016 MILLIMETERS,
- 4 UNDER FEEDING - 30 ROUNDS PER
- MAGAZINE, VELOCITY - 300 METERS PER SECOND,
- 4000 METERS PER SECOND, 13120 FEET PER
- SECOND, RANGE - 2000 METERS,
- 4000 METERS PER SECOND, 13120 FEET PER
- SECOND, RANGE - 2000 METERS,
- WEIGHT 10.0 POUNDS, 4.5 KILOGRAMS,
- LENGTH 40.0 INCHES, 1016 MILLIMETERS,
- 4 UNDER FEEDING - 30 ROUNDS PER
- MAGAZINE, VELOCITY - 300 METERS PER SECOND,
- 4000 METERS PER SECOND, 13120 FEET PER
- SECOND, RANGE - 2000 METERS,
- 4000 METERS PER SECOND, 13120 FEET PER
- SECOND, RANGE - 2000 METERS,

Sample

Bolt Group



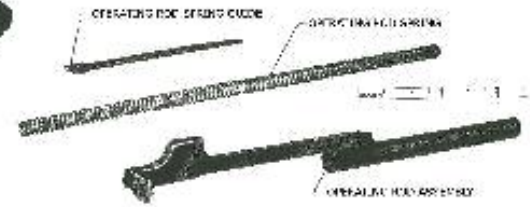
Receiver Group



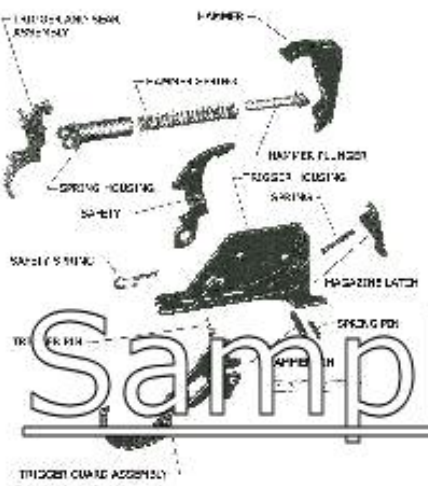
Magazine Group



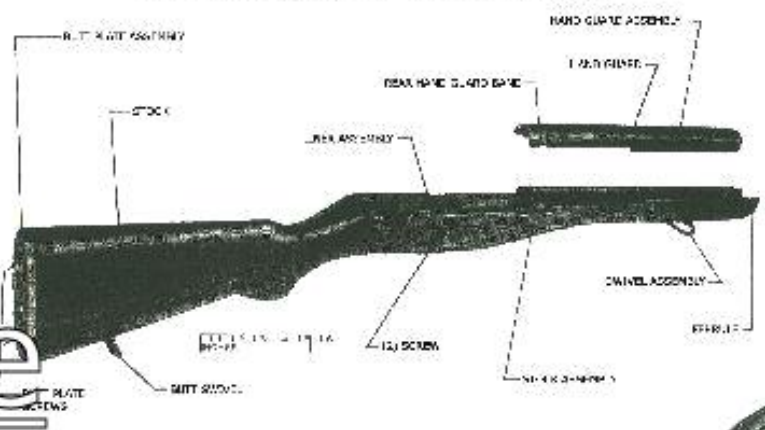
Operating Rod Group



Firing Mechanism Group



Stock and Hand Guard Group



Barrel Group



Sample

Rifle, 7.62 MM, M14: Cycle of Operation

M14 Rifle Grease Points



Selector Switch

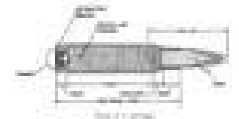
- A. Automatic
- B. Semiautomatic



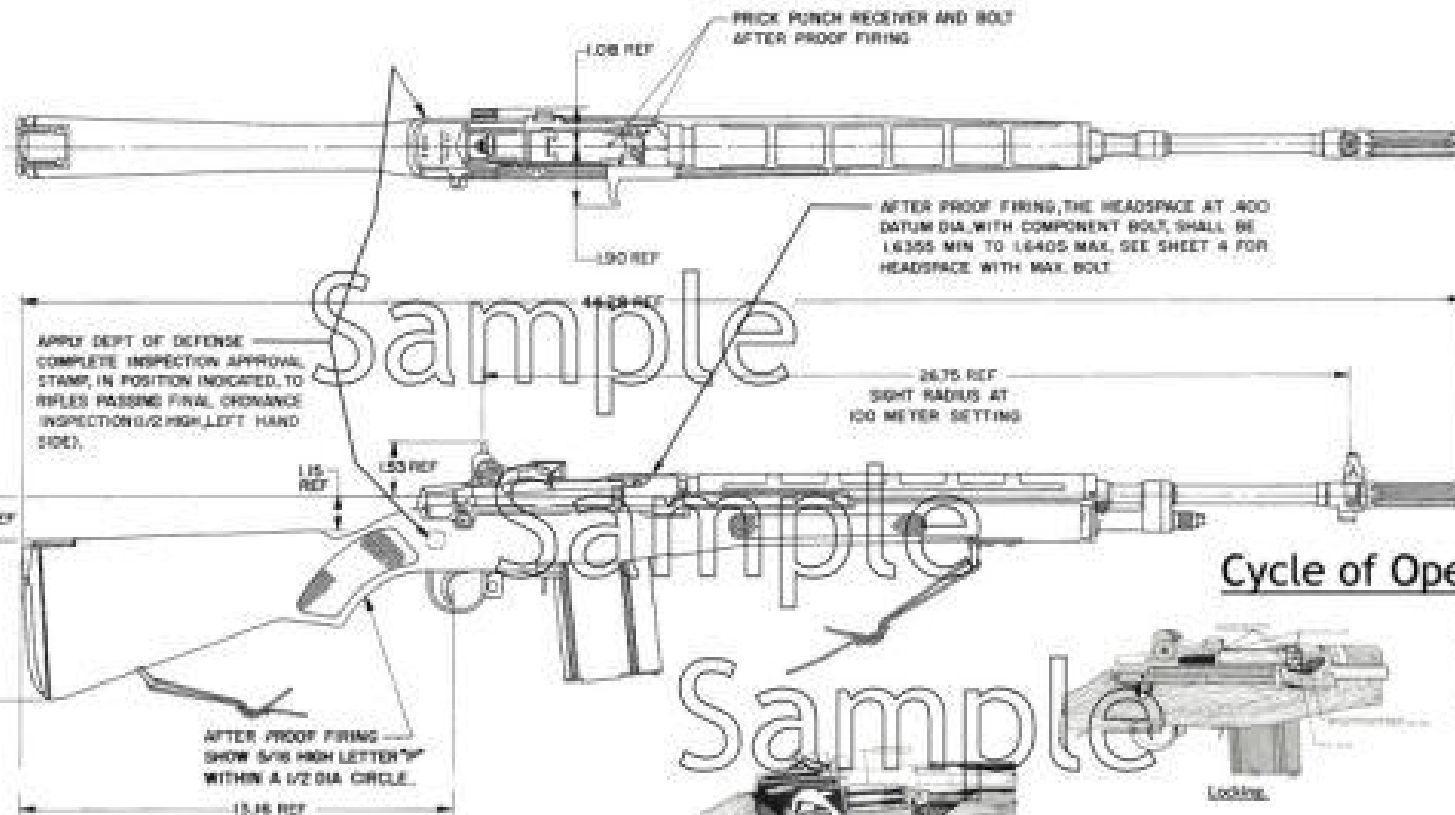
M14 - Right & Left Side Views



Ammunition



Inspection
The type of ammunition used shall conform to the following loading:
a. Case. The case length shall be a maximum of 63.40 mm (2.5 inches) and a minimum of 62.70 mm (2.47 inches). The case shall be made of a material of equal or greater strength than that of the bullet.
b. Bullet. The bullet shall be a maximum of 9.50 mm (0.374 inches) in diameter and a minimum of 9.30 mm (0.366 inches) in diameter. The bullet shall be made of a material of equal or greater strength than that of the case.
