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MILITARY SPECIFICATION

GUN, SUBMACHINE, CALIBER .45, M3A1

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

1. SCOPE

1.1 This specification covers one type of fully automatic, air-cooled, blowback operated, magazine fed, submachinegun.

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

Military

- MIL-P-116 - Preservation, Methods of
- MIL-I-6868 - Inspection Process, Magnetic Particle
- MIL-W-13855 - Weapons, Small Arms, General Specification for
- MIL-P-14232 - Parts, Equipment and Tools for Army Material, Packaging and Packing of

STANDARDS

Military

- MIL-STD-105 - Sampling Procedures and Tables for Inspection by Attributes
- MIL-STD-109 - Quality Assurance Terms and Definitions

DRAWINGS

Army - (WC)

- D7265648 - Gun, Submachine, Caliber .45, M3A1
- D7319565 - Fixture, Holding

FSC 1005

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PUBLICATIONS

Army (WC)

P7265648 - Packaging Data Sheet for Gun, Submachine,
Caliber .45, M3A1

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

3. REQUIREMENTS

3.1 Initial production samples. Samples of submachine guns and parts representing initial production shall be forwarded to a testing agency designated by the procuring activity (see 6.1). Samples shall be representative of material which has been inspected and determined to be acceptable. One of the packs shall be considered the pilot pack (see 5.3). Upon completion of testing agency inspection, samples may be commercially packaged and returned to the contractor for repackaging in accordance with procurement documents at the contractor's expense. The provisions for production samples will not apply to contracts for continuation orders with the same contractor for the submachine gun or parts being produced by the same manufacturing process.

3.2 Materials and construction. Submachine guns and parts shall conform to the materials, dimensions, tolerance limits, physical properties, degree of surface roughness, and final protective finishes specified on the drawings listed on D7265648, and the materials and construction shall be in accordance with the applicable provisions of MIL-W-13855.

3.2.1 Welding and soldering. Welding and soldering shall be in accordance with the applicable drawings. Welded joints shall show good fusion without burning or undercutting of material and shall be free of cracks and other defects that show poor workmanship.

3.2.2 Staking and riveting. Staking and riveting shall be in accordance with the applicable drawings and shall allow no looseness of parts.

3.3 Design. Submachine guns and parts shall conform to the design specified on the drawings listed on D7265648, and this specification, and shall be in accordance with the applicable provisions of MIL-W-13855:

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3.3.1 Barrel assembly. The barrel bore shall be free of scratches, cracks, seams, pits, rings, and other processing defects, and the lands shall be sharp and well defined. Burrs and sharp edges shall be removed from chamber edges. Slight scratches or marks occurring in a chamber which otherwise meets surface roughness requirements shall be allowed provided they do not cause marks on the case of a high-pressure test cartridge fired in the chamber. The barrel shall be so fabricated that upon being assembled to the receiver, the requirements for accuracy and location of group hereinafter prescribed will be met.

3.3.2 Bolt and guide rod assembly. The bolt shall move freely on the guide rods to its rearward position and shall be returned to the forward position by the drive springs.

3.3.3 Cover assembly. With the bolt in the forward position, the safety lock shall lock the bolt when the cover is closed. With the bolt in the cocked position, the safety lock shall cam the bolt rearward and lock it out of engagement with the sear when the cover is closed. The cover shall be held in the open and closed positions by the cover spring.

3.3.4 Extractor. The extractor shall be securely retained in the bolt and shall properly extract cartridge cases.

3.3.5 Housing with ejector. The housing with ejector shall readily assemble to and disassemble from the receiver and shall retain the magazine catch without interfering with the functioning of the catch. The ejector shall properly eject cartridge cases.

3.3.6 Magazine assembly. The magazine assembly shall fit easily into the receiver without depressing the magazine catch and shall drop out under its own weight when the magazine catch is depressed. The magazine assembly shall be free of burrs, dents, and other imperfections which affect function, serviceability and appearance. The follower shall move freely without binding in the magazine body under spring action.

3.3.7 Magazine catch. The magazine catch shall securely hold 2 loaded magazine in place. When depressed, it shall release the magazine. It shall be returned to the locked position by the magazine catch spring.

