

MIL-M-45013D

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SUPERSEDING
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MILITARY SPECIFICATION

MACHINE GUN, 7.62MM: M60

This specification is approved for use by all Departments and Agencies of the Department of Defense.

1. SCOPE

1.1 This specification covers one type of 7.62 millimeter (mm), gas-operated, air-cooled, link-belt fed, lightweight machinegun furnished with one spare interchangeable barrel assembly with bipod assembly. The machinegun is capable of being fired from either the shoulder, bipod, or pedestal or a tripod mount.

2. APPLICABLE DOCUMENTS

2.1 The following documents, of the issue in effect on date of invitation for bids or request for proposal, form a part of this specification to the extent specified herein:

SPECIFICATIONS

- | | | |
|------------------------------|---|---|
| <u>Military</u>
MIL-P-116 | - | Preservation, Methods of. |
| MIL-W-13855 | - | Weapons, Small Arms and Aircraft Armament. Subsystems, General Specification for. |
| MIL-I-45607 | - | Inspection Equipment, Acquisition, Maintenance and Disposition of. |

STANDARDS

- | | | |
|--------------------------------|---|--|
| <u>Military</u>
MIL-STD-105 | - | Sampling Procedures and Tables for Inspection by Attributes. |
| MIL-STD-109 | - | Quality Assurance Terms and Definitions. |

FSC 1005

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DRAWINGS

U.S. Army Weapons Command

F7269100 - Machine Gun, 7.62MM: M60.
 IEL7274545 - Index of Inspection Equipment Lists.

(Part drawings referenced in this specification form a part of Drawing F7269100; inspection equipment drawings form a part of Drawing IEL7274545.)

PUBLICATIONS

U.S. Army Weapons Command

P8413999 - Packaging Data Sheet for Machine Gun,
 7.62MM: M60, w/Equipment.

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

3. REQUIREMENTS

3.1 First article. Requirements for submission of a first article by the contractor shall be as specified in the contract (see 6.1). Unless otherwise specified (see 6.1), the first article shall include the pilot pack (see 5.1).

3.2 Materials and construction. Machineguns and parts shall conform to the materials and construction requirements specified herein, on Drawing F7269100 and drawings applicable thereto, and shall be in accordance with the applicable materials and construction processes of MIL-W-13855.

3.3 Design. Machineguns and parts shall conform to the design specified herein, on Drawing F7269100 and drawings applicable thereto, and shall be in accordance with the applicable design provisions of MIL-W-13855.

3.3.1 Barrel assembly with bipod assembly. The barrel assembly with bipod assembly shall be capable of being manually assembled to and disassembled from the receiver when the barrel lock is in the vertical position and when the bolt is fully retracted. The barrel assembly with bipod assembly shall be so fabricated that when the machinegun is completely assembled, the requirements for targeting and accuracy hereinafter prescribed shall be met.

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3.3.1.1 Barrel assembly. The barrel assembly shall be free of cracks and seams and 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 base steel. No mechanical methods for removal of chromium plating are permitted in the tube bore. Burs and sharp edges shall be removed from chamber edges and scratches or marks, occurring in a chamber which otherwise meets the surface roughness requirements, shall be permitted provided they do not cause marks on the case of a high-pressure test cartridge fired in the chamber. The barrel assembly shall be proof and magnetic particle inspection marked in accordance with the applicable drawing.

3.3.1.1.1 Gas cylinder. The gas cylinder shall be fastened securely on the tube assembly by the gas cylinder rivets so that there shall be no relative movement. With the barrel assembly with bipod assembly disassembled from the receiver assembly, the gas piston shall move of its own weight through its full range of travel in the gas cylinder.

3.3.1.1.2 Front sight. The front sight shall be fastened securely on the tube assembly by the front sight rivets so that there shall be no relative movement.

3.3.1.2 Bipod assembly. The bipod assembly shall be retained on the barrel assembly by the flash suppressor and when assembled shall be capable, by its own weight, of rotating on the tube assembly between its stop positions. The legs shall lock in place in the open or folded positions and shall be capable of being manually released from each position by a pull action within the load limits specified on the applicable drawing. The inner legs shall be capable of being manually extended by a pull action within the load limits specified on the applicable drawing and shall lock under spring action of the retainer in any of the five locking positions. The inner legs shall not retract from any locked position unless the retainers are manually depressed.

3.3.1.3 Flash suppressor. The flash suppressor shall be fastened securely to the barrel assembly by the staked pin so that there shall be no relative movement.

3.3.1.4 Gas cylinder extension, nut, and plug. The gas cylinder extension and nut shall be assembled securely to the gas cylinder so that there shall be no relative movement and shall be retained by the lock washers. The gas cylinder plug shall be assembled to the gas cylinder with the torque specified on the applicable drawing. The gas cylinder plug and the gas cylinder extension lock washer shall be lock wired as specified on the applicable drawing.

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3.3.2 Rear sight assembly. The rear sight base shall be staked securely to the dovetail recess of the receiver, after targeting and accuracy firing tests, so that there shall be no relative movement of the rear sight base. The rear sight leaf shall move manually between the horizontal and vertical positions and shall be held in the vertical positions and shall be held in the vertical position under spring action until manually changed. When the elevation button is depressed the aperture slide shall move without binding in the leaf, and when the elevation button is released the aperture slide shall be held in position under spring action. The elevation and windage adjustment knobs shall turn manually through their full range of travel and shall produce position retention perceptible by touch for each detent notch when the sight is adjusted. When the elevation knob is rotated, the aperture slide shall not cant.

3.3.3 Barrel lock. When in the locked position, the barrel lock shall be capable of being manually unlocked by the application of finger pressure to the barrel lock retaining ring so that the barrel lock is moved through its full range of travel to the right. When unlocked, the barrel lock shall be capable of being pivoted manually between the closed (horizontal) and open (vertical) positions. It shall be held in the open position by spring action permitting the barrel assembly with bipod assembly to be assembled to or disassembled from the receiver. When the barrel lock is returned to the closed position it shall lock under spring action. When in the closed position, the barrel lock shall be capable of retaining the barrel assembly with bipod assembly in the receiver.

3.3.4 Bolt assembly. With the cover assembly opened and the bolt assembly disengaged from the operating rod yoke, the bolt assembly shall move of its own weight through its full range of travel in the slideways of the receiver. Firing pin protrusion shall be as specified on the applicable drawing. The bolt assembly shall be proof and magnetic particle inspection marked in accordance with the applicable drawing.

3.3.4.1 Cam actuator assembly. The cam actuator assembly shall be retained on the bolt by the bolt plug and shall rotate without binding on the bolt. The bolt guide roller and the cam actuator roller shall be retained on the cam actuator by the roller rivet and shall rotate without binding on the cam actuator.

3.3.4.2 Ejector. The ejector shall be retained in the bolt by the spring pin and shall be held in the forward position by spring action. The ejector shall move through its full range of travel under spring action without binding.

3.3.4.3 Extractor. The extractor shall be retained in the bolt by the extractor plunger and spring. The extractor shall move through its full range of travel under spring action without binding.

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3.3.4.4 Firing pin. The firing pin shall move through its full range of travel in the bolt under spring action without binding.