c. Primer. The primer shall be a maximum of 1.50 mm (0.059 inches) in diameter and a minimum of 1.40 mm (0.055 inches) in diameter. The primer shall be made of a material of equal or greater strength than that of the case.
d. Overall Length. The overall length of the cartridge shall be a maximum of 84.00 mm (3.307 inches) and a minimum of 82.00 mm (3.228 inches).
e. Weight. The weight of the cartridge shall be a maximum of 16.00 grams (0.565 ounces) and a minimum of 15.00 grams (0.530 ounces).
f. Velocity. The velocity of the bullet shall be a minimum of 800 m/s (2625 ft/s) and a maximum of 900 m/s (2953 ft/s).
g. Accuracy. The accuracy of the bullet shall be a maximum of 1.50 mm (0.059 inches) at 100 meters and a minimum of 1.00 mm (0.039 inches) at 100 meters.



Cycle of Operation



Stoppages: Cause & Remedy

SYMPTOM	CAUSE	REMEDY
Failure to load	<ul style="list-style-type: none"> 1. Bolt or magazine not inserted. 2. Magazine not inserted. 3. Magazine not inserted. 4. Magazine not inserted. 5. Magazine not inserted. 	<ul style="list-style-type: none"> 1. Insert bolt. 2. Insert magazine. 3. Insert magazine. 4. Insert magazine. 5. Insert magazine.
Failure to chamber	<ul style="list-style-type: none"> 1. Bolt or magazine not inserted. 2. Magazine not inserted. 3. Magazine not inserted. 4. Magazine not inserted. 5. Magazine not inserted. 	<ul style="list-style-type: none"> 1. Insert bolt. 2. Insert magazine. 3. Insert magazine. 4. Insert magazine. 5. Insert magazine.
