

**PRODUCT REQUIREMENT
FOR
7.62MM M240B MACHINE GUN**

Revision 5

12 August 2002

ATTACHMENT 002

PRODUCT REQUIREMENTS FOR MACHINE GUN, 7.62MM: M240B

1.0 SCOPE

1.1 Scope: The product requirements presented in this section establish the performance, design, development, firing, packaging and quality assurance requirements for the M240B, a 7.62 millimeter (mm) gas operated, air cooled, link belt fed, machine gun. Each M240B machine gun is to be furnished with one spare interchangeable barrel assembly, a sling to carry the weapon, and an operator's manual.

2.0 APPLICABLE DOCUMENTS

2.1 Government documents.

2.1.1 Specifications and Standards. The following specifications and standards form a part of this product requirement to the extent specified herein. Unless otherwise specified, the issue of these documents shall be those listed in the issue of the Department of Defense Index of Specifications and Standards (DODISS) and supplement thereto, cited in the solicitation.

SPECIFICATIONS

MILITARY

DOD-D-1000	-	Drawings, Engineering and Associated Lists
MIL-I-8574	-	Inhibitor, Corrosion, Volatile, Utilization of
MIL-W-13855	-	Weapon, Small Arms and Aircraft Armament
		Subsystems, General Specification for
MIL-I-45403	-	Link, Cartridge, Metallic Belt, 7.62MM, M13
MIL-C-46477	-	Cartridge, 7.62MM, NATO, Test, High Pressure, M60
MIL-C-46931	-	Cartridge, 7.62MM, NATO, Ball, M80
MIL-T-47500	-	Technical Data Package, General Specification For
MIL-T-60530	-	Technical Data Package for AMC Materiel
MIL-D-60573	-	Dummy, Cartridge, 7.62MM, Inert Loaded, M172
MIL-W-63150	-	Weapons and Support Material Standard Quality
		Assurance Provisions For
MIL-L-63460	-	Cleaner, Lubricant and Preservative (CLP)

STANDARDS

MILITARY

MIL-STD-100E	-	Engineering Drawing Practices
MIL-STD-1916	-	DOD Preferred Method For Acceptance of Product
MIL-STD-1235	-	Single and Multi-level Continuous Sampling
		Procedures and Tables for Inspection By Attributes
MIL-STD-1913	-	Dimensioning of Accessory Mounting Rail for Small
		Arms Weapons
MS9266-24	-	Bolt, Machine Hexagon Head
MS16562-122	-	Pin, Spring Release
MS35671-23	-	Pin, Grooved, Headless
MS39086-406	-	Pin, Spring, Tubular
MS39086-146	-	Pin, Spring, Tubular
MS39086-522	-	Pin, Spring, Tubular

2.1.2 Other government documents, drawings and publications. The following other Government documents, drawings, and publications form a part of this product requirement to the extent specified herein.

DRAWINGS

US ARMY ARMAMENT RESEARCH, DEVELOPMENT, AND ENGINEERING CENTER

12976814 - Machine Gun, 7.62 MM, M240B

INSPECTION EQUIPMENT DRAWINGS

11826302 - Gage, Headspace, Minimum
11826303 - Gage, Headspace, Maximum
11826304 - Gage, Flush Pin, Firing Pin Protrusion
11826305 - Gage, Plug, Extractor Engagement
11826306 - Gage, Plug, Extractor Clearance
11826322 - Gage, Functional (Max. Breech Bolt)
11826373 - Gage, Functional (Max. Operating Rod)

PACKAGING DATA SHEETS

SPI 12976814 - Packaging Data Sheet, Machine Gun, 7.62mm
M240B

PUBLICATIONS

Technical Manual

TM-9-1005-313-23P - Technical Manual, Unit and Direct Support Maintenance Manual
(including Depot Maintenance Repair Parts) for,
Machine Gun, 7.62mm, M240 (1005-01-025-8095)
Machine Gun, 7.62mm, M240B (1005-01-412-3129)
Machine Gun, 7.62mm, M240C (1005-01-085-4758)
Machine Gun, 7.62mm, M240E1 (1005-01-252-4288)
Machine Gun, 7.62mm, M240G (1005-01-359-2714)

(Copies of specifications, standards, drawings, and publications, required by the contractor in connection with this procurement should be obtained from the procuring activity or as directed by the contracting officer.)