3.3.5 Buffer assembly. The buffer assembly shall be retained in the receiver assembly by the buffer retaining yoke. The buffer retaining yoke and the buffer assembly shall disassemble from the receiver assembly without the use of tools. The plunger shall be capable of being moved through its full range of travel in the buffer body and shall return to its original position by spring action after partial or full travel.

3.3.6 Butt stock assembly. The butt stock assembly shall be retained on the receiver by the buffer assembly under spring action of the latch. The butt stock assembly shall disassemble from the receiver when the latch is depressed using a tool simulating the bullet nose of a cartridge and shall manually reassemble to the receiver without the use of tools.

3.3.6.1 Shoulder rest assembly. The shoulder rest assembly shall move manually between the open and closed positions and shall be retained in either position by spring action.

3.3.6.2 Sling swivel assembly. The sling swivel assembly shall be fastened to the butt stock assembly by the screws so that there shall be no relative movement except that the swivel loop shall rotate without binding.

3.3.7 Carrying handle assembly. The carrying handle assembly shall be retained on the receiver by the spring pin. The carrying handle assembly shall be held in the side position or in the carrying position by spring action and shall move manually from one position to the other.

3.3.8 Tray and hanger assembly. The tray and hanger assembly shall be retained on the receiver by the cover hinge pin.

3.3.8.1 Cartridge retainer pawl. The cartridge retainer pawl shall be retained in the frame assembly by the shaft. The cartridge retainer pawl shall be held normally in position by the spring and shall be returned to the original position by spring action after partial or full travel. The pawl shall move through its full range of travel under spring action without binding and shall retain the linked cartridges in the feed mechanism.

3.3.8.2 Bandolier hanger assembly. The bandolier hanger assembly shall be retained in the frame assembly by the shaft and shall rotate without binding on the shaft and the bandolier shall mount on the bandolier hanger without the use of tools and be securely retained.

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3.3.9 Cocking handle assembly and cocking handle guide. The cocking handle assembly shall be retained on the receiver by the cocking handle guide and shall move without binding through its full range of travel in the slideways of the receiver. The cocking handle assembly shall be held in the forward stop position by the spring action of the retaining latch. When retracted, the cocking handle assembly shall engage the operating rod assembly and shall retract the operating rod assembly and the bolt assembly. The cocking handle guide shall be fastened securely to the receiver by the screw and lock washer so that there shall be no relative movement.

3.3.10 Cover assembly. The cover assembly shall be retained on the receiver assembly by the cover hinge pin. The cover assembly shall be capable of being locked in the closed position by the cover latch only when the bolt assembly is fully retracted. The cover shall open when the cover latch is released, and shall be retained in the fully open position by spring action. All riveted and brazed parts shall be tight, undamaged, and without relative movement.

3.3.10.1 Latch lever assembly. The latch lever assembly shall rotate manually to disengage the cover assembly from the receiver assembly and shall be returned to the stop position by spring action after partial or full travel. The latch lever assembly shall rotate the cover latch to lock and unlock the cover assembly.

3.3.10.2 Cartridge guides. The cartridge guides shall be retained in the cover housing assembly by the cartridge guide shaft and cotter pin. The cartridge guides shall operate through their full range of travel under spring action without binding and shall be so positioned as to properly guide cartridges into the chamber.

3.3.10.3 Feed cam assembly. The feed cam assembly shall be retained in the cover housing assembly by the feed cam retainer and shall move through its full range of travel under spring action without binding. The feed cam assembly shall return to its stop position by spring action after partial or full travel. Movement of the feed cam assembly shall operate the feed pawl assembly.

3.3.10.4 Feed pawl assembly. The feed pawl assembly shall be retained in the cover housing assembly by the chassis rollers and when disengaged from the feed lever assembly shall move of its own weight through its full range of travel. The feed pawl assembly shall be capable of feeding linked cartridges into the feed mechanism.

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3.3.11 Forearm assembly. The forearm assembly shall be retained on the receiver by the spring catch. The forearm assembly shall disassemble from the receiver when the spring catch is depressed using a tool simulating the bullet nose of a cartridge when the barrel assembly with bipod assembly is removed from the machinegun. The sling swivel shall be fastened to the forearm assembly by the screws so that there shall be no relative movement except that the swivel loop shall rotate without binding.

3.3.12 Operating rod assembly.

3.3.12.1 With the cover assembly opened, the drive spring and guide assembly disassembled from the operating rod assembly, and the sear disengaged; the operating rod assembly, together with the bolt assembly shall slide from the open to closed position by its own weight.

3.3.12.2 The operating rod assembly shall manually assemble to and disassemble from the slideways of the receiver. The yoke and head shall be retained on the tube by staked rivets so that there shall be no relative movement of these parts. The roller shall be retained on the yoke by the yoke roller pin and shall rotate without binding. The yoke roller pin shall be retained securely by the spring pin. With the trigger released and the operating rod retracted into the cocked position, the sear engagement notch on the operating rod shall be engaged by the sear and the operating rod shall be held in the cocked position until the trigger is pulled.

3.3.13 Receiver assembly group. The slideways of the receiver assembly shall be smooth and free of burs. The rear mounting pin shall be retained on the receiver by the staked pin. All riveted parts shall be tight, undamaged, and without relative movement.

3.3.14 Trigger mechanism grip assembly. The trigger mechanism grip assembly shall be retained on the receiver assembly by the retaining pin and shall disassemble from the receiver assembly without the use of tools. The retaining pin shall be locked in place by the spring lock. Use of a tool will be permitted, when required, to assist in disassembly of the spring lock.

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3.3.14.1 Safety. The safety shall move manually between the safe and fire positions, and shall remain in the position set under spring action until reset manually. The trigger mechanism shall operate when the safety is positioned at the letter "F" and shall not operate when the safety is positioned at the letter "S".

3.3.14.2 Sear. The sear shall be capable of full engagement with the sear engagement notch on the operating rod and of holding the operating rod in a cocked position. When the safety is in the firing position and the trigger is pulled, the sear shall disengage from the sear engagement notch on the operating rod allowing the operating rod to move forward under spring action. When the trigger is released, the sear shall return to the engaging position by spring action of the sear plunger.

3.3.14.3 Trigger. The trigger shall return to its normal forward position under spring action after partial or complete trigger pull.

3.4 Performance characteristics.

3.4.1 Headspace. The headspace in the assembly gun shall be not less than 1.6315 inch and not more than 1.6365 inch when measured to the 0.400 diameter datum on the first shoulder of the chamber. Testing shall be as specified in 4.4.3.2.

3.4.2 Firing pin indent. The firing pin indent shall be 0.030 to 0.035 inch, and shall not be off center more than one-half the diameter of the firing pin indent. Testing shall be as specified in 4.4.3.3.

3.4.3 Trigger pull. The trigger pull shall be free of creep and shall be greater than 6 pounds but shall not exceed 11.5 pounds. Creep shall be interpreted to mean any perceptible rough movement between the time the trigger slack is taken up and the sear is disengaged from the operating rod. Testing shall be as specified in 4.4.3.3.