Failure to fire	<ul style="list-style-type: none"> 1. Bolt or magazine not inserted. 2. Magazine not inserted. 3. Magazine not inserted. 4. Magazine not inserted. 5. Magazine not inserted. 	<ul style="list-style-type: none"> 1. Insert bolt. 2. Insert magazine. 3. Insert magazine. 4. Insert magazine. 5. Insert magazine.
Failure to eject	<ul style="list-style-type: none"> 1. Bolt or magazine not inserted. 2. Magazine not inserted. 3. Magazine not inserted. 4. Magazine not inserted. 5. Magazine not inserted. 	<ul style="list-style-type: none"> 1. Insert bolt. 2. Insert magazine. 3. Insert magazine. 4. Insert magazine. 5. Insert magazine.
Failure to lock	<ul style="list-style-type: none"> 1. Bolt or magazine not inserted. 2. Magazine not inserted. 3. Magazine not inserted. 4. Magazine not inserted. 5. Magazine not inserted. 	<ul style="list-style-type: none"> 1. Insert bolt. 2. Insert magazine. 3. Insert magazine. 4. Insert magazine. 5. Insert magazine.
Failure to unlock	<ul style="list-style-type: none"> 1. Bolt or magazine not inserted. 2. Magazine not inserted. 3. Magazine not inserted. 4. Magazine not inserted. 5. Magazine not inserted. 	<ul style="list-style-type: none"> 1. Insert bolt. 2. Insert magazine. 3. Insert magazine. 4. Insert magazine. 5. Insert magazine.
Failure to chamber	<ul style="list-style-type: none"> 1. Bolt or magazine not inserted. 2. Magazine not inserted. 3. Magazine not inserted. 4. Magazine not inserted. 5. Magazine not inserted. 	<ul style="list-style-type: none"> 1. Insert bolt. 2. Insert magazine. 3. Insert magazine. 4. Insert magazine. 5. Insert magazine.