2.2 Other Publications. The following documents form a part of this product requirement to the extent specified herein. Unless otherwise indicated, the issue in effect on date of invitation for bids or request for proposal shall apply.

American Society Of Mechanical Engineers

ANSI-Y-14.5 - Geometric Positioning and Tolerancing
ANSI Y14.36 - Surface Texture Symbols
ANSI/ASTM E380 - Standard for Metric Practice

(Applications for copies should be addressed to the American Society of Mechanical Engineers, United Engineering Center, 345 East 47th Street, New York, N.Y. 10017).

Department of Defense
DOD-STD-1476 - International System of Units (SE), metric

3.0 REQUIREMENTS

3.1 First Article. Requirements for submission of the First Article (see 4.3) shall be as specified in the contract. Unless otherwise specified, the first article shall include the pilot pack (see 5.2).

3.2 Materials and construction. Machine guns and parts shall conform to the materials, dimensions, conditions and construction requirements specified herein and on drawing 12976814 and drawings applicable thereto and shall be in accordance with the applicable material and construction provisions of MIL-W-13855.

3.2.1 Packaging. Packaging data sheet SPI 12976814 (see 5.1) dimensions are in the Inch-Pound unit system.

3.2.1.1 Drawings. Dimensions of drawings 12976814 and drawings applicable thereto are in the Metric Unit system except for thread callouts which are in the English unit system.

3.2.1.1.1 Surface Roughness. Surface roughness (ANSI Y14.36) is stated in Micro-Meters Units on drawings in accordance with ANSI/ASTM E380.

3.2.2 Manufacturing. Unless otherwise specified, manufacturing processes stated on drawings are for guidance only.

3.2.2.1 Heat treatment. Hardness shall be as specified on the drawing.

3.3 Design. All drawings are presented in third angle projection.

3.3.1 Barrel Assembly. The barrel assembly with gas regulator and front sight assembly shall be so manufactured that when the machine gun is completely assembled, the requirements for accuracy, dispersion and targeting shall be met (see para 3.4.3.2 and 3.4.3.3). The barrel assembly shall accept the front sight assembly which shall be horizontally adjustable by movement of the two opposing front sight adjusting screws which give perceptible clicks when adjusted. The front sight blade shall be capable of being rotated vertically, up or down, for elevation adjustments. Both the horizontal and vertical adjustments shall be capable of being made through their full range of travel without binding. The front sight retaining strap shall positively and securely retain the front sight blade. The flash suppressor shall be securely retained on the barrel assembly without any perceptible movement. The heat shield assembly shall be securely and firmly retained on the barrel assembly without looseness or rotation.

3.3.1.1 Condition. The barrel assembly shall be free of cracks and seams. The bore and chamber shall be free of pits. The chromium plating shall be free of nodules, flaking, stripping, anode burns and evidence of etched steel. Mechanical methods for removal of chromium plating in the barrel bore shall not be permitted. Burrs and sharp edges shall be removed from chamber edges prior to chrome plating. Scratches and marks occurring in a chamber which otherwise meets the surface texture requirements, shall be permitted providing those scratches and marks do not cause marks on the case of a high pressure test cartridge fired in the chamber (see 3.4.2). Each barrel assembly shall be marked in accordance with the drawing after proof firing and magnetic particle inspection.

3.3.1.1.1 Gas Regulator Plug and Gas Regulator Collar. The gas regulator plug and the gas regulator collar shall assemble to and disassemble from the barrel without the use of tools so that the gas regulator may be readily positioned at either gas port setting #1, #2, or #3. Gas position #1 and #3 shall produce rates of fire consistent with paragraph 3.4.3.

