

INCH-POUND

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SUPERSEDING
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MILITARY SPECIFICATION

FEEDER, DELINKING, AIRCRAFT MACHINE GUN: MAU-56/A

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

1. SCOPE

1.1 Scope. This specification covers one type of machine gun driven feed mechanism for ammunition belted with M13 links for use on the 7.62mm, M134 (GAU-2B/A), machine gun. The feeder pulls the link-belted ammunition, strips the ammunition from the links, ejects the empty links, and feeds the delinked ammunition into the machine gun. The feeder includes an electrically operated mechanism for clearing ammunition from the feeder sprocket prior to the transfer of ammunition to the machine gun when the machine gun trigger is released.

2. APPLICABLE DOCUMENTS

2.1 Government documents.

2.1.1 Specifications, standards and handbooks. The following specifications, standards, and handbooks form a part of this document 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 there to cited in the solicitation (See 6.2).

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: commander, U.S. Army ARDEC, ATTN: SMCAR-BAC-S, Picatinny Arsenal, New Jersey 07806-5000 by using the Standardization Document Improvement Proposal (DO Form 1426) appearing at the end of this document or by letter.

AMSC N/A

FSC 1005

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SPECIFICATIONS

MILITARY

- MIL-Q-9858 - Quality Program Requirements
- MIL-W-13855 - Weapons, Small Arms and Aircraft Armament Subsystems, General Specification for
- MIL-P-14232 - Parts, Equipment and Tools for Army Material, Packaging and Packing of
- MIL-I-45208 - Inspection System Requirements
- MIL-I-45607 - Inspection Equipment, Acquisition, Maintenance and Disposition of
- MIL-L-46150 - Lubricant, Semi-Fluid: Low Friction (Automatic Weapons)
- MIL-W-63150 - Weapons and Support Material, Standard Quality Assurance Provisions for
- MIL-A-70625 - Automated Acceptance Inspection Equipment Design, Testing and Approval, of

STANDARDS

MILITARY

- MIL-STD-109 - Quality Assurance Terms and Definitions
- MIL-STD-202 - Test Methods for Electronics and Electrical Component Parts
- MIL-STD-45662-Calibration Systems Requirements.

(Unless otherwise indicated, copies of federal and military specifications, standards, and handbooks are available from DODSSP-Customer Service, Standardization Documents Order Desk, 700 Robbins Avenue, Bldg. 4D, Philadelphia, PA 19111-5094).

2.1.2 Other Government documents, drawings and publications. The following other Government documents, drawings, and publications form a part of this document to the extent specified herein. Unless otherwise specified, the issues are those cited in the solicitation.

DRAWINGS (see 6.6)

U.S. ARMY ARMAMENT RESEARCH AND DEVELOPMENT CENTER (ARDC)

- 11701120 - Feeder, Delinking, Aircraft Machine gun, MAU-561A

(Product drawings referenced in this specification form a part of 11701120)

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PUBLICATIONS

U.S Army Weapons Command

11701120 - Packaging Data Sheet for Feeder, Delinking,
Aircraft Machine gun, MAU-56/A
IEL 11701120 - Index of Inspection Equipment Lists

(Acceptance inspection equipment drawings referenced in this specification form a part of IEL 11701120)

(Copies of specifications, standards, handbooks and Publications required by manufacturers in connection with specific acquisition functions should be obtained from the contracting activity or as directed by the contracting officer.)

2.2 Order of precedence. In the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained. (See contract provisions for additional precedence criteria).

3. REQUIREMENTS

3.1 Materials. Materials shall be in accordance with the applicable drawings and specifications.

3.2 Components and assemblies. The components and assemblies shall comply with all requirements specified on Drawing 11701120, all associated drawings, and with all requirements specified in applicable specifications and drawings.

3.3 First Article. When specified in the contract or purchase order (see 6.2), a sample shall be subjected to first article inspection in accordance with the technical provisions herein. Unless otherwise specified, the first article shall include the pilot pack (see 5.1).