Rifle, 7.62 MM, M14 National Match: Initial Specifications

(Approximate Timeperiod: 1959)

M14 NM High Pressure Test Cartridge / Magnetic Particle Tests

Each rifle shall withstand the firing of one government standard high pressure test cartridge without evidence of failure. Apply proof mark to rifles meeting this requirement.

After completion of all firing tests (high pressure resistance, function firing, and targeting and accuracy) per MI-R-45979, each bolt and roller assembly 7790186 shall be free of evidence of failure as determined by magnetic particle inspection for cracks, seams and other injurious defects, in accordance with method specified on drawing 7790186. Apply MPI mark to assembly as shown on 7790186 meeting this requirement. After cleaning the assembly the roller shall be packed with grease conforming to MI-G-10924.

M14 NM Tilt Test

With the firing mechanism, stock assembly, operating rod spring and spring guide disassembled from rifle, and with the muzzle raised to an angle of approximately 60 degrees from the horizontal, the bolt, with operating rod assembled, shall open fully without any manual assistance. When the muzzle is lowered to an angle of approximately 60 degrees from the horizontal, the bolt, with operating rod assembled, shall close fully without any manual assistance.

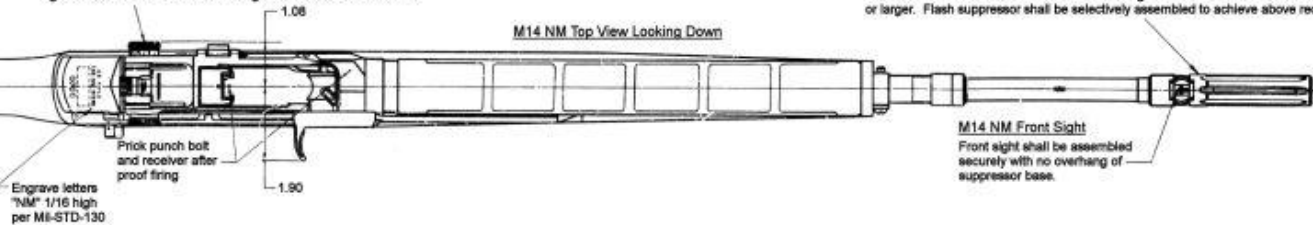
M14 NM Trigger Pull Test

Trigger pull shall be between 8.0 and 13.0 lbs. with the rifle in the cocked position. The trigger shall be free to move in the cocked position. The trigger shall be free to move in the cocked position. The trigger shall be free to move in the cocked position.



M14 NM Aperture & Rear Sight

The aperture assembly provides 1/2 minute of angle elevation adjustment. The peephole size shall be 0.0595 dia for aperture assembly 7791133. The base, rear sight provides 1/2 minute angle of windage adjustment. Rear sight markings must be distinct. Elevating knob must be on 100 meter setting when aperture is elevated 8 clicks from lowest position. Knobs must have free movement, independent of each other, definite clicking action; and positive retention. Aperture assembly shall operate smoothly in base, rear sight with no perceptible side movement when set to 600 meter setting. Preferential assembly of aperture assembly and base, rear sight shall be effected as necessary to meet above requirements. When necessary equal amounts of material shall be removed from both sides of aperture to obtain the required fit. Bright surfaces resulting from fitting the aperture are permissible. When aperture assembly is elevated to its highest position and thumb pressure is applied to bottom of eyepiece in a vertical plane away from the weapon, spring tension of cover must return the aperture assembly to its original position. Screw, rear sight shall be tightened within 20 to 25 inch lbs. Sight must be free of excess oil.