3.3.1.1.2 Machine Gun Barrel and Barrel Adapter. The carrying handle assembly, barrel bracket catch, and barrel spring catch shall be assembled to the barrel with free movement between all three parts which shall be held in place by the barrel adapter. The barrel adapter shall be tightened against the barrel and then loosened until the barrel bracket catch fits into its notch. The barrel adapter, barrel bracket catch, barrel spring catch, and carrying handle assembly shall be held in place by a straight pin. The front sight protector shall be pressed onto the barrel and pinned in place by the self-locking, front sight screw.

3.3.1.1.3 Heat Shield. The heat shield shall be securely retained on the barrel assembly once installed. The spring appendages of the heat shield shall retain their spring action under manual depression and not be deformed under normal installation onto the barrel assembly.

3.3.2 Complete Receiver Assembly. Each receiver assembly shall operate smoothly and shall function in accordance with the following:

- a) Each receiver assembly shall be capable of accepting a maximum sized bolt and operating rod assembly following the firing of a Government standard 7.62mm M60 High Pressure Test cartridge and the application of a protective finish.
- b) The driving spring rod assembly shall fit into the bolt and operating rod assembly and shall be locked in place in the rear end of the receiver assembly.
- c) The barrel bracket catch shall function without binding. The barrel is locked in position when the assembly of the carrying handle assembly, barrel, barrel spring catch, machine gun barrel adapter, and the straight pin are engaged with the barrel bracket catch with 2 to 5 clicks.
- d) The buffer assembly shall be locked and unlocked without the use of tools.
- e) The infantry trigger assembly shall be assembled to the rear part of the receiver assembly and locked in position with the spring pin, assembly and disassembly being accomplished without the use of tools.
- f) The cover assembly with the feed tray shall be assembled and disassembled without the use of tools by manually placing and removing the spring pin.
- g) The cocking assembly with spring pin and headed straight pin shall be assembled to the receiver assembly and shall function freely.
- h) The rear sight assembly shall be assembled to the receiver assembly and maintain its raised or folded position under action of the rear sight plunger and helical compression spring. The rear sight slide assembly shall assemble to the rear sight leaf and shall be retained from removal by its leaf sight, socket head cap screw, and maintain its setting after both the rear sight catches are depressed and the slide assembly is adjusted to the desired range elevation (200 meters to 1800 meters in 100 meter increments).
- i) The bipod assembly shall assemble to the front gas cylinder tube by inserting the bipod head over the two lugs and rotating a quarter turn. The bipod assembly shall be retained on the gas cylinder tube by driving the tubular, slotted spring pin back toward the muzzle from the rear side of the yoke of the gas cylinder capturing the bipod head.
- j) The bipod latch shall manually depress and return within the guideways of the receiver when assembled with the bipod latch spring and the spring pin. As the bipod legs are brought together and folded to stow under the receiver, the bipod latch shall automatically engage with the bipod legs. See paragraph 3.3.8.
- k) The right leg assembly and left leg assembly shall assemble to and be retained on the bipod head hinge body by inserting the bipod leg axis pin from the front or muzzle side and securing it with the axis pin washer, axis pin leg nut, and axis pin leg ring. When deployed, the right and left bipod legs shall remain fully extended under the action of the leg spring. The bipod head shall attach to and swivel in the bipod head hinge body using the actuating cyclinder, bipod retaining plunger, helical compression spring, and the retaining head plunger bushing.
- l) The Accessory Rail Kit shall be firmly attached to the gas cylinder tube of the receiver assembly without any lateral, longitudinal or rotational movement. Stowage and retention of the bipod legs shall not be restricted by the Accessory Rail Kit.
- m) The ejection port cover shall be firmly attached to the bottom plate of the receiver by the hinge pin. Once installed the ejection port cover must swing freely under action of helical torsion spring, and deploy by action of the piston rod assembly during hand charging, and actual cycling of the machine gun during operation. The hinge pin shall remain retained in the bosses of the bottom plate of the receiver.