3.4 Design. Feeders and parts shall conform to the design specified herein, on Drawing 11701120 and drawings applicable thereto, and shall be in accordance with the applicable design provisions of MIL-w-13855.

3.4.1 Cam guide. The cam guide shall be securely retained in the feeder housing by the screw so that there shall be no relative movement. The cam guide shall guide the cartridges that have been stripped from the links by the push rods to the feeder sprocket when the feeder is operated.

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3.4.2 Clearing guide and solenoid group.

3.4.2.1 Clearing guide. The clearing guide shall rotate through its full range of travel between the two spring pins on the feeder housing, without binding.

3.4.2.2 Clearing guide spring. The clearing guide spring shall be securely retained on the feeder housing by the screws and shall retain the clearing guide in position in the slots of the feeder housing.

3.4.2.3 Link and pivot arm. The link and pivot arm shall be attached to the solenoid plunger, feeder housing, and clearing guide by the spring pins and when the solenoid plunger is actuated, the link and pivot arm shall rotate on the spring pins in the clearing guide and feeder housing without binding.

3.4.2.4 Solenoid. The solenoid shall be securely attached to the feeder housing by the screws so that there shall be no relative movement. The solenoid plunger shall move through its full range of travel without binding and shall be returned to and held in the extended position by spring action. Depression of the solenoid plunger shall cause rotational movement of the clearing guide, by action of the link and pivot arm, moving the clearing guide into the feed position. Releasing the solenoid plunger shall allow the clearing guide to rotate into the clearing position.

3.4.3 Entrance guide, link guide, and nose guide. The entrance guide, link guide, and nose guide shall be securely attached to the feeder housing by the screws. There shall be no relative movement of these parts.

3.4.4 Feeder cam housing and insert. The feeder cam housing shall be securely attached to the feeder housing by the screws and the insert shall be securely attached to the feeder cam housing by the screws. There shall be no relative movement of these parts.

3.4.5 Feeder guide. The feeder guide shall be securely retained on the feeder housing by the screws so that there shall be no relative movement.

3.4.6 Feeder shaft group. The feeder gear, stripper sleeve and pin assembly, push rod guide assembly, and feeder sprocket shall be securely retained on the feeder shaft by the spring pins. The spring pin retaining the feeder gear to the feeder

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shaft shall be retained in the feeder gear by the staked pin spring as specified on the applicable drawing. There shall be no relative movement of these parts shall rotate in the bearings in the feeder cam housing and the forward guide plate without binding.

3.4.7 Forward guide and bearing assembly plate. The forward guide and bearing assembly plate shall be securely retained on the feeder housing by the screws so that there shall be no relative movement. The flanged bearing shall be a press fit in the forward guide plate so that there shall be no relative movement of the bearing in the plate.

3.4.8 Identification plate. The identification plate shall be securely attached to the feeder housing by the drive screws so that there shall be no relative movement.

3.4.9 Push rod assemblies and push rod rollers. The push rod assemblies shall move through their full range of travel in the feeder cam housing, push rod guide assembly, and feeder gear without binding when the feeder gear and feeder shaft are rotated. The push rod pins shall be a press fit in the push rods and the push rod rollers shall rotate on the pins without binding. The push rod assemblies shall strip cartridges from the links and position the stripped cartridges into the stripper sleeve and pin assembly and the cam guide when the feeder is operated.

3.4.10 Round direction plate. The round direction plate shall be securely attached to the feeder housing by adhesive stated on Dwg 11701125 so that there shall be no relative movement.

3.4.11 Timing pin and button. The button shall be securely retained on the timing pin by the spring pin. The timing pin shall move through its full range of travel without binding and shall be returned to and held in the extended position by action of the spring.

3.4.12 Lubrication. The push rods and the gear teeth shall be coated with lubricating oil conforming to MIL-L-46150. All other surfaces shall be coated with preservative oil specified on the applicable drawings. The ball bearing shall be protected against contamination by cleaning solvent during cleaning operations.