3.3.8 Receiver assembly. The receiver assembly shall be free of welding and soldering defects, dents, cracks, burrs, and other mutilations which affect safety, appearance, and proper operation of the weapon. All rivets shall be tight. The spring ratchet shall securely retain the barrel assembly in the locked position.

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3.3.9 Sear. The sear shall firmly engage the bolt when the bolt is in the cocked position and shall release the bolt when the trigger is pulled.

3.3.10 Stock assembly. The stock assembly shall readily assemble to and disassemble from the receiver and shall move from the open to the closed position without binding. It shall release from the closed position without depressing the stock catch. It shall lock in the extended position and shall not release from this position without depressing the stock catch. The stock assembly shall be capable of being used as a tool to remove the barrel from the receiver, and the stock tang shall properly depress the magazine follower to allow loading of ammunition.

3.3.11 Stock catch. The stock catch shall move without binding through its full travel under spring action. It shall properly engage the stock notches in the extended and closed positions.

3.3.12 Trigger assembly. The trigger assembly shall readily assemble to and disassemble from the receiver. It shall move without binding through its full travel and shall be held in the forward position by the trigger spring.

3.3.13 Trigger guard. The trigger guard shall readily assemble to and disassemble from the receiver and shall securely retain the housing with ejector.

3.3.14 Springs. Springs shall meet the requirements specified on the applicable drawings.

3.3.15 Interchangeability. Unless otherwise specified on the drawings, all components and assemblies shall be interchangeable. Preferential assembly of components shall be allowed in normal assembly operations provided that all components are dimensionally acceptable. Submachine guns and spare parts shall be capable of meeting the interchangeability tests prescribed in 4.4.3.

3.3.16 Trigger pull. The trigger pull shall be smooth and free of creep and shall be within 4-1/2 to 7-1/2 pounds. Creep shall be interpreted to mean any perceptible rough movement between the time the slack is taken up and the sear is released, with pressure applied to the trigger at a uniform rate of increase over a period of not less than three seconds.

3.3.17 Primer indent. The primer indent, taken as specified in 4.4.1, shall be .015 inch minimum.

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High-pressure resistance. Submachine guns and spare barrels shall be capable of withstanding the firing of one high-pressure test cartridge without cracks as evidenced by magnetic particle inspection. The chamber and bore dimensions shall be within the limits specified on the applicable drawing after proof firing.

3.3.19 Functioning. Submachine guns and magazines shall function smoothly and properly without malfunctions or unserviceable parts when tested as prescribed in 4.4.5. Rate of fire shall not exceed 450 rounds per minute.

3.3.20 Targeting and accuracy. With the sights alined at six o'clock on a five-inch bull's eye and at a range of feet, four out of five shots shall fall within or cut the edge; and of the bull's-eye to qualify for targeting requirements all shots shall group within or cut the edge of a three-inch circle, or four out of five shots shall be within or cutting the edge of a three-inch circle drawn around the center of impact to qualify for accuracy requirements.

3.3.21 Endurance. Submachine guns and spare bolts shall be capable of withstanding the endurance test as specified in 4.4.7 with not more than the number of malfunctions and unserviceable Components allowed in Table I.

3.4 Marking. Each submarine gun, and each component thereof for which markings are prescribed, shall be clearly marked in accordance with the applicable drawings and MIL-W-13855.

3.5 Workmanship. Workmanship shall be in accordance with the requirements or MIL-W-13855.

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TABLE 1. Malfunctions and Unserviceable Components

Malfunctions ¹	Number permitted in the 5,000-round endurance test
Failure to extract from chamber	0
Failure to eject	4
Failure to feed (other than magazine failure)	2
Magazine fails to feed (dented, burred, or sharp edges)	1
Ruptured cartridge case	0
Mis-fire	1
Pierced primer	1
Failure to close	0
Failure of trigger to release (any cause)	0
Uncontrolled fire	0
Other malfunctions (other than those shown above)	2
<u>Unserviceable components ¹</u>	
Extractor broken or burred	1
Other broken or unserviceable parts	0

¹ When malfunctions are traceable to particular components it is permissible to replace such components and record them as unserviceable subject to limitations of Table I. When it is definitely established by the Government that previously recorded malfunctions are attributable to an unserviceable component, such malfunctions shall not be counted against the submachine gun being tested, provided that they occurred not more than 200 rounds prior to replacement of the unserviceable component. However, such malfunctions shall remain recorded and properly identified. An unserviceable component is one that causes malfunctions or impairs the safety of the weapon.

