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 MIL-S-45921A  
 22 June 1993
 

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 SUPERSEDING  
 MIL-S-45921  
 6 January 1971

## MILITARY Specification

STOCK, GUN, SHOULDER: ASSEMBLY W/O BUTT PLATE,  
 FIBERGLASS REINFORCED, PLASTIC (PREMIX)  
 (FOR RIFLE, 7.62MM: M14)

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 fiberglass reinforced plastic (premix) stock assembly for the M14 rifle. The stock assembly is furnished without the butt plate but with the slotted machine screw, square plain nut, and nut retainer required for assembly of the butt plate (See 6.1).

## 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 thereto, cited in the solicitation (See 6.2).

## SPECIFICATIONS

## MILITARY

MIL-P-116	-preservation, Methods of
MIL-W-13855	-Weapons: Small Arms and Aircraft Armament Subsystems, General Specification for

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 (DD Form 1426) appearing at the end of this document or by letter.

AMSC N/A

FSC 1005

DISTRIBUTION STATEMENT A. Approved for public release distribution is unlimited.

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MIL-R-45012	-Rifle, 7.62MM: M14
MIL-I-45607	-Inspection Equipment, Acquisition, Maintenance and Disposition of

## STANDARDS

## MILITARY

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

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

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

## DRAWINGS

## U.S. ARMY ARMAMENT RESEARCH DEVELOPMENT AND ENGINEERING CENTER (ARDEC)

7791339	-Nut, Plain Square
7791267	-Screw, Machine, slotted
7790686	-Plate Assembly, with Shoulder Rest
11015379	-Operating Instructions for Gage F-11015506
11015469	-Gage, Centrality
11015479	-Gage, Functional
11015506	-Gage Fixture, air Gaging
11686426	-Stock, Gun, Shoulder (Premix)
11010414	-Retainer, Nut
11686842	-Diagram, Targeting and Accuracy
11015482	-Fixture, Twist Test
6511841	-Gage, Targeting Jack
7273901	-Stand, Firing
11686427	-Stock Assembly w/o Butt Plate (Premix)
IEL11686427	-List of Inspection Equipment
P5910348	-packaging Data Sheet for Stock Assembly, Gun, Shoulder

(Copies of other Government documents, drawings, and Publications required by contractors in connection with specific acquisition functions should be obtained from the contracting activity or as directed by the contracting activity.)

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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.

## 3. REQUIREMENTS

3.1 First article sample. Requirements for submission of the first article sample shall be as specified in the contract, (see 6.1). The first article sample shall include the pilot pack (see 5.1).

3.2 Materials, construction and design. Stock assemblies without butt plates shall conform to the materials, construction and design requirements specified herein, on Drawing F11686427 and drawings applicable thereto, and shall be in accordance with the applicable materials, construction, and design provisions of MIL-W-13855. Slotted machine screws, square plain nuts, and nut retainers shall conform to Drawings B7791267, A7791339, and B11010414 respectively.

3.2.1 Ferrule. The ferrule shall be cemented and crimped securely to the stock as specified on the applicable drawing so that there shall be no relative movement.

3.2.2 Sling swivel assembly. The sling swivel assembly shall be securely riveted to the stock as specified on the applicable drawing so that there shall be no relative movement except that the swivel loop shall rotate through its full range of travel. Set end of rivets shall be free of cracks and shall not protrude above the  $.94 + 0.1$  dimension.

3.2.3 Stock (premix).

3.2.3.1 Process. A detailed description of the manufacturing and fabricating process and methods of control of manufacturing variables in a form of a titled, numbered, and dated process specification shall be prepared by the prime contractor, or obtained by the prime contractor. The process specification shall be made available by the prime contractor at the commencement of the production of material to which it applies during the course of production for use by authorized Government and industry representatives in the facilities of the prime contractor, his subcontractors, or his vendors. It shall also be made available, on request, for review by technical personnel of the technical agency.

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3.2.3.2 Stock shells. Stock shells shall consist of fiberglass reinforced plastic (premix) and reimpregnated glass rovings assembled in accordance with the applicable drawing. Stock shells shall be uniform and smooth and shall be free of cracks, holes, tackiness, blisters, wrinkles, porosity, air pockets, foreign materials, and other injurious defects.