3.3.2.1 Bolt and Operating Rod Assembly. The bolt and operating rod assembly shall be assembled manually to the rear end of the receiver assembly prior to the assembly of the buttstock and buffer assembly. The bolt and operating rod assembly must readily move forward and backward in the guides in the receiver assembly. The bolt assembly and operating rod assembly shall consist of the firing pin, bolt assembly, spring pin, operating rod assembly, and spring pin. The firing pin shall move freely when

assembled to the operating rod assembly. All surfaces which contact guide ways to shoulders shall be polished in accordance with the applicable drawings.

3.3.2.2 Cartridge Extractor. The cartridge extractor shall be assembled into the bolt breech body. The spring assembly and the exterior of the extractor plunger shall be lubricated with CLP (MIL-L-63460) prior to being assembled into the bolt breech body. The clearance (see drawing 11826057) between the cartridge case seat and the inner face of the cartridge extractor shall be verified after movement of the cartridge extractor has been verified. The cartridge extractor engagement (see drawing 11826057) shall also be verified.

3.3.2.3 Cartridge Ejector. The cartridge ejector and helical spring shall be greased with CLP (MIL-L-63460) and then assembled into the bolt breech body. The cartridge ejector shall be oriented and compressed using the ejector removing tool and shall be secured with a spring pin.

3.3.2.4 Operating Rod Assembly. The piston rod shall be assembled to the piston rod extension and secured with a straight headless pin, and permanently riveted together per drawing 12976867. The piston rod must follow the minimum radius circle prescribed by drawing 12976867.

3.3.2.5 Firing Pin. The firing pin when assembled into the bolt and operating rod assembly shall function freely in the bolt breech body assembly.

3.3.2.6 Driving Spring Rod Assembly. The driving spring rod assembly shall be assembled manually into the bolt and operating rod assembly in the receiver assembly and locked into position by inserting its lower pin into the key hole slot in the rear end of the bottom of the receiver assembly. The driving spring rod assembly shall be disassembled from the bolt and operating rod assembly by manually disengaging the pin of the driving spring rod assembly from the rear of the receiver assembly.

3.3.3 Cover Assembly. The cover assembly contains the mechanism to feed cartridges linked with M13 links through the firing cycle. All rollers, links, pawls and cams shall operate smoothly and freely. When in the operating position the cover assembly shall be latched securely to the receiver assembly to hold both the cover assembly and the left hand feed tray in the operating position. The cover assembly shall be assembled to the feed tray and the receiver assembly with tray and cover axis pin. The cover assembly accessory mounting rail shall be in accordance with MIL-STD-1913.

3.3.4 Feed Tray. The feed tray and the cover assembly together shall be assembled to the receiver assembly. The feed tray shall move easily both with and independently of the cover assembly.

3.3.5 Cocking Assembly. The cocking assembly when assembled to the receiver assembly shall operate freely and allow the bolt and operating rod assembly to move forward and backward as required. The cocking assembly shall engage the detent surfaces of the receiver assembly and remain detented until manually charged. The cocking assembly shall engage the bolt and operating rod assembly via the headed straight pin. The headed straight pin shall be secured to the cocking assembly by the spring pin.

3.3.6 Infantry Trigger Assembly. The infantry trigger assembly shall be held in position by the spring pin. The infantry trigger assembly component parts shall include the trigger frame, small arms safety, sear, helical spring, trigger assembly, two straight pins, a separate straight pin, headed trigger guard pin, trigger guard, right stock assembly, left stock assembly, and two stock screws.

3.3.7 Buttstock and Buffer Assembly. The buttstock and buffer assembly shall be assembled and disassembled, without the use of tools, in the grooves at the rear of the receiver assembly. The buttstock and buffer assembly shall be secured in position by the buffer block catch at the bottom of the buffer assembly under action of the helical compression latch spring and buffer catch detent plunger. The buttstock assembly shall be firmly retained to the buffer assembly under action of the buttstock securing screw. The buttplate shall be attached securely to the buttstock assembly by the two butt plate screws.

3.3.7.1 Buffer Assembly. The components of the buffer assembly shall include the buffer housing, hydraulic buffer, the buffer block catch, buffer catch detent plunger, helical compression latch spring, spring pin, and straight, headed pin.