3.4.4 High-pressure resistance. Machineguns shall be capable of withstanding the firing of Government standard 7.62mm M60 high pressure test cartridges. Parts shall be free of cracks, seams, and other injurious defects often proof firing as evidenced by visual and magnetic particle inspection. Testing shall be as specified in 4.4.3.1.

3.4.5 Functioning. Machineguns shall operate with Government standard 7.62mm, M59 or M80 ball cartridges and 7.62mm, M13 links without malfunctions or unserviceable parts, and the cyclic rate of fire shall be within 500 to 650 rounds per minute. Testing shall be as specified in 4.4.3.1.

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3.4.6 Targeting and accuracy. Using Government standard 7.62mm, M59 or M80 ball cartridges and 7.62mm, M13 links, nine rounds of a 10 round burst fired from the machinegun at a range of either 50 yards or 100 yards shall be within the extreme spread and targeting area specified on Drawing C7269214 for the applicable range. Testing shall be as specified in 4.4.3.1.

3.4.7 Endurance. Machineguns shall be capable of firing 10,000 rounds of Government standard 7.62mm, M59 or M80 ball cartridges with not more than the number of malfunctions and unserviceable parts allowed in Table I, and the cyclic rate of fire shall be within the limits specified in 3.4.5. Testing shall be as specified in 4.4.3.4.

3.5 Interchangeability. Unless otherwise specified on the drawings, all parts shall be interchangeable. (In normal assembly operations there shall be no objections interposed to preferential assembly of parts provided that all parts are dimensionally acceptable.) Testing shall be as specified in 4.4.3.4.

3.6 Marking. Marking shall be in accordance with the applicable drawings and MIL-W-13855.

3.7 Workmanship. Workmanship shall be in accordance with the workmanship requirements of MIL-W-13855.

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TABLE I. Malfunctions and Unserviceable Parts

Code	Malfunctions ¹	Number permitted in 10,000 rounds
LP	Loosening of parts (failure of bonding and riveting).	0
LPS	Loosening of parts (failure of staking).	1
FF	Failure to feed.	4
FEJ	Failure to eject.	3
FEX	Failure to extract.	1
OM	Other malfunctions.	1

Code	Unserviceable parts ¹	Number permitted in 10,000 rounds	
		First 5,000 rounds	Second 5,000 rounds
WL	Lock washer.	1	1
OP	Other parts ²

¹When malfunctions are traceable to particular parts, it is permissible to replace such parts and record them as unserviceable, subject to limitations of Table I. When it is definitely established by the Government representative that previously recorded malfunctions are attributable to an unserviceable part, such malfunctions shall not be counted against the machinegun being tested, provided that they occurred not more than 200 rounds prior to replacement of the unserviceable part. These 200 rounds shall have been fired with the unserviceable part. However, such malfunctions shall remain recorded and properly identified. An unserviceable part is one that causes malfunctions or impairs the safety of the weapon. Malfunctions attributable to links and ammunition shall not be counted against the machinegun however, such malfunctions shall be recorded.

²One unserviceable part other than that specified shall be allowed in the test and shall be subject to the judgement of the Government representative that the failure does not represent an unsafe condition or a defective condition which is prevalent throughout the lot of items involved.

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4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract or purchase order, the supplier is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified in the contract or order, the supplier may use his own or any other facilities suitable for the performance of the inspection requirements specified herein, unless disapproved by the Government. The Government reserves the right to perform any of the inspections set forth in the specification where such inspections are deemed necessary to assure supplies and services conform to prescribed requirements.

4.2 Quality assurance terms and definitions. Quality assurance terms and definitions used herein are in accordance with MIL-STD-109.

4.3 First article inspection. The first article shall be selected from early production and submitted for testing in accordance with the contract requirements (see 6.1). The first article shall be a representative of the production processes to be used during quantity production. The first article shall be subjected to all examination and test specified herein, and such other inspection as is necessary to determine compliance with the requirements of the contract.

4.4 Quality conformance inspection.

4.4.1 Inspection lot.

4.4.1.1 Machineguns. The number of machineguns in an inspection lot shall be either 200 or one month's production, whichever is smaller. Machineguns shall be assembled from lots of component parts that have met all inspection requirements specified herein. Endurance test lot size shall be as specified in 4.4.3.5.1.

4.4.1.2 Parts and packaging. The formation, size and presentation of inspection lots of parts and packaging shall be in accordance with MIL-STD-105. Inspection lots shall be as large as practicable, in consideration of quality history, manufacturing conditions, and contractor's delivery schedule, and within the limitations of MIL-W-13855.

4.4.2 Examination.

4.4.2.1 Component parts and concurrent repair parts. Examination of parts shall be performed in accordance with the criteria specified in the contract (see 6.1). The contractor's examination of parts shall be accomplished prior to their assembly into the end item or submission for acceptance as repair parts.

4.4.2.2 Machineguns. Final examination of machineguns shall be performed after completion of all testing and just prior to preservation and packaging. Each step in the examination shall include a visual examination for proper cleaning and presence of the specified protective coating. Machineguns failing to meet the requirements shall be rejected. Each machinegun shall be examined as specified below.

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4.4.2.2.1 Visually examine machinegun for cleanliness, workmanship, and completeness of manufacturing, assembly, finish, and marking (identification, proof firing, and magnetic particle inspection). Manually examine machinegun for functioning of operating parts and visually examine markings for clarity and legibility. (See 3.2 through 3.3.14.3, 3.4, and 3.5).

4.4.2.2.2 Butt stock assembly.

- a. Manually examine butt stock assembly for compliance with 3.3.6.
- b. Disassemble butt stock assembly from the receiver.

4.4.2.2.2.1 Shoulder rest assembly. Manually examine shoulder rest assembly for compliance with 3.3.6.1.

4.4.2.2.2.2 Sling swivel assembly. Manually examine sling swivel assembly for compliance with 3.3.6.2.

4.4.2.2.3 Buffer assembly.

- a. Manually examine for secure retention of buffer assembly in receiver.
- b. Disassemble buffer assembly from receiver by pushing buffer forward and removing buffer retaining yoke. Manually examine to assure that yoke disassembles from receiver freely.
- c. Examine spring action of buffer assembly for compliance with 3.3.5.
- d. Visually examine buffer assembly to assure freedom from burs, cracks, deformations and leakage of hydraulic fluid.

4.4.2.2.4 Driving spring and driving spring guide assembly.

- a. Disassemble driving spring and guide assembly from operating rod assembly and buffer plunger.
- b. Visually examine ends of spring for secure brazing (see Drawing B7269303).
- c. Visually examine guide assembly for secure brazing of stop to rod (see Drawing C7269199).

4.4.2.2.5 Operating rod assembly and bolt assembly action. Examine action of operating rod assembly and bolt assembly for compliance with 3.3.12.1

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4.4.2.2.6 Operating rod assembly.

- a. Disassemble operating rod assembly from bolt assembly and visually and manually examine operating rod assembly for compliance with 3.3.12.2.
- b. Visually examine rod for excessive wear or mutilations on sear engagement notch.
- c. Visually examine yoke for mutilations or burs on bolt camming surfaces.
- d. Visually examine roller for excessive wear or mutilations.