3.2.3.2.1 Barcol hardness. The average Barcol hardness of the stock (left-hand and right-hand) 24 hours after molding shall be not less than 50.

3.2.3.3. Knurled straight pins. The knurled straight pins shall be permanently cemented by the adhesive in the locations specified on the applicable drawings.

3.2.3.4 Screw retaining plate. The screw retaining plate shall be permanently cemented by the adhesive in the location specified on the applicable drawing.

3.2.3.5 Adhesive. Prior to cementing, adhesive surfaces shall be cleaned and free from oil, grease, dirt, sanding dust, and other contaminants. The adhesive joint areas of the stock shall be completely filled with adhesive and the adhesive joint areas shall not show any separation or shrinkage of adhesive when tested as specified in 4.5.3.3.1 and 4.6.1.

3.2.3.6 Foam. The foam in the butt end of the stock shall be uniform and of homogeneous cell structure. The foam shall be free of open spaces, blowholes, or unfilled pockets. The foam shall completely adhere to the skin of the stock shells. The cellular material except the skin of the accessory holes shall be uniform and free of voids or open cells exceeding 10 percent of the total volume with none larger than 1/4-inch diameter and not occurring more than once per two cross-sectional areas when tested as specified in 4.5.3.3.1 and 4.6.1. The accessory holes shall have hard, smooth, nonporous surfaces as specified on the applicable drawing.

3.2.3.7 Coating. The surface coating shall be uniform and complete and shall be completely cured and dried. The surface coating shall be free of tackiness, soft areas, pin holes, orange-peel, and thickened drainage areas. The color shall be as specified on the applicable drawing.

3.2.3.8 Repairing of stock. The stocks shall not be repaired in any manner except that repairs may be made to the coating and to the adhesive joint area if the adhesive is clearly

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visible at the bottom of the insufficiently filled joint area. Any repairs which are made to the coating or the adhesive joint area and the method of repairing shall have the prior approval of the technical agency.

3.2.4 Twist. Stock assemblies shall be capable of withstanding a torque of 40 pound-feet without evidence of cracks or breakage when tested as specified in 4.5.3.3.2 and 4.6.2.

3.2.5 Shock resistance. When assembled as a component of the M14 rifle, stock assemblies shall be capable of passing the shock resistance test (grenade firing) specified in 4.5.3.3.3 and 4.6.3 without evidence of cracks or breakage.

3.2.6 Functioning firing. When assembled as a component of the M14 rifle, stock assemblies shall be capable of passing the functioning test specified in 4.6.4 without malfunction or breakage attributable to the stock assembly without butt plate.

3.2.7 Targeting and accuracy. When the stock assembly is assembled as a component of the M14 rifle, the targeting and accuracy of the plastic stock shall be equal to or better than the targeting and accuracy of the wooden stock subassembly when assembled as a component of the M14 rifle, and in compliance with the targeting and accuracy requirements of MIL-R-45012.

3.2.8 Shock resistance endurance. When assembled as a component of the M14 rifle, stock assemblies shall be capable of passing the 100 round grenade shock resistance endurance test specified in 4.6.6 without evidence of cracks or breakage.

3.2.9 Low temperature shock resistance. When assembled as a component of the M14 rifle, stock assemblies shall be capable of passing the low temperature shock resistance test (grenade firing) specified in 4.6.7 without evidence of cracks or breakage.

3.2.10 Low temperature abuse. When assembled as a component of the M14 rifle, stock assemblies shall be capable of passing the low temperature abuse test specified in 4.6.8 without evidence of cracks or breakage.

3.2.11 Heat resistance. When assembled as a component of the M14 rifle, stock assemblies shall be capable of passing the heat resistance test specified in 4.6.9 without injurious charring or injurious volatilization.

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3.3 Marking. Markings shall be in accordance with the applicable drawing and marking provisions of MIL-W-13855.

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

## 4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract or purchase order, the contractor is responsible for the performance of all inspection requirements (examinations and tests) as specified herein. Except as otherwise specified in the contract or purchase order, the contractor may utilize 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 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.

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

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

- a. First article inspection (see 4.4).
- b. Quality conformance inspection (see 4.5).