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, the supplier may utilize his own facilities or any other commercial laboratory acceptable to 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.

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

4.2 Initial production sample inspection. Inspection of initial production samples (see 3.1) and pilot pack (see 5.3) shall be performed at the designated testing agency. Initial production samples and pilot pack shall be subjected to the inspection specified herein and such other inspection as is necessary to determine compliance with the requirements of the contract. The level A and B pilot packs shall be subjected to the free fall drop test specified in MIL-P-116 except that the drop height shall be 21 inches.

4.3 Inspection provisions.

4.3.1 Inspection lot.

4.3.1.1 The lot size for inspection purposes shall consist of one month's production or 500 submachine guns, whichever is less.

4.3.1.2 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.

4.3.2 Examination.

4.3.2.1 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.

4.3.2.2 Submachine guns. Final examination of submachine guns 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. Submachine guns failing to meet the requirements shall be rejected. Each submachine gun shall be examined as specified below.

4.3.2.2.1 Visually examine submachine gun for cleanliness, workmanship, and completeness of manufacture, assembly, finish, and marking (identification, proof firing, and magnetic particle inspection). Manually examine submachine gun for functioning of operating parts and visually examine markings for clarity and legibility. (See 3.2 through 3.3.14.3, 3.4 and 5.2)

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4.3.2.2.2 Magazine assembly. Visually and manually examine the magazine assembly for compliance with 3.3.6 and 3.3.7.

4.3.2.2.3 Stock assembly.

(a) Manually examine the stock assembly for compliance with 3.3.10 and 3.3.11.

(b) Visually examine stock for mutilated or burred cleaning brush threads.

4.3.2.2.4 Barrel assembly.

(a) Visually examine the barrel assemblies for compliance with 3.3.1.

(b) Visually examine barrel assemblies for presence of proper proof and magnetic particle inspection marks. (See Drawing D7265648)

(c) Visually and manually examine barrel retention by spring ratchet for compliance with 3.3.8.

4.3.2.2.5 Receiver assembly.

(a) Visually examine receiver assembly for compliance with 3.3.8.

(b) Visually and manually examine all welding, riveting, or staking on receiver and possible interference with movement of bolt in receiver.

(c) Visually examine receiver for presence of proper proof mark. (See Drawing D7265648).

4.3.2.2.6 Cover assembly. Visually and manually examine the cover assembly for compliance with 3.3.3.

4.3.2.2.7 Extractor.

(a) Manually examine the extractor for compliance with 3.3.4.

(b) Visually examine the extractor claw for deformation or wear.

4.3.2.2.8 Ejector.

(a). Visually and manually examine the ejector for compliance with 3.3.5.

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(b) Manually examine the trigger guard for compliance with 3.3.13.

(c) Visually examine the ejector for burred or deformed tip.

(d) Visually examine the ejector for binding in the bolt groove.

(e) Visually examine for cracked bolt catch face on sear.

4.3.2.2.9 Bolt and guide rod assembly.

(a) Visually and manually examine the bolt and guide rod assembly for compliance with 3.3.2.

(b) Visually examine driving springs and bolt for mutilations or deformations.

(c) Visually and manually examine plate for proper retention by guide rod retaining clip.

4.3.2.2.10 Trigger assembly.

(a) Visually and manually examine the trigger assembly for compliance with 3.3.9 and 3.3.12.

(b) Visually examine the trigger pin for mutilation or deformation.

(c) Visually and manually examine the trigger assembly for proper riveting.

4.3.2.2.11 Submachine guns 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 operations and control the stamps used for such stampings.