M14 NM Flash Suppressor

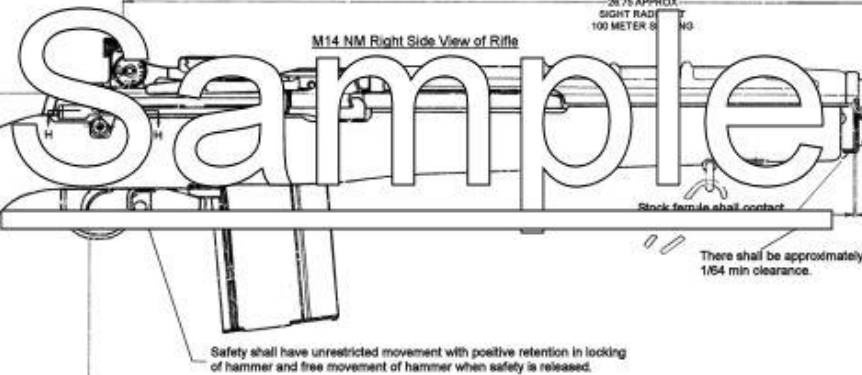
The flash suppressor shall be fastened to the barrel with no rotational or longitudinal movement. In assembly the nut with evenly spaced notches shall be rotated in a clockwise direction simultaneously achieving maximum tightness against flash suppressor and barrel and positioning one of the notches at the twelve o'clock position. The nut shall not be backed off to align a notch. The nut shall be locked securely by the set screw. Either gage 11015429 or 11015430 shall enter the muzzle up to the handle of the gage and the 0.329 dia of the gage shall not touch the flash suppressor. Gage 11015429 shall be used when bore dia is 0.3005 or smaller. Gage 11015430 shall be used when the bore dia is 0.3006 or larger. Flash suppressor shall be selectively assembled to achieve above requirement.

M14 NM Front Sight

Front sight shall be assembled securely with no overhang of suppressor base.

M14 NM Trigger Pull Test

Trigger pull shall be between 8.0 and 13.0 lbs. with the rifle in the cocked position. The trigger shall be free to move in the cocked position. The trigger shall be free to move in the cocked position. The trigger shall be free to move in the cocked position.



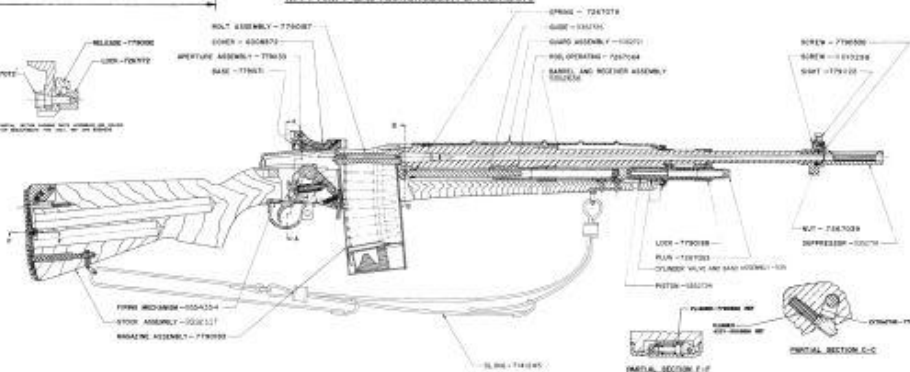
M14 NM Gas Cylinder

Gas cylinder shall fit tightly on the barrel diameter and the splines. There shall be no rotational movement. Peering of gas cylinder splines is permissible to meet required fit.

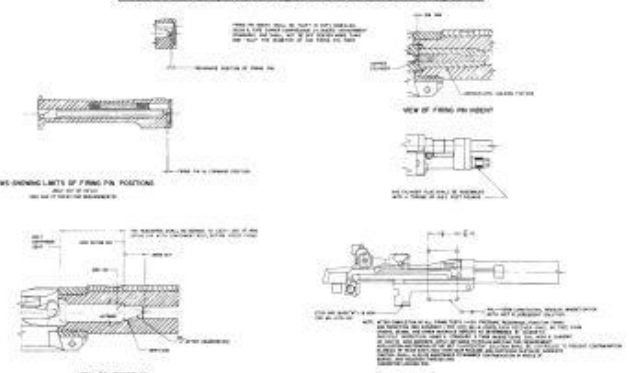
In assembly, the gas cylinder lock shall be hand tightened against shoulder on the barrel within a range beyond the 6 o'clock position but not in excess of 210 degrees (10 o'clock) past the 6 o'clock position. The gas cylinder lock shall then be "backed off" the minimum distance necessary to align with the gas cylinder at the 6 o'clock position.