3.4.13 Timing. With the timing pin engaged in each of the seven timing positions, the dimensional relationship of the feeder sprocket teeth to the feeder gear shall be within the limits specified on the applicable drawings.

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3.4.14 Torque. The torque required to manually start rotation of the feeder shaft without ammunition shall be determined for each feeder.

3.4.15 Solenoid dielectric withstanding voltage. Solenoid shall withstand 590 to 600 volts root mean square at a frequency of 50 to 60 Hertz (Hz) for one second without disruptive discharge or deterioration. Testing shall be as specified in 4.4.3.1, 4.5.1 and Method 301 of MIL-STD-202.

3.4.16 Solenoid operation. The solenoid shall actuate the clearing guide and position the clearing guide into the feed position when 25 volts direct current (vdc) is applied to the solenoid and when the solenoid is de-energized it shall allow the clearing guide to return to the clearing position under spring action of the solenoid plunger. Testing shall be as specified in 4.4.3.1 and 4.5.2.

3.4.17 Functioning. The feeder shall operate without stoppage or breakage of parts attributable to the feeder. Testing shall be as specified in 4.4.3.1 and 4.5.3. The feeder shall completely strip all rounds from the links, shall feed the stripped rounds into the machine gun or approved test equipment simulating the machine gun, shall eject the empty links from the feeder, and perform its cleaning function. Links may remain in the exit chute after firing.

3.4.18 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.) Feeders and repair parts shall be capable of meeting the interchangeability tests specified in 4.4.3.2 and 4.5.4.

3.4.19 Endurance. Feeders shall be capable of withstanding an endurance test of 30,000 rounds with at least 200 clearing operations without functioning failures (see 3.4.17), or no more than one clearing malfunction attributable to the feeder and the replacement of shear pins as a result of a malfunction. Testing shall be in accordance with 4.4.3.3 and 4.5.5.

3.5 Marking. Each feeder shall be marked in accordance with the applicable drawings and MIL-W-13855.

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

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4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless specified in the contract or purchase order, the contractor is responsible for the performance if all inspection requirements (examinations and tests) as Specified herein. Except as otherwise specified in the contract or purchase order, the contractor may use his own or any other facilities suitable for the performance of 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 ensure supplies and services conform to prescribed requirements

4.1.1 Responsibility for compliance. All items shall meet all requirements of Sections 3 and 5. The inspection set forth in this specification shall become a part of the contractor's overall inspection system or quality program. The absence of any inspection requirements in the specification shall not relieve the contractor of the responsibility of ensuring that all products or supplies submitted to the Government for acceptance comply with all requirements of the contract. Sampling inspection, as part of manufacturing operations, is an acceptable practice to ascertain conformance to requirements, however, this does not authorize submission of known-defective material, either indicated or actual, nor does it commit the Government to accept defective material.

4.1.2 General provisions. Unless otherwise specified herein, the provisions of MIL-W-13855 apply and form a part of this specification. Reference shall be made to MIL-STD-109 to define-quality assurance terms used herein.

4.2 Classification of inspections. The inspection requirements specified herein are classified as follows:

- a. First article inspection (See 4.3).
- b. Quality conformance inspection (see 4.4).

4.3 First article inspection.

4.3.1 Submission. The contractor shall submit a first article sample as designated by the Contracting Officer for evaluation in accordance with provisions of 4.3.2.

4.3.2 Inspections to be performed. As determined by the Government, the first article assemblies, components and test specimens may be subjected to any or all of the examinations and tests specified in this detail specification and be inspected for

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compliance with any or all requirements of the applicable drawings.

4.3.3 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 inspection upon any failure of an assembly, component or test specimen to comply with any of the requirements.