4.4 First article inspection. A first article sample shall be selected from early production and pilot pack submitted for inspection in accordance with contract requirements (see 6.1). The sample shall be representative of production processes to be used during quantity production. The first article inspection sample shall be inspected as specified in 4.5.3.2.

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4.5 Quality conformance inspection.

4.5.1 Inspection lot. The formation, size, and presentation of inspection lots and applicable samples 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 conditioner and contractor's delivery schedule, and within the limitations of MIL-W-13855.

4.5.2 Examination.

4.5.2.1. Stock assemble without butt plate. Stock assemblies shall be examined for requirements in 3.2.1, 3.2.2, 3.2.3.2, 3.2.3.2.1, 3.2.3.3, 3.2.3.4, 3.2.3.5, 3.2.3.7, 3.3 and 3.4. Stock assemblies and components shall be examined as specified below in 4.5.2.1.1 and in the contract (see 6.1).

4.5.2.1.1 Classification of defects.

INSPECTION POSITION A-Stock,gun, shoulder (Premix) -Dwg. 11686426

<u>Categories</u>	<u>Defect</u>	<u>Zone</u>	<u>AQL</u>	<u>Inspection Method</u>
<u>Critical</u>	- None Defined			
Major				
101.	Improper molding of stock shells (see 3-2.3.2)		.65	Visual
102.	Coplaner requirement of sides (.002) not met	3-C4	.65	11015506 11015379
103.	Symmetry (.006) of trigger guard and trigger housing cutouts to receiver cutout, incorrect	1-D4	.65	11015469
104.	Assembleability, butt swivel to stock (.246/ .32, .626, symmetrical (.006) to S), incorrect	3-C7 4-D5	.65	11015479
105.	Assembleability, plate assembly with shoulder rest to stock and outside contour (1.68, .965, 1.791, .607, .215, 2.99, .10/ .51R, 3.86, .76), incorrect	2-B8 4-C8 4-D6, D7, D8 4-E7, E8	.65	11015479
106.	Length, receiver leg cutout (.852), incorrect	3-C4	.65	SMTE

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<u>Categories</u>	<u>Defect</u>	<u>Zone</u>	<u>AOL</u>	<u>Method</u>
107.	Height at receiver and trigger housing angles (2.271, 10°0', 15°0', .25 datum diameter roll), incorrect	5-D7, D8	.65	1101 55 06 1101 53 79
108.	Width, receiver cutout (1.248), incorrect	1-C3	.65	SMTE
109.	Assembleability of magazine thru stock (1.04), incorrect	1-D4	.65	1101 54 69
110.	Height receiver bearing surface, rear end (.017-.012), incorrect	2-D6	.65	1101 55 06 1101 53 79
111.	Improper undercut receiver bedding surface (.005, .01, .09, 1.20, 3.19, 2.685)	1-C4 , D5 E4 3-E5	.65	SMTE
112.	Assembleability of sear release (.155) , incorrect	1-D4	.65	1101 54 69
113.	Width, trigger housing Cutout (.650-2 places), incorrect	1-D5 2-B6	.65	SMTE
114.	Distance between rivet holes (.750), incorrect	1-D2	.65	SMTE
<u>Minor</u>				
201.	Depth, operating rod guide clearance cut (.675), incorrect	5-D6	1.5	11015469
202.	Depth, gas cylinder clearance (.94), incorrect	3-E2	1.5	SMTE
203.	Height, location, cutout for rear end of trigger housing (1-703)	4-B4	1.5	SMTE
204.	Length, location, trigger clearance (2.515), incorrect	2-B5	1.5	11015469
205.	Height, connector slot (.23), incorrect	4-B5	1.5	11015469
206.	Width, gas cylinder cutout (.68), incorrect	5-C4	1.5	11015469
207.	width, shoulder plate and hinge block opening (1.214) incorrect	4-E7	1.5	SMTE
208.	Evidence of poor workmanship		2.5	Visual