4.4.2.2.7 Bolt assembly.

- a. Visually examine bolt for presence of proof and magnetic particle inspection marks (see Drawing F11010358).
- b. Examine firing pin protrusion using the inspection equipment in accordance with Drawing C7274295 (see Drawing D11010357.)
- c. Visually examine to assure that ejector face is flush with or below front of bolt (see Drawing D11010357).

4.4.2.2.7.1 Cam actuator assembly. Manually examine cam actuator assembly for compliance with 3.3.4.1.

4.4.2.2.7.2 Ejector. Manually examine retention and spring action of ejector for compliance with 3.3.4.2.

4.4.2.2.7.3 Extractor. Manually examine spring action of extractor for compliance with 3.3.4.3.

4.4.2.2.7.4 Firing pin. Manually examine firing pin for compliance with 3.3.4.4.

4.4.2.2.7.5 Disassembly of bolt assembly.

- a. Disassemble all parts except ejector from bolt assembly.
- b. Visually examine all parts for mutilations, breaks, or cracks.
- c. Visually examine bolt lugs, operating cam cut, rollers, guideways, cam actuator assembly, extractor lips, and ejector face for cracks, burs, sharp edges, or deformations.
- d. Visually examine firing pin striker point; it shall be smooth and free of pits and burs. Examine fillet radii at spools for cracks and deformation.
- e. Reassemble bolt assembly, assuring that cam actuator assembly is properly assembled with roller end forward on bolt and that extractor is securely retained by the plunger and spring.

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4.4.2.2.8 Trigger mechanism grip assembly.

- a. Disassemble trigger mechanism assembly from receiver assembly manually examining for compliance with 3.3.14.
- b. Visually examine for secure riveting of trigger mechanism frame assembly to channel assembly.

4.4.2.2.8.1 Safety. Visually and manually examine safety for compliance with 3.3.14.1.

4.4.2.2.8.2 Sear. Visually and manually examine sear for compliance with 3.3.14.2.

4.4.2.2.8.3 Trigger. Manually examine trigger for compliance with 3.3.14.3.

4.4.2.2.9 Cover assembly. Visually and manually examine cover assembly for compliance with 3.3.10.

4.4.2.2.9.1 Latch lever assembly. Manually examine spring action of latch lever assembly for compliance with 3.3.10.1.

4.4.2.2.9.2 Cartridge guides.

- a. Visually and manually examine retention and spring action of cartridge guides for compliance with 3.3.10.2.
- b. Visually examine cartridge guides for cracks, burs, sharp edges, or deformations.

4.4.2.2.9.3 Feed cam assembly.

- a. Visually and manually examine feed cam assembly for compliance with 3.3.10.3.
- b. Visually examine feed cam assembly for burs, cracks, sharp edges, or deformations.

4.4.2.2.9.4 Feed pawl assembly.

- a. Visually and manually examine retention and free travel of feed pawl assembly for compliance with 3.3.10.4.
- b. Visually examine feed pawl assembly for cracks, burs, sharp edges, or deformations.

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4.4.2.2.10 Tray and hanger assembly.

- a. Visually examine the tray and hanger assembly for compliance with 3.3.8.
- b. Visually examine feed plate guideways and cartridge stops for cracks, burs, sharp edges, or deformations.

4.4.2.2.10.1 Cartridge retainer pawl.

- a. Visually and manually examine retention, spring action, and free travel of cartridge retainer pawl for compliance with 3.3.8.1.
- b. Visually examine the cartridge retaining pawl for cracks, burs, sharp edges, or deformations.

4.4.2.2.10.2 Bandolier hanger assembly. Manually examine the bandolier hanger assembly for compliance with 3.3.8.2.

4.4.2.2.11 Barrel assembly with bipod assembly (two per gun). Disassemble barrel assembly with bipod assembly from the receiver. Assure that with barrel lock lever in the vertical position disassembly from the receiver is readily accomplished. Assemble to and disassemble spare barrel assembly with bipod assembly from the receiver.

4.4.2.2.11.1 Barrel assembly.

- a. Visually examine the barrel assemblies for mutilations, cracks, and seams. Visually examine bore and chamber for foreign matter, corrosion, pits, burs, bulges, and deformations. The chrome plating shall be free of nodules, anode burns and flaking or stripping.
- b. Visually examine barrel assemblies for presence of proof and magnetic particle inspection marks on the tube assembly (see Drawing F7269042).

4.4.2.2.11.1.1 Gas cylinder.

- a. Visually and manually examine gas cylinder for compliance with 3.3.1.1.1.
- b. Disassemble gas cylinder nut and extension, lock washers and piston, visually examine piston and lock washers for cracks, burs, or deformations. Reassemble, assuring that head of piston is assembled toward breech (rear) end.
- c. Visually and manually examine gas cylinder plug and gas cylinder extension lock washer or secure lock wiring and secure assembly.

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4.4.2.2.11.1.2 Front sight. Examine front sight for compliance with 3.3.1.1.2.

4.4.2.2.11.2 Bipod assembly. Manually examine bipod assembly for compliance with 3.3.1.2 except that load requirements shall not be checked during this examination.

4.4.2.2.11.3 Flash suppressor. Examine flash suppressor for compliance with 3.3.1.3.

4.4.2.2.12 Forearm assembly. Manually examine for compliance with 3.3.11.

4.4.2.2.13 Receiver assembly group.

- a. Visually and manually examine receiver assembly group for compliance with 3.3.13.
- b. Manually examine cocking handle guide, screw, and lock washer for compliance with 3.3.9.

4.4.2.2.13.1 Cocking handle assembly.

- a. Manually examine retention and free movement of cocking handle assembly for compliance with 3.3.9.
- b. Manually examine spring action of retaining latch on cocking handle assembly for compliance with 3.3.9.

4.4.2.2.13.2 Carrying handle assembly. Examine carrying handle assembly for compliance with 3.3.7.

4.4.2.2.13.3 Barrel lock. Manually examine barrel lock for compliance with 3.3.3.

4.4.2.2.13.4 Rear sight assembly. Visually and manually examine rear sight assembly for compliance with 3.3.2.

4.4.2.2.14 Headspace. Prior to reassembly of machinegun, check for headspace requirement (see 3.3.15) using the test methods specified in 4.5.1.

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4.4.2.2.15 Reassembled machineguns.

- a. While reassembling barrel assembly with bipod assembly to receiver assembly, examine to assure that when barrel lock lever is set in closed position barrel is retained in receiver (see 3.3.3).
- b. Reassemble machinegun without the use of tools and hand operate to assure proper function of all parts.
- c. Manually examine safety for proper function. Safety must move readily, with positive retention in the "S" and "F" positions. When the trigger is pulled, the sear shall not release operating rod when safety is in "S" position and must release operating rod when safety is in "F" position.
- d. Visually examine machinegun for presence of proof mark (see 4.5.5).

4.4.2.2.16 Inspection approval stamp. Machineguns which have passed all examinations after successful completion of testing shall be stamped by the contractor with the Department of Defense complete inspection approval stamp as specified on the applicable drawing. The Government representative will observe the stamping operation and control the stamps used for such stampings.