Gas cylinder shall be brought forward against the lock before tightening the gas plug.

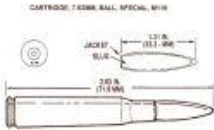
M14 NM Parts Identification & Numbers



M14 NM Headspace, Firing Pin Positions, and Firing Tests



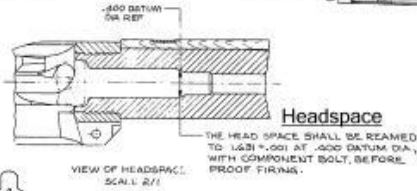
Rifle, 7.62 MM, M21 Sniper's: General Information (Circa 1984)



CARTRIDGE, 7.62MM BALL, SPECIAL, M18
 DIM: 12.8 in (325.14 mm) length, 0.437 in (11.16 mm) diameter, 2.0 in (50.8 mm) neck diameter.
Description: Ball Cartridge. The cartridge is identical by weight and ball-bearing and ball design mark, manufacturer and gun.
Performance: Chamber capacity: 5, 0.000 in; Velocity: 2800 ft/s.



Top View Looking Down



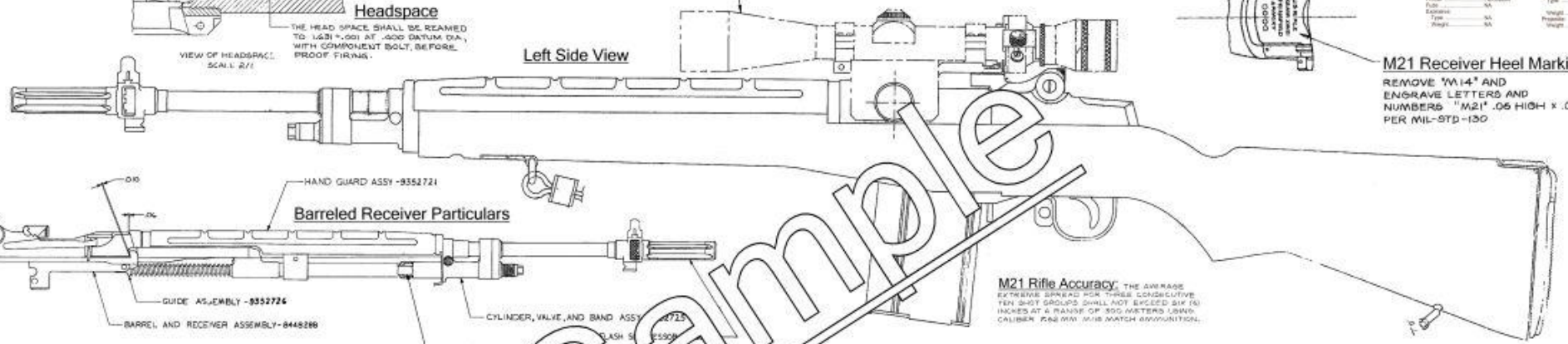
Headspace

THE HEAD SPACE SHALL BE REAMED TO 1.631 ±.001 AT .000 DATUM DIA. WITH COMPONENT BOLT, BEFORE PROOF FIRING.