4.3.2.3 Packaging and packing. Examination and test of packaging and packing shall be in accordance with MIL-P-14232.

4.3.3 Testing.

4.3.3.1 High-pressure resistance, functioning, and targeting and accuracy firing testing. The contractor shall test each submachine gun for high-pressure resistance, functioning, and targeting and accuracy using the test methods specified in 4.4.5, and 4.4.6 respectively. Submachine guns failing to meet any of the requirements shall be rejected.

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4.3.3.2 Firing pin indent and trigger pull testing. The contractor shall test a sample of 10 submachine guns selected by the Government representative from each inspection lot for firing pin indent and trigger pull using the test methods specified in 4.4.1 and 4.4.2 respectively. Failure of any submachine gun in the sample to meet the requirements shall cause rejection of the represented lot.

4.3.3.3 Ammunition. Ammunition used in all firing tests except the high-pressure test shall be Government standard cartridge ball, caliber .45 ammunition. Government standard caliber .45 high-pressure test ammunition shall be used in the high-pressure test.

4.3.3.4 Machine rests. Unless otherwise specified herein, machine rests approved by the procuring agency shall be used for all firing tests. (See Drawing D7319565)

4.3.3.5 Interchangeability testing.

4.3.3.5.1 In plant.

4.3.3.5.1.1 Submachine guns. Ten submachine guns, with only the assigned barrel assembly, selected by the Government representative from each inspection lot shall be tested by the contractor for interchangeability using the test methods specified in 4.4.3.1.1. Submachine guns 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 submachine guns each month when a record of consistently satisfactory results has been established. The 10 submachine guns shall be tested for and shall comply with the requirements for firing pin indent, and trigger pull before and after interchange of parts, using the test methods specified in 4.4.1, and 4.4.2 respectively. In addition, the submachine guns shall be tested for functioning and targeting and accuracy requirements after interchange of parts using the test methods specified in 4.4.5 and 4.4.6. Hand refinement of parts will be allowed on not more than two submachine guns during interchange of parts provided that no part is altered beyond drawing requirements. No failures shall be allowed in the function firing test and failure of not more than two submachine guns 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 shall be reassembled to the original submachine gun. 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

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reconditioning the lot of submachine guns. 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 submachineguns from each retest or reconditioned lot shall be tested using the same procedure described above except that hand refinement and failure in the accuracy firing test will be allowed on not more than 4 submachine guns.

4.3.3.5.1.2 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 4.4.3.1.2. 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 4.4.3.1.2.

4.3.3.5.2 Interplant. When submachine guns are manufactured concurrently by more than one contractor, each contractor shall forward monthly six submachine guns, for the interplant interchangeability test specified in 4.4.3.2 (see 6.1). The contractor will be informed of any failure of the submachine guns 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.

4.3.3.5.3 Spare parts. On prime contracts for spare parts, 10 parts from each inspection lot shall be tested for interchangeability at the designated testing agency. Failure of parts to meet the requirements of the interchangeability test (see 4.4.3.3) shall be cause for discontinuance of acceptance of material on date of notification. Inspection and acceptance shall not be resumed until the defective condition is corrected by the contractor.

4.3.3.6 Endurance testing.

4.3.3.6.1 Lot size. The first 5 endurance test lots shall each consist of 200 submachine guns or a month's production, whichever is smaller. When 5 successive lots meet the reliability requirements, the lot size shall be increased to 500 submachine guns or a month's production, whichever is smaller. When 5 successive lots of the increased size have met the endurance requirements, the lot size shall be further increased to 1,000 submachine guns 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.

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4.3.3.6.2 Procedure. One submachine gun selected by the Government representative from each endurance test lot shall be tested by the contractor for endurance using the test methods specified in 4.4.8. 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 submachine guns 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 submachine gun 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 submachine guns as a reconditioned lot, the cause of failure shall be determined and contractor correction shall be effected on all submachine guns in the lot. Sample size and test methods for reconditioned lots shall be the same as for retest.

4.3.3.7 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.