3.3.7.2 Buttstock Assembly. The buttstock assembly shall accept the buttstock bushing and retaining ring for further assembly to the buffer assembly under action of the buttstock securing screw.

3.3.8 Bipod Assembly and Sling Ring.

3.3.8.1 Bipod Assembly. The left leg assembly and right leg assembly of the bipod assembly shall engage their respective notches in the bipod body hinge head under spring action of the leg spring. Unless each bipod leg assembly (left-hand and right hand) is depressed against the spring, the bipod legs must be unable to fold. Once the left and right leg assemblies are manually folded, the leg assemblies shall easily fold rearward into engagement with their respective notches on the receiver assembly complete (3.3.2). The left and right hand leg assemblies shall be retained in their stowed position under action of the bipod latch.

3.3.8.2 Sling Ring. The sling ring shall be firmly attached to the gas cylinder (front). The spring pin for the sling ring shall retain both the sling ring and the bipod assembly.

3.3.8.3 Complete Receiver Assembly. The bipod assembly and the sling ring shall be firmly restrained on the front end of the gas cylinder by the spring pin. The bipod assembly shall rotate within the stops afforded by the gas cylinder. The left and right bipod leg assemblies shall easily rotate together, independently and fold under hand spring action into engagement with the notches on the receiver assembly. The bipod latch shall securely retain the bipod legs in their respective recesses of the receiver. The bipod latch shall operate under spring action to release the bipod. Once the bipod assembly is released, the legs shall automatically spring free into a fully deployed position ready for weapon emplacement.

3.3.9 Headspace. The headspace shall be as specified on drawing 12976815.

3.3.10 Firing Pin Protrusion. The firing pin protrusion shall be as specified on drawing 12976815.

3.4 Performance Characteristics.

3.4.1 Trigger Pull. The trigger pull shall not be less than 4 kilograms (8.8 lbs) and not more than 8.5 kilograms (18.75 lbs) force.

3.4.2 High Pressure Resistance. Each machine gun barrel, bolt breech body assembly, and receiver body assembly supplied as a repair part, spare part, or as an end item component will be subjected to a high pressure resistance test as specified on their respective drawings. Each of these components shall be capable of withstanding the firing of one standard 7.62mm M60 High Pressure Test Cartridge (MIL-C-46477). The receiver assembly shall be tested in the "white" condition, i.e., prior to final protective finish. After firing, all components proof tested shall be free of cracks, seams, and defects other than material inclusions found in the side plates (Dwg 11826079). Testing shall be as specified in 4.4.3.4.

3.4.3 Functioning. The machine gun shall operate without malfunctions, loose or unserviceable parts. The cyclic rate of fire shall be 550 to 650 rounds per minute with the gas regulator plug in the position #1. The rate of fire shall not be less than 625 rounds per minute with the gas regulator plug set at position #3. Testing shall be as specified in 4.4.3.5.

3.4.3.1 Belt Pull. The machine gun, under normal operating conditions, shall be capable of pulling a belt weighing 4.5 kilograms without malfunction. Testing shall be demonstrated in accordance with 4.5.5

3.4.3.2 Accuracy and Dispersion.

3.4.3.2.1 Accuracy. Accuracy shall be measured at a firing distance of 100 meters. Testing shall be in accordance with 4.4.3.6.

3.4.3.2.2 Dispersion. The extreme spread of a ten-round burst fired from the machine gun at position #1 of the plug, gas regulator shall not exceed 30 centimeters. This is required for both the assigned and spare barrels as determined from targeting the machine gun. Testing shall be in accordance with 4.4.3.6.

3.4.3.3 Targeting. When the machine gun is zeroed with both the assigned and spare barrels, the point of aim and the mean points of impact of a ten-round continuous burst from both the assigned and spare barrels shall lie within a 1.0 mil circle, (i.e., 10 centimeter diameter at 100 meters) from the point of aim. Testing shall be in accordance with 4.4.3.6.