4.4.2.3 Packaging. Examination of packaging of machineguns shall be performed in accordance with the classification of defects and acceptable quality levels (AQL's) specified in 4.4.2.3.1 (see 6.1). Sample size shall be in accordance with MIL-STD-105, using inspection level I. The following provisions shall apply:

- a. The AQL's are specified as percent defective.
- b. An individual AQL is specified for each defect, not for a group of defects.
- c. Examination for packaging defects specified in 4.4.2.3.1 shall apply to each item of the applicable sample of machineguns, interior packages, or exterior containers, as applicable.

4.4.2.3.1 Classification of defects for packaging. (Unless otherwise specified in each listed defect, the packaging requirements are specified on Packaging Data Sheet P8413999).

<u>Categories</u>	<u>Defect</u>	<u>AQL</u>
Critical:	None defined.	
Major:		
101	Illegible or incorrect marking.	1.0
102	Improper level of packaging and packing (see procurement documents).	1.0

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<u>Categories</u>	<u>Defect</u>	<u>AQL</u>
103	Missing items of equipment.	1.0
104	Inadequate cleaning and drying.	1.5
105	Improper preservative application and drainage.	1.5
106	Improper assembly of package: position of assemblies in supports, position of separator between supports, and assembly of cells.	1.5
107	Improper closure of interior packages.	1.5
108	Improper closure and strapping of shipping containers.	1.5

Minor: None defined.

4.4.2.3.2 Examination of packaging of repair parts shall be performed in accordance with the criteria specified in the contract (see 6.1).

4.4.3 Testing.

4.4.3.1 High-pressure resistance, functioning, and targeting and accuracy firing testing. The contractor shall test each machinegun for high-pressure resistance, functioning, and targeting and accuracy using the test methods specified in 4.5.5, 4.5.6 and 4.5.7 respectively. Machineguns failing to meet any of the requirements shall be rejected. In addition, the contractor shall test five machineguns from each inspection lot for functioning with the magazine, using the test methods specified in 4.5.6.2. Also, if machineguns are fired for targeting and accuracy at a range of less than 100 yards, the contractor shall test a sample of 5 machineguns (which have passed the test at the shorter range) from each inspection lot at a range of 100 yards using the test methods specified in 4.5.7. Failure of any machinegun in the sample to meet the requirements shall cause rejection of the represented lot.

4.4.3.2 Headspace testing. The contractor shall test each machinegun for headspace using the test methods specified in 4.5.1. Machineguns failing to meet the requirements shall be rejected.

4.4.3.3 Firing pin indent and trigger pull testing. The contractor shall test a sample of 10 machineguns selected by the Government representative from each inspection lot for firing pin indent and trigger pull using the test methods specified in 4.5.2 and 4.5.3 respectively. Failure of any machinegun in the sample to meet the requirements shall cause rejection of the represented lot.

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4.4.3.4 Interchangeability testing.4.4.3.4.1 In plant.

4.4.3.4.1.1 Machineguns. Ten machineguns with only the assigned barrel assembly with bipod assembly, selected by the Government representative from each inspection lot shall be tested by the contractor for interchangeability using the test methods specified in 4.5.4.1.1. Machineguns taken for interchangeability testing shall have been found satisfactory in all other examinations and tests. Test frequency may be reduced to not less than 1 test of 10 machineguns each month when a record of consistently satisfactory results has been established. The 10 machineguns shall be tested for and shall comply with the requirements for headspace, firing pin indent, and trigger pull before and after interchange of parts, using the test methods specified in 4.5.1, 4.5.2, and 4.5.3 respectively. In addition, the machineguns shall be tested for functioning and targeting and accuracy requirements after interchange of parts using the test methods specified in 4.5.6 and 4.5.7. No failures shall be allowed in the function firing test and failure of not more than two machineguns shall be allowed in the accuracy firing test. Targeting results shall be recorded and shall not be basis for rejection and the sights shall not be adjusted. At the completion of the interchangeability test the barrel assembly with bipod assembly shall be reassembled to the original machinegun. Failure of the interchangeability test shall cause retest or rejection of the represented lot. At the discretion of the Government representative, an interchangeability retest may be allowed without reconditioning the lot of machineguns. Failure in the retest shall cause rejection of the represented lot subject to reconditioning and further test as a reconditioned lot. A sample of 20 machineguns from each retest or reconditioned lot shall be tested using the same procedure described above except that failure in the accuracy firing will be allowed on not more than 4 machineguns.

4.4.3.4.1.2 Concurrent repair parts. The contractor shall subject at least two parts from each inspection lot of concurrent repair parts to the interchangeability test specified in 4.5.4.1.2. Failure of any part to meet the requirements shall be cause for rejection of the represented lot of parts subject to reconditioning and further test as a reconditioned lot. A sample of double the number of parts used in the original test shall be tested from each reconditioned lot using the test method specified in 4.5.4.1.2.

4.4.3.4.2 Interplant. When machineguns are manufactured concurrently by more than one contractor, each contractor shall forward monthly six machineguns, for the interplant interchangeability test specified in 4.5.4.2 (see 6.1). The contractor will be informed of any failure of the machineguns to meet prescribed requirements. Upon completion of inspection by the testing agency, samples may be commercially packaged and will be returned to the contractor for repackaging in accordance with procurement documents at the contractor's expense.

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4.4.3.5 Endurance testing.

4.4.3.5.1 Lot size. The first five endurance test lots shall each consist of 200 machineguns or a month's production, whichever is smaller.

When five successive lots meet the endurance requirements, the lot size shall be increased to 500 machineguns or a month's production, whichever is smaller.

When five successive lots of the increased size have met the endurance requirements, the lot size shall be further increased to 1,000 machineguns or a month's production, whichever is smaller. If rejection of a lot occurs at any time, the next smaller test lot size criteria shall be reinstated and the above procedure repeated in returning to the larger lot size.

4.4.3.5.2 Procedure. One machinegun selected by the Government representative from each endurance test lot shall be tested by the contractor for endurance using the test method specified in 4.5.8. The contractor shall provide replacement parts as required to complete the test at no additional cost to the Government. If the endurance requirements are not met, the represented lot shall be rejected subject to retest or reconditioning and further test as a reconditioned lot. An endurance retest of two other machineguns from the same lot shall be made without reconditioning the represented lot, unless in the opinion of the Government representative, the failure indicates serious defects in the item, in which case retest shall be made only when authorized by the procuring agency. Failure of either machinegun in the retest to meet the requirements shall cause rejection of the represented lot subject to reconditioning and further testing as a reconditioned lot. Prior to submission of a lot of machineguns as a reconditioned lot, the cause of failure shall be determined and contractor correction shall be effected on all machineguns in the lot. Sample size and test methods for reconditioned lots shall be the same as for retest.

4.4.3.6 Component parts and concurrent repair parts testing. Raw material testing, part testing and certification shall be performed in accordance with the criteria specified in the contract (see 6.1). This will include chemical analysis and physical tests of materials, and tests of protective finish, heat treatment, bonding, and function of parts as applicable. The contractor shall accomplish these tests prior to assembly of parts into the end item.

4.4.3.7 Packaging testing.

4.4.3.7.1 Machineguns.

4.4.3.7.1.1 The contractor shall furnish the Government representative with certification that the packaging materials conform to the applicable packaging data sheets and specification.