4.4 Quality conformance inspection.

4.4.1 Inspection lot formation. The term "inspection lot" is defined as a homogeneous collection of units of product from which a representative sample is drawn or which is inspected 100 percent to determine conformance with applicable requirements. Units of product selected for inspection shall represent only the inspection lot from which they are drawn and shall not be construed to represent any prior or subsequent quantities presented for inspection. Homogeneity shall be considered to exist provided the inspection lot has been produced by one manufacturer, in one unchanged process, using the same materials and methods, in accordance with the same drawings, same drawing revisions, same specifications and same specification revisions. All material submitted for inspection in accordance with this specification shall comply with the homogeneity criteria specified herein, regardless of the type of inspection procedure which is being applied to determine conformance with requirements. 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. Feeders shall be assembled from lots of component parts that have met all inspection requirements specified herein. Interchangeability and endurance test lot size shall be as specified in 4.4.3.2.1.1 and 4.4.3.3.1.

4.4.2 Examination.

4.4.2.1 Component Parts and concurrent repair parts. Examination of Components parts and concurrent repair part; shall be performed in accordance with the criteria specified in MIL-W-63150 (see 6.2.d). The contractor's examination of these parts shall be accomplished prior to their assembly into the end item or submission for acceptance as repair parts.

4.4.2.2 Feeders. Visually and manually examine each of the following:

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4.4.2.2.1 Feeder cam housing and insert. Manually examine the feeder cam housing and the insert to determine compliance with 3.4.4.

4.4.2.2.2 Entrance guide, link guide, and nose guide. Manually examine the entrance guide, link guide, and nose guide to determine compliance with 3.4.3.

4.4.2.2.3 Clearing guide and solenoid group.

- a. Manually examine the clearing guide, clearing guide spring link, pivot arm, and solenoid to determine compliance with 3.4.2.1 through 3.4.2.4.
- b. Visually examine the fingers on the clearing guide to assure freedom from burrs, cracks, and mutilations.

4.4.2.2.4 Timing pin and button. Manually examine the timing pin and button to determine compliance with 3.4.11.

4.4.2.2.5 Forward guide and bearing assembly plate.

- a. Manually examine the forward guide and bearing assembly plate to determine compliance with 3.4.7.
- b. Visually examine the cartridge guide on the forward guide plate to assure freedom from burrs, cracks, and mutilations.

4.4.2.2.6 Feeder guide.

- a. Manually examine the feeder guide to determine compliance with 3.4.5.
- b. Visually examine the feeder guide to assure freedom from burrs, cracks, and mutilations.

4.4.2.2.7 Cam guide. Manually examine the cam guide to determine compliance with 3.4.1.

4.4.2.2.8 Feeder shaft group.

- a. Manually examine the feeder gear, stripper sleeve and pin assembly, push rod guide assembly, feeder sprocket, and a feeder shaft to determine compliance with 3.4.6.
- b. Visually examine the sprocket to assure freedom from burrs, cracks, and mutilations.
- c. Visually examine the gear teeth to assure freedom from burrs, cracks, and mutilations.

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d. Visually examine to assure that the spring pin that retains the feeder gear to the feeder shaft is flush or below the surface of the feeder gear (see Dwg. 11701120).

4.4.2.2.9 Push rod assemblies and push rod rollers. Manually rotate the feed gear and feeder shaft to assure-proper function of the push rod assemblies (see 3.4.9).

4.4.2.2.10 Round direction plate. Visually and manually examine the round direction plate to determine compliance with 3.4.10.

4.4.2.2.11 Marking. All markings required by applicable drawings shall be visually examined for clarity and legibility (see 3.5). Visually and manually examine the identification plate to determine compliance with 3.4.8 and to assure that all pertinent data has been applied.

4.4.2.2.12 Lubrication. Visually examine the feeder to assure that all functioning surfaces have been lubricated (see 3.4.12).

4.4.2.2.13 Timing. Feeders shall be examined for the timing requirement (see 3.4.13) using the inspection equipment conforming to Drawing 11702138. The feeder shall be assembled to the timing gage and the feeder sprocket shall be rotated until the timing pin can be engaged in one of the feeder gear timing holes. The gear alignment pin of the gage shall then be depressed between the nearest feeder gear teeth as the timing pin is released. With the feeder sprocket in this position for each of the seven timing positions, the gage shall indicate whether the timing requirement has been met.