3.4.3.4 Endurance. The machine gun with assigned and spare barrel shall be capable of firing a 15,000 round endurance test without incurring more than two immediately clearable stoppages. No loose parts or assemblies, unserviceable parts, uncontrolled fire, or stoppages which require disassembly of the machine gun and/ or an excess of one minute to correct, are allowed. A stoppage is defined as any unplanned cessation in firing or the inability to commence firing. Testing shall be in accordance with 4.4.3.7.

3.4.3.5 Reliability. The machine gun shall demonstrate a Mean Round Between Stoppage (MRBS) of 7,500 rounds and a Mean Round Between Failure (MRBF) of 25,000 rounds over a minimum receiver service life of 50,000 rounds. Barrel life shall be 15,000 rounds minimum. Testing shall be in accordance with 4.4.3.9.

3.4.3.5.1 Mean Round Between Stoppage (MRBS). MRBS is determined by dividing the total number of rounds fired by the total number of stoppages. A stoppage is defined as any unplanned cessation in firing or the inability to commence or cease firing attributable to the gun. All incidents shall be recorded and any considered as not chargeable to the machine gun shall be substantiated by the contractor.

3.4.3.5.2 Mean Round Between Failure (MRBF). MRBF is determined by dividing the total number of rounds fired by the total number of failures. A failure is defined as any stoppage (as described above) which involves part replacement or requires in excess of one minute to correct; or involves any failed or damaged part detected during scheduled preventive maintenance, the replacement of which is not authorized at the crew or organizational level of maintenance as prescribed by Source Maintenance Recoverability Code and TM-9-1005-313-23P. (Note: MRBF is a subset of MRBS). Only parts determined unserviceable may be replaced. Simultaneous replacement of unserviceable parts is treated as one chargeable failure. Incidents attributed to personnel, test equipment, or parts found broken at the conclusion of testing are not chargeable; however, they shall be recorded.

3.4.3.5.3 Unserviceable Barrel. A barrel is considered unserviceable when: (a) 20 percent of any burst exhibits yaw of 15 degrees or more, or (b) the mean velocity of a burst drops 200 feet per second below the mean of the velocity initially recorded at the start of the test. Barrels failing to meet the minimum life criteria shall be considered failures for the MRBS/ MRBF computations. Testing shall be performed concurrently with the reliability test in accordance with 4.5.9

3.4.3.6 Interchangeability. Unless otherwise specified on the drawings, all parts are interchangeable. Testing shall be as specified in 4.4.3.8.

3.4.4 Marking. Marking shall be in accordance with the applicable drawings and MIL-W-13855. The bar code label shall be firmly affixed to the weapon receiver, the bar coding shall be clearly defined and the number on the label shall agree with the serial number stamped on the receiver.

3.4.5 Workmanship. Workmanship shall be in accordance with the workmanship requirements of MIL-W-13855. In addition, the machine gun shall be free of dust, grease, rust, corrosion products, and other foreign matter. The cleaning method used shall not be injurious to any parts nor shall the parts be contaminated by the cleaning agent. All markings and stampings shall be neat and clearly defined.

4.0 QUALITY ASSURANCE PROVISIONS (QAP)

4.1 Responsibility For Inspection. The supplier is responsible for the performance of all inspection requirements as specified herein. The contractor may use his own or any facilities suitable for the performance of the inspection requirements specified herein, unless disapproved by the Government. In addition, the Government reserves the right to perform any of the inspections set forth in the product requirement where such inspections are deemed necessary to assure that supplies and services conform to prescribed requirements. References shall be made to MIL-STD-1916 to define terms used herein. The provisions of MIL-W-13855 shall apply.

4.1.1 Responsibility For Compliance. All items shall meet the requirements of the applicable drawings, Quality Assurance Provisions, and Special Packaging Instructions. The absence of any inspection requirements shall not relieve the contractor of the responsibility of ensuring that all products submitted to the government for acceptance comply with all the contract requirements.