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4.4.3.7.1.2 Determination of cleanliness. The contractor shall test items from each inspection lot for cleanliness using the test methods specified in 4.5.9.1. Sampling shall be in accordance with MIL-P-116.

4.4.3.7.1.3 Heat-sealed seam and vacuum retention. The contractor shall test level A unit packages from each inspection lot for heat seal and vacuum retention using the test methods specified in 4.5.9.2 and 4.5.9.3 respectively. Sampling shall be in accordance with MIL-P-116.

4.4.3.7.2 Repair parts. Testing of packaging of repair parts shall be performed in accordance with the criteria specified in the contract (see 6.1).

4.4.4 Inspection equipment.

4.4.4.1 Unless otherwise specified in procurement documents (see 6.1), responsibility for acquisition, maintenance and disposition of measuring and testing equipment prescribed on lists contained on the Index of Inspection Equipment Lists, Drawing IEL7274545, and for all other inspection equipment required to perform inspection prescribed by applicable specifications, shall be in accordance with MIL-I-45607.

4.4.4.2 Ammunition and links (see 6.1).

4.4.4.2.1 Ammunition. Unless otherwise specified in procurement documents, Government standard 7.62mm, M60 high-pressure test cartridges shall be used for the high-pressure resistance test; M59 or M80 ball cartridges shall be used for all other firing tests; and dummy-inert cartridges shall be used as required in the functioning firing test.

4.4.4.2.2 Links. Government standard 7.62mm, M13 links shall be used for linking ammunition required for firing tests.

4.5 Test methods.

4.5.1 Headspace test. Each machinegun with both its assigned and spare barrel assembly with bipod assembly shall be gaged for headspace requirement (see 3.4.1) after proof firing, prior to acceptance, in accordance with instructions specified on Drawing B7274136 using the inspection equipment conforming to Drawing D7274515 and F7274459.

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4.5.2 Firing pin indent test. Each sample machinegun with both its assigned and spare barrel assembly with bipod assembly shall be tested for firing pin indent requirement (see 3.4.2) using the inspection equipment in accordance with Drawings D7274381 and C7318984. The machinegun shall be cocked and then held in a horizontal position with the cover assembly opened. The holding fixture containing the copper compression cylinder shall be inserted into the barrel chamber, the cover closed, and the trigger pulled to release the bolt and indent the copper cylinder. The holding fixture shall be removed from the machinegun and the depth of the indent in the copper cylinder computed by measuring the distance from the original surface of the copper cylinder (before indentation) to the bottom of the firing pin impression. If any firing pin indent is not within the requirements, three more impressions shall be taken and the average depth of the three indents of each test shall be within the requirements. All firing pin indent impressions shall not be off center more than one-half the diameter of the firing pin point as evidenced by visual examination.

4.5.3 Trigger pull test. Machineguns shall be tested for trigger pull requirement (see 3.4.3) using the inspection equipment in accordance with Drawing C7796424. The machinegun shall be cocked and the safety shall be in the "fire" position. The load shall then be gradually applied to the trigger in the direction specified on the applicable drawing. The trigger pull shall also be tested for creep by applying pressure manually to the trigger at a uniform rate of increase over a period of not less than 3 seconds.

4.5.4 Interchange of parts.

4.5.4.1 In plant.

4.5.4.1.1 Machineguns. Machineguns shall be tested for interchange of parts (see 3.5) by disassembling and then reassembling parts using the parts and prearranged system prescribed below. Interchange of parts shall be accomplished by dividing the parts of each machinegun into 10 groups of nonmating parts as shown below and distributing the groups into 10 different trays until each tray contains a complete machinegun. Groups of parts from machinegun number 1 shall be taken in order and placed in trays 1 through 10; groups of parts from machinegun number 2 shall be taken in order and placed in trays 2 through 10 to 1; groups of parts from machinegun number 2 shall be taken in order and placed in trays 2 through 10 to 1; groups of parts from machinegun number 3 shall be taken in order and placed in trays 3 through 10 to 2, etc. Commercial parts such as screws, nuts, washers and pins shall be placed in the same tray as their mating or associate part. Any commercial part rendered unserviceable by disassembly shall be replaced without penalty to the interchangeability test. The machineguns shall be reassembled using only those parts which are in the same tray.

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Groups of Nonmating Parts

Group I

Actuator assembly, cam (7269063)
 Barrel assembly w/bipod assembly
 (7269027)(with gas cylinder
 extension, nut, plug, and
 lockwashers removed)
 Bearing, firing pin (7269065)
 Catch, forearm (7269180)
 Clip, spring lever (7269146)

Group II

Cam assembly, feed (11699814)
 Extension, gas cylinder (7269030)
 Plunger, safety (7269206)
 Receiver assembly (11686308)
 Spring, catch, forearm (7269187)

Group III

Extractor (7790907)
 Guide assembly, driving spring
 (7269199)
 Handle assembly, cocking (7791621)
 Housing assembly, cover (7269118)
 Housing assembly, trigger (7269203)
 Spring, helical, torsion (11686315)
 (used with feed lever assembly -
 7269119)

Group IV

Rod assembly, operating (11686309)
 Shaft, cartridge guide (11010152)
 Shaft, cartridge pawl (7790724)
 Spring, firing pin (7269087)
 Spring, helical, compression
 (7269086)(used with extractor
 plunger - 7269083)

Group V

Buffer assembly (11010518)
 Guide, cartridge, front (7269116)
 Guide, cocking handle (11010155)
 Latch, hinge pin (7269243)
 Lever, feed (7269145)
 Nut, gas cylinder (7269031)
 Spring, helical, compression
 (7269211)(used with sear
 plunger - 7269207)

Group VI

Forearm assembly (11010430) with
 catch, pin, and spring removed)
 Bandolier, Hanger Assembly (8448414)
 Pin, hinge cover (7269247)
 Plunger, extractor (7269083)
 Sear (7269209)
 Spring, driving (7269303)

Group VII

Guide, cartridge, rear (7269117)
 Pawl assembly, feed (7269120)
 Pawl, cartridge retainer (7269332)
 Pin, catch forearm (7269184)
 Pin, firing (11010376)
 Pin, retaining (7269205)
 Spring, helical, compression
 (11010197)(used with barrel
 lock - 11010184)

Group VIII

Bolt (11010358)
 Plunger, sear (7269207)
 Safety (7269415)
 Spring, helical, torsion (7269335)
 (used with cartridge feed tray
 assembly - 8448415)
 Spring lock, retaining pin (7792398)
 Stock assembly, butt (11686711)

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Group IX

Lock, barrel (11010184)
 Pin, straight, headless (7792920)
 (used with bolt plug assembly -
 7791523)
 Pin, shoulder, headed (7269204)
 (used with trigger assembly -
 7269212)
 Piston, gas (7791247)
 Plug assembly, bolt (7791523)
 Plug, gas cylinder (7792093)

Group X

Frame assembly, cartridge tray
 (7792097)
 Ring, retaining (11010377)(used
 with barrel lock - 11010184)
 Spring, helical, compression
 (7269210)(used with safety
 plunger - 7269206)
 Spring, helical, torsion
 (7269301)(used with cover
 assembly - 7269114)
 Trigger assembly (7269212)
 Washer, lock (7269035)
 Yoke, buffer retaining (11699786)

4.5.4.1.2 Concurrent repair parts. Concurrent repair parts shall be tested for interchangeability requirement (see 3.3.18) by disassembling two machineguns, previously tested in 4.4.3.4.1.1, as necessary and then reassembling them using the concurrent repair parts. No hand refinement of parts will be allowed, and the machineguns shall operate and function properly. This test may be performed independently of the machinegun interchangeability test specified in 4.4.3.4.1.1 and at more frequent intervals using accepted machineguns taken from current production.