4.4.2.2.14 Torque. The torque required to manually start rotation of the feeder shaft without ammunition (see 3.4.14) shall be measured and recorded. The recorded measured values shall be forwarded in accordance with 6.3.

4.4.3 Testing.

4.4.3.1 Solenoid dielectric withstanding voltage, solenoid operation, and functioning testing. The contractor shall test each feeder for solenoid dielectric withstanding voltage solenoid operation and functioning using the test method specified in 4.5.1, 4.5.2, and 4.5.3 respectively. Feeders failing to meet the requirements shall be rejected.

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4.4.3.2 Interchangeability testing4.4.3.2.1 Inplant.

4.4.3.2.1.1 Feeders. The contractor shall test a sample of three feeders selected by the Government representative, from each month's production for interchangeability using the test method specified in 4.5.4.1.1. Feeders taken for interchangeability testing shall have been found satisfactory in all examinations and tests. The three feeders shall be inspected for timing and torque after interchange of parts using the examinations specified in 4.4.2.2.13 and 4.4.2.2.14. In addition, the feeders shall be tested for functioning requirement after interchange of parts using the test method specified in 4.5.3. 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 feeders. Failure in the retest shall cause rejection of the represented lot subject to reconditioning and further test as a reconditioned lot. A sample of six feeders from each retest or reconditioned lot shall be tested using the same procedure described above.

4.4.3.2.1.2 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.

4.4.3.2.2 Interplant. When feeders are manufactured concurrently by more than one contractor each contractor shall forward monthly to the testing agency specified in the contract, three feeders for the interplant interchangeability test specified in 4.5.4.2 (see 6.2). The contractor will be informed of any failure of the feeders to meet prescribed requirements.

4.4.3.3 Endurance testing.

4.4.3.3.1 Lot size. The initial test lot of feeders shall consist of the first month's production. Thereafter, endurance test lots shall each consist of 100 feeders or a month's production, whichever is larger.

4.4.3.3.2 Procedure. One feeder, selected by the Government representative, from each endurance lot shall be tested by the contractor for endurance using the test method

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specified in 4.5.5. 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 feeders 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 any feeder 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 feeders as a reconditioned lot, the cause of failure shall be determined and contractor correction shall be effected on all feeders and parts in production. Sample size and test method for reconditioned lots shall be the same as for retest.

4.4.3.4 Certification. Unless otherwise specified, the contractor shall be responsible for testing necessary to accomplish certification. For each inspection lot of feeders, the contractor shall provide the Government representative with certified statements of compliance with applicable drawings and specifications of the materials and processes specified on Drawing 11701120.

4.4.3.5 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 6.2). 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.

4.4.3.6 Packaging, examination, and testing. Unless otherwise specified (see 6.2), the packaging examination and testing shall be in accordance with MIL-P-14232.

4.4.4 Inspection equipment.

4.4.4.1 Acquisition, maintenance and disposition. Unless otherwise specified, responsibility for acquisition, maintenance and disposition of acceptance inspection and test equipment prescribed on lists contained on Index of Inspection Equipment List, Drawing 11701120, and for all other inspection equipment required to perform inspection prescribed by applicable specifications, shall be in accordance with MIL-I-45607.

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4.4.4.2 Submission of inspection equipment. When specified in the procurement document (See 6.5), Copies of drawings of contractor designed inspection equipment shall be forwarded as specified in the contract.

4.4.4.3 Ammunition and links (see 6.2).

4.4.4.3.1 Ammunition. Unless otherwise specified in procurement documents, Government standard 7.62mm ball cartridges or M172 (less primer) ball, inert loaded, smooth case cartridges shall be used for testing feeders.