4.3.3.8 Packaging testing. Testing of packaging materials shall be in accordance with MIL-F-14232.

4.4 Test methods.

4.4.1 Firing pin indent test. Each sample submachine gun shall be tested for firing pin indent requirements (see 3.3.17) using a compression cylinder holding fixture in accordance with Drawing D7319565. The submachine gun shall be cocked and then held in a horizontal position such that the holding fixtures containing the copper compression cylinder can be inserted into the barrel chamber. The trigger is then pulled to release the bolt and indent the copper cylinder. The holding fixture shall be removed from the submachine gun 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 shall be within the requirements. All firing pin indent impressions shall

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not be off center more than one-half of the diameter of the firing pin point as evidenced by visual examination. Failure of any test sample to meet the requirements shall cause rejection of the represented lot.

4.4.2 Trigger pull test. Submachine guns shall be tested for trigger pull requirements (see 3.3.17). The specified loads shall be applied 1/2 inch from the bottom of the trigger and exerted in a direction parallel to the axis of the bore. 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. Failure of any test sample to meet the requirements shall cause rejection of the represented lot.

4.4.3 Interchange of parts.

4.4.3.1 In plant.

4.4.3.1.1 Submachine runs. Ten submachine guns shall be tested for interchange of parts (see 3.3.15) 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 submachine gun into 10 groups of non-mating parts as shown below and distributing the groups into 10 different trays until each tray contains parts for a complete submachine gun. Groups of parts from the first submachine gun shall be taken in order and placed in trays 1 through 10; groups of parts from the second submachine gun shall be taken in order and placed in trays 2 through 10 to 1; groups of parts from the third submachine gun shall be taken in order and placed in trays 3 through 10 to 2, etc. 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 submachine guns shall be reassembled using only those parts which are in the tray.

Groups of non-mating parts

Group I

Barrel assembly (779143)
Guard, Trigger (6301456)
Pin, Shoulder, Headless (5349935) (used with bolt
and guide rod group)

Group II

Bolt, Breech (7161926)
Housing Assembly (7161923)
Stock Extension, Gun (7161812)

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Group III

Collar, Shaft (5349947)
Holder, Sear Trigger Spring (5349942)
Receiver (7161931)
Trigger Assembly (6301448) (with helical spring removed)

Group IV

Clip, Retaining (5349931)
Magazine, Cartridge (5653427)
Sear, Trigger (7162774)
Washer, Lock (7162076)

Group V

Catch, Magazine (6301453)
Nut, Plain, Round (7161905)
Rod (6301449) (used with bolt and guide rod group)

Group VI

Catch (5349927)
Pin, Straight, Headed (5349948) (used with receiver assembly)
Spring, Helical, Compression (7160999) (used with bolt and guide rod group)

Group VII

Cap (7161913)
Pin, Grooved, Headless (7161906)
Spring, Helical, Extension (5351196) (goes with trigger assembly)

Group VIII

Cover, Receiver (7161911)
Pin, Straight, Headless (5349938) used with trigger sear)
Spring, Helical, Compression (A7160998) (used with magazine catch)

Group IX

Extractor, Small Arms Cartridge (6301464)
Pin, Straight, Headless (5351190) (used with sear and receiver assembly)
Shield (A7160997) (used with magazine catch)

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Group X

Gasket (7161911)
Plate, Locating (5351195)
Spring, Helical, Compression (5351194) (used with receiver assembly)

4.4.3.1.2 Concurrent repair parts. Concurrent repair parts shall be tested for interchangeability requirement (see 3.3.15) by disassembling two submachine guns, previously tested in 4.3.3.5.3.1, as necessary and then reassembling them using the concurrent repair parts. No hand refinement of parts will be allowed, and the submachine guns shall operate and function properly. This test may be performed independently of the submachine gun interchangeability test specified in 4.3.3.5.1.1 and at more frequent intervals using accepted submachine guns taken from current production.

4.4.3.2 Interplant. Submachine guns to be subjected to the interplant interchangeability test shall be given preliminary hand functioning to assure proper operation before parts are disassembled from the submachine gun. Submachine guns shall be interchanged in a manner similar to the detailed plan in 4.4.3.1.1 except that parts shall be divided into six groups and, that when disassembling, every other submachine gun used shall be one produced by a different manufacturer. The submachine guns shall be tested for and shall comply with the requirements for firing pin indent, trigger pull, functioning, and targeting and accuracy before and after interchange of parts using the test methods specified in 4.4.1 and 4.4.2, 4.4.5 and 4.4.6 respectively. Parts shall be identified with their manufacturer throughout the test. Before submachine guns are returned to the contractors, original parts shall be reassembled to their respective submachine guns and the submachine guns given a hand functioning test to assure proper operation.