4.1.2 Requirements For Reporting Failures. Failure to meet any product requirement through inspection, testing or assembly shall require the filing of a failure analysis and proposed corrective action. The failure analysis and proposed corrective action shall be in contractor format and shall be provided to the government QAR for review and approval.

4.2 Classification Of Inspections. The following types of inspection shall be conducted on the product:

- a. First Article Inspection (FA)
- b. Quality Conformance Inspection (QCI)

4.3 First Article Inspection. The contractor is responsible for performance of the FA inspection. The FA shall be subjected to the QCI specified herein and QAP and SPI and other inspections as necessary to determine compliance with contract requirements. The requirement to conduct a reliability test as part of first article will be specified in the contract. The first article shall be representative of the manufacturing methods and processes to be used for quantity production. The first article or articles shall be selected, as specified in the contract, from articles produced prior to the beginning of quantity production.

4.3.1 First Article Submission. The first article shall consist of the following items in sample quantities as indicated:

Part Description	Drawing	Quantity
Combination of Adopted Item for Machine Gun, 7.62 MM, M240B with Basic Items of Issue	12976814	10

4.3.2 Rejection. If any assembly, component, or test specimen fails to comply with any of the applicable requirements, the First Article sample shall be rejected. The Government reserves the right to terminate its inspection upon any failure of an assembly, component, or test specimen in the sample to comply with any of the stated requirements.

4.4 Quality Conformance Inspection.

4.4.1 Inspection Lot.

4.4.1.1 Machine Guns. The number of machine guns in an inspection lot shall be one month's production. Adjustments to lot size (see 4.4.3.7 and 4.4.3.8.1) shall be made only on an individual basis.

4.4.1.2 Parts. The number of parts in an inspection lot shall be determined in accordance with MIL-STD-1916.

4.4.2 Examination. The examination listed in the product requirement and QAPs shall be performed on inspection lots as defined in 4.4.1 of this product requirement.

a. Sampling Plans. Sampling plans are incorporated in this product requirement either by reference to appropriate military standards or by stipulating other specific acceptance criteria. In cases where sampling is specified in accordance with MIL-STD-1916, the contractor may request permission from the procuring activity to use an equivalent continuous sampling plan from MIL-STD-1235.

4.4.2.1 Component Parts And Concurrent Repair Parts. Examination of component parts and concurrent repair parts shall be performed in accordance with criteria specified in the contract. Machine guns and concurrent repair parts consisting of more than one part shall be assembled with accepted parts.

4.4.2.2 Machine Guns. Examination of each machine gun shall be performed after completion of all testing and immediately prior to preservation and packaging. A visual inspection in accordance with MIL-W-13855 shall be performed on the machine gun and on component parts at each examination step below for the following characteristics.

- a. Cleaning, improper
- b. Specified protective coating missing
- c. Evidence of poor general quality
- d. Manufacturing operations incomplete
- e. Assembly improper

- f. Evidence of poor workmanship
- g. Parts damaged
- h. Finish incorrect
- i. Marking incorrect or illegible

Machine guns and component parts failing to meet the requirements shall be rejected.

4.4.2.2.1 Assembly Characteristics. Each machine gun shall be examined as specified below by assembly/disassembly into the following majors groups and/or assemblies. Ensure that the operating group is not on sear and the bolt fully home.

a. Barrel Assembly.

1. Manually disassemble the barrel assembly from the receiver assembly. Manually assemble to and manually disassemble the spare barrel assembly from the receiver assembly. Determine compliance with 3.3.1.1.2 by examining the operation of the barrel bracket catch.

2. Visually examine both barrel assemblies to determine compliance with 3.3.1.1.

3. Examination of the high pressure test cartridge case to determine whether or not specified scratches and marks occurring in the chamber are permitted, shall be performed immediately following the firing of the designated test cartridge. Visually examine every barrel assembly for proof and magnetic particle inspection.

4. Visually examine the barrel and the gas hole bushing for compliance with 3.3.1.1.1.

5. Visually and manually examine the assembly of the parts to determine compliance with 3.3.1.1.2. Manually examine the assembly for free movement between all parts.