4.5.4.2 Interplant. Machineguns to be subjected to the interplant interchangeability test shall be given preliminary hand functioning to assure proper operation before parts are disassembled from the machinegun. Machineguns shall be interchanged in a manner similar to the detailed plan in 4.5.4.1.1 except that parts shall be divided into six groups and, that when disassembling, every other machinegun used shall be one produced by a different manufacturer. The machineguns shall be tested for and shall comply with the requirements for headspace, firing pin indent, trigger pull, functioning, and targeting and accuracy before and after interchange of parts using the test methods specified in 4.5.1, 4.5.2, 4.5.3, 4.5.6, and 4.5.7 respectively. Parts shall be identified with their manufacturer throughout the test. Before machineguns are returned to the contractors, the original parts shall be reassembled to their respective machineguns and the machineguns given a hand functioning test to assure proper operation.

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4.5.5 High-pressure resistance test. Machineguns shall be tested for high-pressure resistance requirement (see 3.4.4) by firing one high-pressure test cartridge (see 4.4.4.2.1) through its assigned barrel assembly with bipod assembly. Machineguns shall be tested using the firing fixture conforming to Drawing F7273925. Each tube assembly shall have been proof fired and magnetic particle inspected in accordance with the applicable drawing before assembly to the machinegun for this test. Bolts and assigned barrel assemblies to be assembled into production machineguns shall be proof fired only as part of the completed machineguns and magnetic particle inspected and marked in accordance with the applicable drawings and other applicable documents. Bolts and barrel assemblies to be used as repair parts and spare barrel assemblies shall be proof fired independently of the production machineguns and magnetic particle inspected and marked in accordance with the applicable drawing and other applicable documents. After proof firing, machineguns shall be examined for cracks, deformations, and other evidence of damage, and cartridge cases shall be visually examined for bulges, splits, rings, and other defects caused by defective barrels. Proof marks shall be applied as indicated on the applicable drawings on machineguns that have passed this test.

4.5.6 Functioning firing test.

4.5.6.1 Machineguns shall be tested for functioning requirement (see 3.4.5) in accordance with the schedule specified in Table II. The machineguns shall be tested using the firing fixture conforming to Drawing F7273925. For the first 500 machineguns, the ammunition shall be linked together in 100 round belts with a dummy cartridge separating each 50 rounds, and for all other machineguns, the ammunition shall be linked together in 100 round belts with a dummy cartridge separating each 20 rounds (see 4.4.4.2). The belts of ammunition shall hang unsupported vertically from the firing fixture feed tray for a distance of not less than 4 feet (see Drawing C7273911).

4.5.6.2 The sample machineguns shall be tested for functioning requirement (see 3.4.5) using the firing fixture specified in 4.5.6.1 and using the magazine attached to the machinegun. Firing shall be accomplished using either the assigned or spare barrel assembly with bipod assembly. The magazine shall be loaded with a cartoned 100 round belt of ammunition having a dummy cartridge separating each 50 rounds (see 4.4.4.2). The first 50 rounds shall be fired in interrupted bursts (see note 1 of Table II) and the next 50 rounds shall be fired in one continuous burst.

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Table II. Functioning Firing Test Schedule

	First 500 machine- guns	All other machine- guns	Type of firing
First barrel	50 rounds	20 rounds	Interrupted bursts ¹
	50 rounds	20 rounds	One continuous burst ²
Second barrel (spare)	50 rounds	20 rounds	Interrupted bursts ¹
	50 rounds	20 rounds	One continuous burst ²

¹The trigger shall be intentionally released to stop firing at least five times during the interrupted burst firing.

²Rate of fire shall be measured and recorded on every tenth machinegun during the one continuous burst firing of each barrel using a timer gage conforming to Drawing D7273920. Failure of any sample machinegun to meet the cyclic rate of fire requirement shall be cause for measurement of the cyclic rate of fire on the other nine machineguns represented.

4.5.7 Targeting and accuracy firing test.

4.5.7.1 In lieu of the 100 yard range specified in 3.4.6, machineguns may be fired at a range of not less than 25 meters with suitable correlations in the accuracy and targeting requirements as indicated on the targeting and accuracy diagram, Drawing C7269214, and as approved by the contracting officer (see 4.4.3.1). Each machinegun shall be tested with both its assigned and spare barrel assembly with bipod assembly with the same sight setting for compliance with the targeting and accuracy requirements of 3.3.21. The ammunition and links shall be in accordance with 4.4.4.2.

4.5.7.2 Machineguns shall be tested using the test fixture conforming to Drawing F7273907. With the rear sight set at zero windage and the elevation scale set so that the scale retaining screw is approximately at the midpoint in the slot, the sight aperture slide shall be brought to the elevation setting indicated on the targeting and accuracy diagram. With the sights alined at 6 o'clock on the sighting image of the targeting and accuracy diagram, a 10 round burst shall be fired for the targeting and accuracy requirements. The barrel assembly with bipod assembly shall be replaced by the spare barrel assembly with bipod assembly and with a 6 o'clock hold on the sighting image of a new target a 10 round burst shall be fired for the targeting and accuracy requirements. Adjustment of the sights may be made within the limitations of 4.5.7.3 to bring the two barrels within the targeting requirements with the same sight setting. A 10 round warmup burst is allowable when testing each barrel assembly with bipod assembly.

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4.5.7.3 Adjustment to the rear sight shall not cause overhanging of the rear sight base. Vertical adjustment shall be made by movement of the adjustable elevation scale and, after adjustment, determination shall be made that the required additional adjustment is available (see 3.4.6). Filing of the top of the front sight blade shall be allowed to correct for vertical deviation provided that resulting bright areas are covered with an approved touchup paint.

4.5.7.4 Upon satisfactory completion of the targeting and accuracy firing test, the rear sight base shall be staked in place and the adjustable elevation scale shall be set at the correct scale graduation.

4.5.8 Endurance test.

4.5.8.1 Testing of machineguns for endurance requirements (see 3.4.7) shall be accomplished with the machineguns held in a firing fixture conforming to Drawing F7273925.

4.5.8.2 A total of 10,000 rounds shall be fired in the initial test machinegun from each test lot regardless of the number of malfunctions or unserviceable parts requiring replacement in order to complete the test.