4.4.4.3.2 Links. Government standard 7.62mm, M13 links shall be used for linking ammunition.

4.5 Methods of Inspection.

4.5.1 Solenoid dielectric withstanding voltage test
Feeders shall be tested for solenoid dielectric withstanding voltage requirement (see 3.4.15) using a current limited (5 milliamperes maximum) high potential voltage shall be applied for $1.0 \pm .01$ seconds between either coil terminal "B" or "E" (See Dwg. 11701134) and grounded metal parts. High potential test voltages shall be reduced 20 percent for retest of solenoids previously tested at the voltages specified in 3.4.15.

4.5.2 Solenoid operation test. Feeders shall be tested for solenoid operation requirement (see 3.4.16) after completion of the solenoid dielectric withstanding voltage test. A power supply with line and load regulator capability of 10 millivolts (mV) or .03%, recovery time of 100 microseconds maximum and root mean square ripple and noise not exceeding 1.0 mV shall be used to apply 25 ± 0.1 vdc to terminal "B" and "E" of the solenoid (do not energize the solenoid for more than 5 seconds).

4.5.3 Functioning test. Feeders shall be tested for functioning requirement (3.4.17) using M134 (GAU-2B/A) gun, or contractor designed Government approved test equipment which simulates the function of the gun. Two belts of 150 rounds each of linked dummy ammunition shall be used for testing each feeder. The feeder shall be accelerated up to a feeding steady state rate of 4,000 to 4,400 rounds per minute with a maximum acceleration time of .5 seconds from the start of gun rotation to a 4,000 rounds per minute rate of fire. Clearing action shall be initiated at approximately the 50th and 100th round of each belt and power shall be removed from the drive motor $.150 \pm .015$ seconds after the feeder solenoid is de-energized. The feeder solenoid shall not be energized for more than five seconds at any one time. Instrumentation shall be of the contractor's design and shall be such that the steady state rate of the feeder and

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time required to attain the steady state rate is recorded. The instrumentation shall also record the time delay ($.150 \pm .01s$) between the removal of the feeder solenoid voltage and the removal of the drive motor voltage. There shall be a minimum of nine rounds ejected through the clearing port of the feeder from the time the feeder solenoid is de-energized and voltage is removed from the drive motor, indicating proper clearing action takes place.

4.5.4 Interchange of parts.

4.5.4.1 In plant.

4.5.4.1.1 Feeders. Feeders shall be tested for interchange of parts (see 3.4.18) by disassembling and then reassembling parts using the parts and pre-arranged system specified below. Interchange of parts shall be accomplished by dividing the parts of each feeder into three groups of non-mating parts as shown below and distributing the groups into three different trays until each tray contains parts for a complete feeders. Groups of parts from the first feeder shall be taken in order and placed in trays 1 through 3; groups of parts from the second feeder shall be taken in order and placed in trays 2, 3, and 1; groups of parts from the third feeder shall be taken in order and placed in trays 3, 1, and 2. Commercial parts such as screws, spring pins, etc., 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 feeders shall be reassembled using only those parts which are in the same tray.

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Groups of non-mating partsGroup I

Button (11701056)
 Gear, feeder (11701131)
 Guide, clearing (11701140)
 Guide, link (12011713)
 Guide, nose (11686381)
 Housing, feeder cam (11701139)
 Plate, fwd guide & brg assy
 (11701216)
 Solenoid (11701134)

Group II

Bearing, ball (11701116)
 Guide assy., push rod (1170121)
 Housing, feeder (11686378)
 Insert (11701129)
 Link (11701127)
 Roller, push rod (11701122)
 Stripper sleeve & pin assy.
 (11701217)
 Sprocket, feeder (11701130)

Group III

Arm, pivot (11701128)
 Guide, cam (11701137)
 Guide, entrance (11686379)
 Guide, feeder (11701132)
 Pin, timing (11701055)
 Push rod assembly (11701126)
 Shaft, feeder (11701136)
 Spring, clearing (11701124)

4.5.4.1.2 Concurrent repair parts. Concurrent repair parts shall be tested for interchangeability requirement (see 3.4.18) by disassembling two feeders, previously tested in 4.4.3.2.1.1, as necessary and then reassembling them using the concurrent repair parts. No hand refinement of parts will be allowed, and the feeders shall operate and function properly. This test may be performed independently of the feeder interchangeability test specified in 4.4.3.2.1.1, and at more frequent intervals using accepted feeders taken from current production.