6. Visually and manually examine the assembly of the parts to the barrel to determine that the front sight retaining strap located in the front sight protector positively and securely retains the front sight blade to determine compliance with 3.3.1.

(a.) Manually unlatch the front sight-retaining strap and visually and manually determine that the front sight blade can be rotated for vertical adjustment of elevation during zeroing without any perceptible binding.

(b.) Visually and manually determine that the laterally opposed front sight adjustment screws can laterally move yet retain the front sight protector securely to the front sight collar.

(c.) Verify that adjustment of the front sight adjusting screws gives perceptible evidence of individual clicks for proper windage adjustment of the machine gun during zeroing.

b. Receiver Assembly. Visually and manually examine the following characteristics to determine compliance with 3.3.2.

1. The receiver assembly operates smoothly and accepts Functional Gage (maximum operating rod) 11826373 and Functional Gage (maximum breech bolt) 11826322 after firing a high pressure test cartridge and the application of a protective finish.

2. The driving spring rod assembly fits into the bolt and operating rod assembly and is locked in place in the rear end of the receiver assembly.

3. The barrel bracket catch functions without binding and locks the barrel in position.

4. The buffer assembly locks to and unlocks from the receiver assembly without the use of tools.

5. The infantry trigger assembly assembles to and disassembles from the rear part of the receiver assembly and locks in position with the spring pin without the use of tools.

6. The cover assembly with the feed tray assembles to and disassembles from the receiver assembly by placing and removing the tray and cover axis pin without the use of tools.

7. The cocking assembly assembles to the receiver assembly and functions freely. Visually and manually examine the cocking assembly to determine compliance with 3.3.5.

8. The rear sight assembly is securely assembled to the receiver assembly, functions and maintains location and orientation. The rear sight slide assembly shall move freely when both rear sight catches are depressed and shall retain its elevation setting.

9. Manually examine the bipod assembly for secure retention by the gas cylinder. Ensure that the bipod assembly is free to rotate side to side within the limits of the stops. Ensure that the bipod latch is easily depressed against spring action for securing the bipod leg assemblies. The bipod latch should also be easily able to be unlatched for bipod removal purposes.

10. Manually examine for secure fastening of the sling ring. The padded sling assembly must attach easily to the sling ring.

11. Ejection Port Opening Cover. Visually and manually examine the ejection port opening cover for compliance with 3.3.2.

12. Assessor Rail Kit. Visually and manually examine the Assessor Rail Kit for compliance with 3.3.2.

c. Firing Mechanism Group. Ensure that the operating mechanism is not charged. Remove the rear trigger spring pin and withdraw the firing mechanism for examination. Visually and manually examine the infantry trigger assembly for compliance with 3.3.6.

d. Buffer And Buttstock Assembly.

(a.) Manually examine for secure fastening of the buffer and buttstock assembly by the buffer block catch.

(b.) Disassemble and assemble, without the use of tools, the buffer and buttstock assembly from and to the grooves at the rear of the receiver assembly.

e. Bolt And Operating Rod Assembly Group. Visually and manually examine and measure the following characteristics to determine compliance with 3.3.2.1, 3.3.2.2, and 3.3.2.3.

1. The component parts of the assembly are the operating rod assembly, the firing pin, the bolt assembly, spring pin, and spring pin.

2. All surfaces contacting the guide ways or shoulders are polished to their required finish (see paragraph 3.3.2.1).

3. The assembly readily moves forward and backward in the guides of the receiver assembly.

4. The assembly manually assembles to and disassembles from the rear end of the receiver assembly.

5. Cartridge Extractor.

(a.) Visually examine the spring assembly and the exterior of the extractor plunger for the presence of lubrication.

(b.) Using gage number 11826306 measure and record the clearance between the cartridge case seat and the inner face of the cartridge extractor to insure compliance with the drawing requirement (see 3.3.2.2).

(c.) Using gage number 11826305 measure and record the engagement of the cartridge extractor to insure compliance with the drawing requirement (see 3.3.2.2).