VIEW OF HEADSPACE, SCALE 2:1

TELESCOPE, STRAIGHT- 9349352

Left Side View

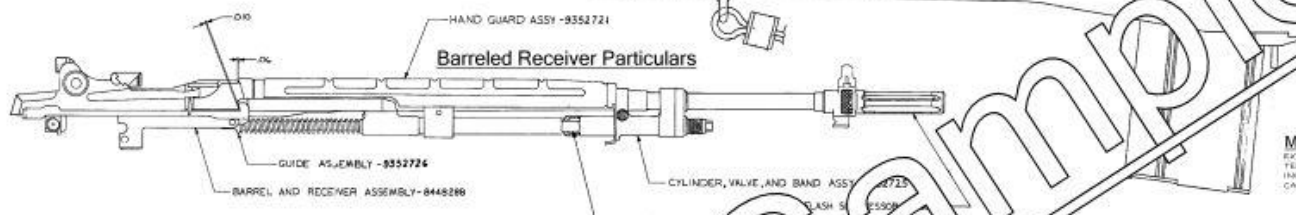


M21 Receiver Heel Markings

REMOVE "M14" AND ENGRAVE LETTERS AND NUMBERS "M21" .06 HIGH X .005 MIN. DEEP PER MIL-STD-130

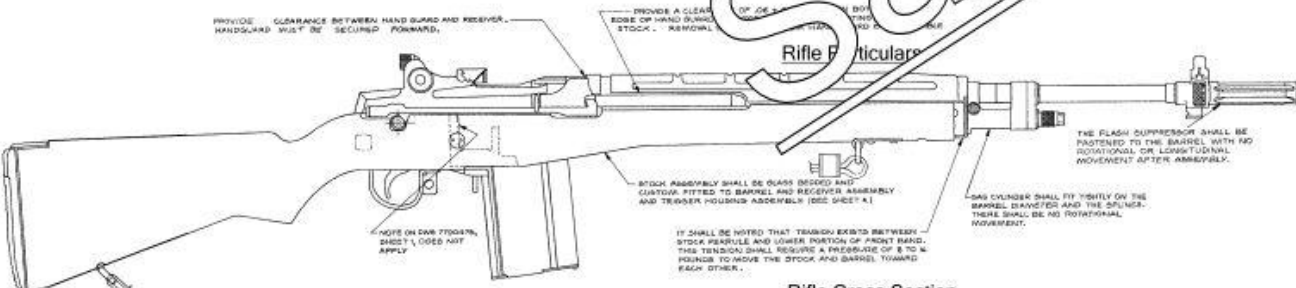
CARTRIDGE, 7.62MM BALL, SPECIAL, M18

Dimension	Value	Unit
Length	325.14	mm
Weight	11.16	g
Caliber	7.62	mm
Velocity	853	m/s
Pressure	35	MPa
Case	5.6	mm
Head	11.16	mm
Neck	5.08	mm
Base	17.14	mm
Tip	11.16	mm
Weight	11.16	g



Barreled Receiver Particulars

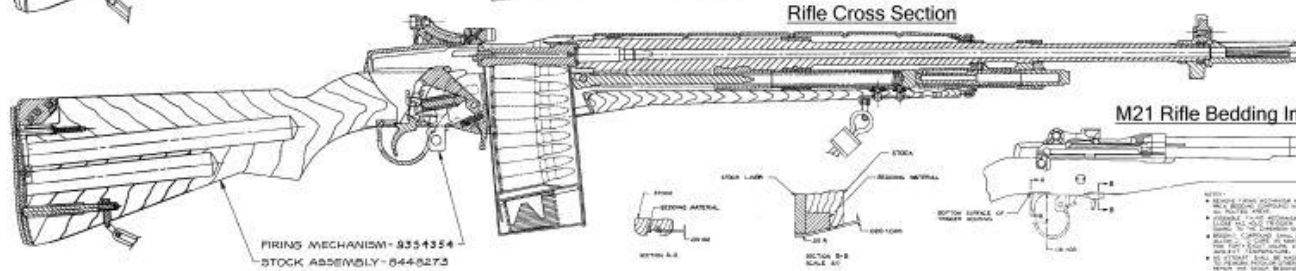
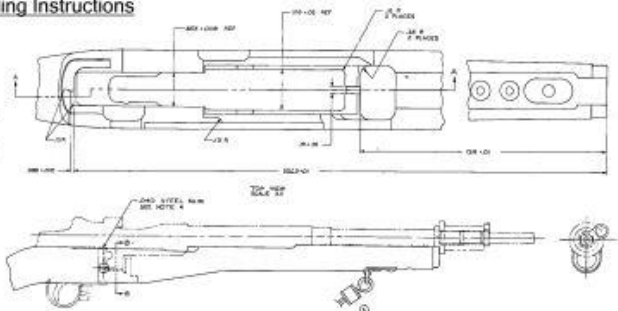
M21 Rifle Accuracy: THE AVERAGE EXTREME SPREAD FOR THREE CONSECUTIVE TEN SHOT GROUPS SHALL NOT EXCEED SIX (6) INCHES AT A RANGE OF 500 METERS LOAD CALIBER 7.62 MM M18 MATCH AMMUNITION.