4.5.4.2 Interplant. Feeders to be subjected to the interplant interchangeability. test shall be inspected for timing, torque, and functioning using the inspection methods specified in 4.4.2.2.13, 4.4.2.2.14, and 4.5.3 respectively, to assure proper operation before parts are interchanged. Parts shall then be disassembled from the feeder and identified as to manufacturer. Disassembled parts shall be mixed and the feeders shall be reassembled by random selection without altering or hand fitting any part. After assembly, the feeders shall be inspected for timing, torque, and functioning using the inspection methods specified in 4.4.2.2.13, 4.4.2.2.14, and 4.5.3 respectively. Before feeders are returned to the contractors, the original parts shall be reassembled to their respective feeders.

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4.5.5 Endurance test

4.5.5.1 Feeders shall be tested for endurance (see 3.4.19) using the test equipment specified in 4.5.3.

4.5.5.2 Linked ammunition in belts of 150 rounds each (see 4.5.4.3) shall be used. The feeders shall be accelerated up to a feeding steady state rate of 4,000 to 4,400 rounds per minute before the power is removed from the drive and the clearing action is initiated approximately in the middle of each belt. Feeders shall be checked after each 1,500 rounds for correct timing and loosening of parts. All loosened parts shall be tightened and recorded. In addition, the feeders shall be lubricated after each 1,500 rounds and at the end of each day's testing.

4.5.5.3 Endurance tested feeders shall be disposed of as specified in the contract (see 6.2).

5. PACKAGING.

5.1 Pilot pack. A pilot package shall be forwarded in accordance with the contract (see 6.2). Pilot packages shall be packaged to the level of packaging specified in the contract and packed level C in accordance with the requirements of Packaging Data Sheet P11701120.

5.2 Preservation, packaging, packing and marking. Feeders shall be preserved, unit packaged, packed, and marked in accordance with the requirements of Packaging Data Sheet P11701120 for the level of protection specified (see 6.2).

5.3 Repair parts. Repair parts shall be prepared for delivery in accordance with the applicable packaging data sheets specified in the contract (see 6.2).

6. NOTES

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory.)

6.1 Intended use. This specification covers the performance requirements, examinations and tests for one type of machine gun driven feed mechanism for ammunition belted with M13 links for use on the 7.62mm, M134 (GAU-28/A), machine gun.

6.2. Acquisition requirements. Acquisition documents must specify the following:

- a. Title, number and date of this specification.

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- b. Issue of DODISS to be cited in the solicitation, and, if required, the specific issue of individual documents referenced (see 2.1.1).
- c. Requirements for and the number of feeders to be submitted for first article by the contractor (see 3.3 and 4.3).
- d. Criteria for examination of component parts and concurrent repair parts (see 4.4.2.1).
- e. Criteria for performance of testing of component parts and concurrent repair parts (see 4.4.3.5).
- f. Packaging examination and testing if different (see 4.4.3.6).
- g. List of inspection equipment, responsibilities for acquisition, maintenance, disposition of, if other than as specified (see 4.4.4).
- h. Place of final inspection and acceptance (see Notes in MIL-W-13855).
- i. When required shipping instructions for copies of contractor designed inspection equipment (see 4.4.4.2).
- j. Responsibilities for furnishing ammunition and links (see 4.4.4.3).
- k. Shipping instructions for feeder and parts when an interplant interchangeability test is required (see 4.4.3.2.2).
- l. Disposition instructions of endurance tested feeders and parts (see 4.5.5.3).
- m. Procedures and methods for disposition of rejected material.
- n. Disposition of Government furnished property.
- o. That packages opened for examination shall be repackaged by the contractor at the contractor's expense.
- p. Shipping instructions for first article samples and pilot pack (see 3.3 and 5.1).
- q. Selection of applicable levels of preservation, packaging and packing (see 5.2).
- r. Packaging instructions for repair parts (see 5.3).