4.4.3.3 Spare parts. Spare parts shall be tested for interchangeability according to 4.4.3.1.2 except that the number of submachine guns shall be ten.

4.4.4 High-pressure resistance test.

4.4.4.1 Submachine guns shall be tested for high-pressure resistance requirements (see 3.3.18) by firing one high-pressure test cartridge (see 4.3.3.3) through its assigned barrel assembly. Submachine guns shall be tested using the firing fixture conforming to Drawing D73195659. Bolts and assigned barrel assemblies to be assembled into production submachine guns shall be proof fired only as part of the completed submachine gun and magnetic particle inspected (according to MIL-I-6868) and marked in accordance with the applicable drawing and other applicable documents. Bolts and

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barrel assemblies to be used as repair parts and spare barrel assemblies shall be proof fired independently of the production submachine guns and magnetic particle inspected and marked in accordance with the applicable drawings and other applicable documents. After proof firing, submachine guns 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. A 1/8 inch high letter P shall be applied to the barrel collar and receiver for each weapon that has successfully completed the high-pressure test.

4.4.5 Function firing test.

4.4.5.1 Each submachine gun (including magazine) shall be subjected to a function firing test. At least 30 rounds shall be fired using the magazine presented with the weapon. If more than one magazine is used for each weapon, the additional magazines may be slaves. Each of the first 500 submachine guns shall be fired a total of 90 rounds. The first 30 rounds shall be fired in one continuous burst, and the remaining 60 rounds shall be fired intermittently. Each of the next 4,500 submachine guns shall be fired a total of 60 rounds. The first 30 rounds shall be fired in one continuous burst, and the remaining 30 rounds shall be fired intermittently. Each submachine gun of subsequent lots of 500 submachine guns, shall be fired a total of 30 rounds. Firing shall be intermittent, except that 25 submachine guns from each lot shall be fired in one continuous burst of 30 rounds to check functioning and rate of fire. Intermittent firing shall be in bursts of approximately five rounds each.

4.4.5.2 Rate of fire. At least 25 submachine guns from each lot shall be checked for rate of fire during a 30-round burst of the function firing test and the result shall be recorded. Failure of more than one submachine gun to meet rate of fire requirement shall cause rejection of the represented lot.

4.4.5.3 Spare magazines. At least five magazines from each lot of spare magazines shall be fired 30 rounds. If more than one malfunction attributable to the magazine occurs, a second sample of ten magazines shall be function fixed. Any malfunction attributable to the magazine during the firing of the second sample shall cause rejection of the represented lot.

4.4.5.4 Check test. In addition to the above schedule, one submachine gun from each inspection lot shall be checked for functioning and rate of fire while firing a total of 480 rounds using one magazine. At the discretion of the procuring agency, and provided consistently satisfactory results have been obtained, firing shall be reduced to one submachine gun from each 1,000 submachine guns produced. Submachine guns may be fired from the

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shoulder or by using a machine rest. Each test weapon shall be fired 240 rounds while elevated 75 degrees from the horizontal position and 240 rounds depressed 75 degrees from the horizontal position. Firing shall be continuous and intermittent, alternating each 30 rounds. Rate of fire shall be checked and recorded during one continuous burst of 30 rounds in both the elevated and depressed position. The submachine gun shall be cooled after firing 240 rounds. Any malfunctions, unserviceable components, or failure to meet the rate of fire requirement shall be cause for retest or rejection of the represented lot. A functioning check retest may be allowed without reconditioning the lot of machine guns at the discretion of the Government. If a retest is made, another submachine gun from the lot under consideration shall be subjected to the test. Failure of the submachine gun in the retest shall cause rejection of the lot represented subject to reconditioning and further test. Two submachine guns shall be subjected to the test from each reconditioned lot.