4.5.8.3 Firing shall be accomplished using 100 round belts. Every other belt shall be fired in interrupted bursts with at least 10 intentional interruptions in firing. All other belts shall be fired in one continuous burst. One barrel assembly with bipod assembly shall be used throughout the entire test. For the first half of the endurance test, the belts of ammunition shall hang unsupported vertically from the firing fixture feed tray for a distance of not less than 4 feet (see Drawing C7273911); and the second half of the test shall be fired using the bandolier loaded with a cartoned 100 round belt, attached to the machinegun. The ammunition and links shall be in accordance with 4.4.4.2.

4.5.8.4 The machinegun shall be cooled to ambient temperature after each 200 round series using cooling aids other than water. The cyclic rate of fire shall be measured and recorded on each fifth series. It shall be permissible to clean and oil the machinegun at intervals of not less than 2,000 rounds. At the close of each day's firing, the machinegun shall be protected against corrosion. No parts shall be altered and only parts broken or worn to the extent that they are unserviceable shall be replaced.

4.5.8.5 Complete accurate records shall be kept for each endurance test, showing each malfunction and part replacement including the number of the round at which each occurred and corrective action taken.

4.5.8.6 At the completion of the endurance test, machineguns shall be disposed of as specified in the contract (see 6.1).

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4.5.9 Packaging tests.

4.5.9.1 Determination of cleanliness. The applicable surfaces (except for barrel bore and chamber) of each sample unit shall be subjected to the determination of cleanliness test in accordance with MIL-P-116, except that the wipe test shall not be applicable to parts with black oxide or anodized protective coatings. The barrel bores and chambers shall be wipe tested for cleanliness using clean white bore cleaning swabs, and the degree of cleanliness shall be verified by comparison of the test swabs with standard swab samples furnished by the contracting officer.

4.5.9.2 Heat-sealed seam. The level A sample unit packages shall be subjected to the heat seal test specified in MIL-P-116.

4.5.9.3 Vacuum retention. A sufficient vacuum shall be drawn to cause the flexible barrier to cling snugly to the enclosed item. Care shall be exercised to insure that an excessive amount of vacuum is not applied which might cause puncture or rupture of the barrier. Without releasing the vacuum, the final opening in the barrier shall be sealed.

4.5.9.3.1 Interpretation of results. After remaining undisturbed at room temperature for 2 hours, the barrier shall be examined to determine whether it is still taut and retracts against the item when drawn away and quickly released.

5. PREPARATION FOR DELIVERY

5.1 Pilot pack. A pilot pack consisting of a complete and packed unit, shall be packaged and packed in accordance with Packaging Data Sheet P8413999 to the level of protection specified in the contract (see 6.1) and packed level C shall be forwarded as specified in 3.1.

5.2 Preservation, packaging, packing and marking. Machineguns with equipment shall be preserved, unit packaged, packed, and marked in accordance with the requirements of Packaging Data Sheet P8413999.

5.3 Repair parts. Repair parts shall be prepared for delivery in accordance with the applicable packaging data sheets as specified in the contract (see 6.1).

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6. NOTES

6.1 Ordering data. Procurement documents should specify the following:

- a. Title, number, and date of this specification.
- b. List of drawings and specifications pertinent to the machine-gun, showing applicable revision dates.
- c. Examination criteria not specified herein (see 4.4.2.1, 4.4.2.3.2 and 4.4.3.7.2).
- d. Index of inspection equipment lists pertinent to the machine-gun, showing applicable revision dates.
- e. That packages opened for examination shall be repackaged by the contractor at the contractor's expense.
- f. Disposition of tested machineguns (see 4.5.8.6).
- g. Shipping instructions for first article and pilot pack (see 3.1 and 5.1).
- h. Selection of applicable levels of preservation, packaging, and packing.
- i. Packaging instructions for repair parts (see 5.3).
- j. Place of final inspection and acceptance (see Notes in MIL-W-13855).
- k. List of acceptance inspection equipment to be furnished the contractor (see 4.4.1) and responsibilities for other Government property to be furnished the contractor.
- l. Responsibilities for furnishing ammunition and links (see 4.4.4.2).
- m. Responsibility for test firing facilities and operating procedures (see 6.3).
- n. Shipping instructions for machineguns when an interplant interchangeability test is required (see 4.4.3.4.2).
- o. Procedures and methods for demilitarizing and disposing of rejected material.
- p. Disposition of Government furnished property.

6.2 Test firing facilities and operating procedures should be designed by the contractor in conformance with local, state, and federal regulations. They should be suitable for carrying out prescribed firing tests and insure the safety of operating and visiting personnel. Copies of these contractor designs should be forwarded to the contracting officer. Government facilities may be viewed upon application to the contracting officer.

6.3 When action by a testing agency is required, work programing will be effected with the testing agency at the earliest practicable date.

6.4 To avoid delay in test firing, the Government representative should maintain a minimum of 2 months' supply of ammunition as determined by anticipated firing requirements.

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6.5 Contract data requirements. Reports of the results of final examination and functioning firing, targeting and accuracy, endurance, and interchangeability tests shall be specified for delivery on the DD Form 1423 included in the contract.

6.6 When warranted, the contract should specify the application of MIL-Q-9858 or MIL-I-45208, as appropriate, on the Management Control Systems Summary List, DD Form 1660.

6.7 Unless otherwise specified (see 6.1 k), the contract should specify the application of MIL-I-45607 and MIL-C-45662 on the Management Control Summary List, DD Form 1660.

Custodians:
Army - WC
Navy - OS
Air Force - 84

Preparing activity:
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SPECIFICATION ANALYSIS SHEET		Form Approved Budget Bureau No. 22-R255
INSTRUCTIONS: This sheet is to be filled out by personnel, either Government or contractor, involved in the use of the specification in procurement of products for ultimate use by the Department of Defense. This sheet is provided for obtaining information on the use of this specification which will insure that suitable products can be procured with a minimum amount of delay and at the least cost. Comments and the return of this form will be appreciated. Fold on lines on reverse side, staple in corner, and send to preparing activity. Comments and suggestions submitted on this form do not constitute or imply authorization to waive any portion of the referenced document(s) or serve to amend contractual requirements.		
SPECIFICATION		
ORGANIZATION		
CITY AND STATE	CONTRACT NUMBER	
MATERIAL PROCURED UNDER A <input type="checkbox"/> DIRECT GOVERNMENT CONTRACT <input type="checkbox"/> SUBCONTRACT		
1. HAS ANY PART OF THE SPECIFICATION CREATED PROBLEMS OR REQUIRED INTERPRETATION IN PROCUREMENT USE? A. GIVE PARAGRAPH NUMBER AND WORDING.		
B. RECOMMENDATIONS FOR CORRECTING THE DEFICIENCIES		
2. COMMENTS ON ANY SPECIFICATION REQUIREMENT CONSIDERED TOO RIGID		
3. IS THE SPECIFICATION RESTRICTIVE? <input type="checkbox"/> YES <input type="checkbox"/> NO (If "yes", in what way?)		
4. REMARKS (Attach any pertinent data which may be of use in improving this specification. If there are additional papers, attach to them and place both in an envelope addressed to preparing activity)		
SUBMITTED BY (Printed or typed name and activity - Optional)		DATE

DD FORM 1426
1 JAN 60

REPLACES EDITION OF 1 OCT 64 WHICH MAY BE USED.