6.3 Contract data requirement. Monthly reports of the results of final examination, functional testing (see 4.5.3) and torque (see 4.4.2.2.14), shall be specified for delivery on a DD Form 1423 included in the contract.

6.4 Management Control Summary List. (DD Form 1660).

- a. When warranted, the contract shall specify the application of MIL-Q-9858 or MIL-I-45208.
- b. Unless otherwise specified (see 6.2.h), the contract should specify the application of MIL-I-45607 and MIL-STD-45662.

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6.5 Submission of contractor inspection equipment desires for approval. Submit copies of designs as required to: Commander, U.S. Army ARDEC, Attn: SMCAR-QAF-I, Picatinny Arsenal, NJ 07806-5000. This address will be specified on the Contract Data Requirements List, DD Form 1423 in the contract.

6.6 Drawings. Drawings listed in Section 2 of this specification under the heading U.S. Army Armament, Research, Development and Engineering Center (ARDEC) may also include drawings prepared by, and identified as U.S. Army Armament, Research and Development Command (ARRADCOM), Frankford Arsenal, Rock Island Arsenal or Picatinny Arsenal drawings. Technical data originally prepared by these activities is now under cognizance of ARDEC.

6.7 Testing agencies. When action by a testing agency is required, work programming will be affected with a testing agency at the earliest practicable date.

6.8 Supersession data. This specification includes the requirements of Springfield Armory Purchase Description SAPD-289A, Amendment 2, dated 17 December 1966.

6.9 Subject term (Key word) listing.

M134 (GAU-2B/A), 7.62mm Machine Gun
M13 Links

6.10 Changes from previous issue. Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extensiveness of the changes.

Custodian:
Army-AR
Air Force - 84

Preparing activity:
Army-AR
(Project 1005-0817)

STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

INSTRUCTIONS

1. The preparing activity must complete blocks 1, 2, 3, and 8. In block 1, both the document number and revision letter should be given.
2. The submitter of this form must complete blocks 4, 5, 6, and 7.
3. The preparing activity must provide a reply within 30 days from receipt of the form.

NOTE: This form may not be used to request copies of documents, nor to request waivers, or clarification of requirements on current contracts. Comments submitted on this form do not constitute or imply authorization to waive any portion of the referenced document(s) or to amend contractual requirements.

RECOMMEND A CHANGE	1. DOCUMENT NUMBER MIL-F-45598A	2. DOCUMENT DATE (YYMMDD) 20 January 1994
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3. DOCUMENT TITLE
Feeder, Delinking, Aircraft Machine Gun: MAU-56/A

4. NATURE OF CHANGE (Identify paragraph number and include proposed rewrite, if possible. Attach extra sheets if needed.)

5. REASON FOR RECOMMENDATION

6. SUBMITTER

a. NAME (Last, First, Middle Initial)	b. ORGANIZATION	
c. ADDRESS (Include Zip Code)	d. TELEPHONE (Include Area Code) (1) Commercial (2) AUTOVON (If applicable)	7. DATE SUBMITTED (YYMMDD)

8. PREPARING ACTIVITY

a. NAME US Army, ARDEC	b. TELEPHONE (Include Area Code) (1) Commercial 201 724-6626 (2) AUTOVON DSN 880-6626
c. ADDRESS (Include Zip Code) SMCAR-BAC-S Picatinny Arsenal, NJ 07806-5000	IF YOU DO NOT RECEIVE A REPLY WITHIN 45 DAYS, CONTACT: Defense Quality and Standardization Office 5203 Leesburg Pike, Suite 1403, Falls Church, VA 22041-3466 Telephone (703) 756-2340 AUTOVON 289-2340