4.4.6 Targeting and accuracy firing test.

4.4.6.1 Each submachine gun shall be tested for targeting and accuracy (see 3.3.20). Submachine guns shall be tested using the test fixture conforming to Drawing D7319565. Seven rounds single shot shall be fired on a 100 foot range. Two of the shots shall be warm-up shots and shall be fired off the target. Each submachine gun not meeting the requirements of the targeting and accuracy test shall be rejected. If more than one submachine gun in the lot fails, the lot represented shall be rejected subject to reconditioning and retest of each submachine gun in the lot. Submachine guns from the lot which have passed the test shall not be retested.

4.4.7 Endurance test.

4.4.7.1 Testing of submachine guns for endurance requirements (see 3.3.21) shall be accomplished with the submachine guns held in a firing fixture conforming to Drawing D7319565.

4.4.7.2 A total of 5,000 rounds shall be fired in the initial test submachine gun from each lot regardless of the number of malfunctions or unserviceable parts requiring replacement in order to complete the test.

4.4.7.3 Firing shall be in series of 150 rounds using fully loaded magazines. Firing from every second magazine shall be intermittent with at least six intentional breaks in firing, Ten magazines shall be selected for each test and used in rotation so that approximately 500 rounds will be fired from each magazine.

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4.4.7.4 The submachine gun shall be cooled to ambient temperature after each 300 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 submachine gun at intervals of not less than 1000 rounds. At the close of each day's firing, the submachine gun shall be protected against corrosion. No parts shall be altered and only parts broken or worn to the extent that they are un-serviceable shall be replaced (within the allowance of Table I).

4.4.7.5 Spare bolts. One bolt from the first 500 spare bolts produced and one bolt from each month's production thereafter shall be endurance fired a total of 5,000 rounds, except that when a heat lot change of material occurs, one bolt from the first 500 produced from the new heat lot shall also be fired. Requirements of Table I shall be met, except that malfunctions not attributable to the bolt shall not be counted.

4.4.7.6 Complete and 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.

4.4.7.7 At the completion of the endurance test, submachine guns shall be disposed of as specified in the contract (see 6.1).

5. PREPARATION FOR DELIVERY.

5.1 Preservation, packaging, packing and marking. Preservation, packaging, packing and marking of submachine guns shall be in accordance with the requirements of Packaging Data Sheet P7265648.

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

5.3 Pilot pack. On each contract a pilot pack consisting of a complete and packed shipping container representing initial production shall be forwarded in accordance with 3.1.

6. NOTES

6.1 Ordering data. Procurement documents should specify the following:

- Title, number and date of this specification.
- b. Lists of drawings and specifications pertinent to the submachine gun, showing applicable revision dates.

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- c. Number of production samples required for tests (see 3.1).
- d. Shipping instructions for production samples and pilot pack (see 3.1 and 5.3).
- e. Inspection criteria not specified herein (see 4.3.2.1).
- f. List of interchangeable parts (see 4.4.3).
- g. Quantity and shipping instructions for submachine guns and parts when an interplant interchangeability test is required (see 4.4.3.2).
- h. Selection of applicable levels of preservation, packaging and packing.
- i. Marking.
- j. Packaging instructions for repair parts (see 5.2).
- k. Place of final inspection and acceptance (see Notes in MIL-W-13855).
- l. Responsibility for furnishing manufacturing, inspection and test equipment (see Notes in MIL-W-13855).
- m. Responsibility for furnishing ammunition (see Notes in MIL-W-13855).
- n. Contractor-Government agreement for quality assurance provisions.

Custodians:
Army - WC
Air Force - 84
Navy - None

Preparing activity:
Army - WC
Project No. 1005-0327

Review activities:
Army - None
Air Force - None
Navy - None

User activities:
Army - None
Air Force - None
Navy - MC

SPECIFICATION ANALYSIS SHEET		Form Approved Budget Bureau No. 110-R004
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.		
SPECIFICATION		
ORGANIZATION		CITY AND STATE
CONTRACT NO.	QUANTITY OF ITEMS PROCURED	DOLLAR AMOUNT \$
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 form and place both in an envelop, addressed to preparing activity)		
SUBMITTED BY (Printed or typed name and activity)		DATE

DD FORM 1426
1 APR 63

REPLACES NAVSHIPS FORM 4883, WHICH IS OBSOLETE