Rifle Particulars

M21 Rifle Bedding Instructions

- NOTE:**
1. NEVER ATTEMPT TO REAM THE CHAMBER OR BARREL. THE CHAMBER AND BARREL ARE REAMED TO SPECIFICATION BY THE MANUFACTURER.
 2. THE CHAMBER AND BARREL SHALL BE REAMED TO SPECIFICATION BY THE MANUFACTURER.
 3. THE CHAMBER AND BARREL SHALL BE REAMED TO SPECIFICATION BY THE MANUFACTURER.
 4. THE CHAMBER AND BARREL SHALL BE REAMED TO SPECIFICATION BY THE MANUFACTURER.
 5. THE CHAMBER AND BARREL SHALL BE REAMED TO SPECIFICATION BY THE MANUFACTURER.
 6. THE CHAMBER AND BARREL SHALL BE REAMED TO SPECIFICATION BY THE MANUFACTURER.
 7. THE CHAMBER AND BARREL SHALL BE REAMED TO SPECIFICATION BY THE MANUFACTURER.
 8. THE CHAMBER AND BARREL SHALL BE REAMED TO SPECIFICATION BY THE MANUFACTURER.
 9. THE CHAMBER AND BARREL SHALL BE REAMED TO SPECIFICATION BY THE MANUFACTURER.
 10. THE CHAMBER AND BARREL SHALL BE REAMED TO SPECIFICATION BY THE MANUFACTURER.



Rifle Cross Section

M21 Rifle Bedding Instructions (Continued)

- NOTE:**
1. NEVER ATTEMPT TO REAM THE CHAMBER OR BARREL. THE CHAMBER AND BARREL ARE REAMED TO SPECIFICATION BY THE MANUFACTURER.
 2. THE CHAMBER AND BARREL SHALL BE REAMED TO SPECIFICATION BY THE MANUFACTURER.
 3. THE CHAMBER AND BARREL SHALL BE REAMED TO SPECIFICATION BY THE MANUFACTURER.
 4. THE CHAMBER AND BARREL SHALL BE REAMED TO SPECIFICATION BY THE MANUFACTURER.
 5. THE CHAMBER AND BARREL SHALL BE REAMED TO SPECIFICATION BY THE MANUFACTURER.
 6. THE CHAMBER AND BARREL SHALL BE REAMED TO SPECIFICATION BY THE MANUFACTURER.
 7. THE CHAMBER AND BARREL SHALL BE REAMED TO SPECIFICATION BY THE MANUFACTURER.
 8. THE CHAMBER AND BARREL SHALL BE REAMED TO SPECIFICATION BY THE MANUFACTURER.
 9. THE CHAMBER AND BARREL SHALL BE REAMED TO SPECIFICATION BY THE MANUFACTURER.
 10. THE CHAMBER AND BARREL SHALL BE REAMED TO SPECIFICATION BY THE MANUFACTURER.