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<u>Categories</u>	<u>Defect</u>	<u>Zone</u>	<u>AQL</u>	<u>Inspection Method</u>
<u>INSPECTION POSITION B - Stock Assembly - Dwg.11686427</u>				
<u>Critical</u> - None Defined				
<u>Major</u>				
101.	Improper assembly and function of swivel assembly sling (see paragraph 3.2.2)		.65	Visual- Manual, SMTE
102.	Improper or missing adhesive application		.65	Visual
103.	Location, retainer and nut seat		.65	Note 1
104.	Improper assembly of ferrule (.897 to .936 calculated (ref .030 + .005, 1.119 + .005), .020, 1.119, .29, symmetrical to A within .012)		.65	11015469
105.	Location, front end (17.211 to 17.235 calculated - Ref. .020± .002, 17.213-.020), incorrect		.65	11015469
106.	Parts missing or incorrectly assembled		.65	Visual
<u>Minor</u>				
201.	Evidence of poor workmanship		2.5	Visual

Note 1. Using a plate assembly with a shoulder rest of known acceptable quality, the screw (7791267) shall assemble to the plain square nut (A7791339) with retainer (11010414) without evidence of misalignment.

4.5.2.2 Packaging. Examination of packaging of stock assemblies without butt plate shall be performed in accordance with the classification of defects and acceptable quality levels (AQL's) specified in 4.5.2.2.1. 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. The AQL listed for each defect shall be applied to the individual defect, not to a group of defects.

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c. Examination for packaging defects specified in 4.5.2.2.1 shall apply to each sample of stock assemblies without butt plate, interior packages, or exterior Containers, as applicable.

4.5.2.2.1 Classification of defects for packaging. (Unless otherwise specified in each listed defect, the packaging requirements are specified on Packaging Data Sheet P5910348).

<u>Categories</u>	<u>Defect</u>	<u>AOL</u>
<u>Critical:</u>	None Defined	
<u>Major:</u>		
101.	Illegible or incorrect marking.	1.0
102.	Improper location of marking.	1.0
103.	Improper level of packaging or packing (see procurement documents).	1.0
104.	Inadequate cleaning and drying.	1.5
105.	Improper preservation application.	1.5
106.	Improper closure of unit package.	1.5

## 4.5.3 Testing.

4.5.3.1 Material testing. Tests required by applicable drawings and specifications shall be performed on materials used in the manufacture of stocks. The contractor shall furnish the Government representative with certified copies of reports of all tests as may be required for each lot of each material used. The contractor shall also furnish the Government representative with certification that the materials used in packaging conform to the applicable specifications.

4.5.3.2 First article testing. Forty (40) stock assemblies without butt plate shall be submitted by the contractor for first article testing. The sample stocks shall be numbered 1 thru 40 using marking that will permit identification throughout the inspection listed in Table I. The sequence shall be as prescribed in Table I. Failure of any stock to meet the requirements shall be cause for rejection. Corrective action by the contractor shall be as prescribed in the contract.

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TABLE I. Test schedule.

<u>Applicable Inspection</u>	<u>Number</u>
1. Examination (see 4.5.2.1)	1 through 40
2. Functioning firing test (see 4.6.4)	1 through 40
3. Targeting and accuracy test (see 4.6.5)	1 through 40
4. Adhesive and foam test (see 4.6.1)	1, 2, 3 and 4
5. Twist test (see 4.6.2)	5 and 6
6. Shock resistance (grenade firing) test (see 4.6.3)	13 through 40
7. Shock resistance endurance test (see 4.6.6)	19, 26, and 37
8. LOW temperature shock resistance test (see 4.6.7)	7 and 8
9. Low temperature abuse test (see 4.6.8)	9 and 10
10. Heat resistance test (see 4.6.9)	11 and 12

4.5.3.3 Testing.

4.5.3.3.1 Foam and adhesive testing. Two stock assemblies selected by the Government representative from each day's production shall be tested by the contractor using the test method specified in 4.6.1. Stocks may be selected prior to application of the coatings. Failure of any stock to meet the requirements shall cause rejection of the day's production.

4.5.3.3.2 Twist testing. Five samples of stock assemblies shall be taken from each inspection lot and shall be tested by the contractor for the twist requirement using the test methods specified in 4.6.2. Failure of any stock assembly to meet the requirements shall cause rejection of the represented lot.

4.5.3.3.3 Shock resistance testing. When specified in the contract, a sample of 10 stock assemblies shall be selected by the Government representative from each month's production and shall be forwarded to the designated testing agency. The stock assemblies shall be tested by the testing agency for the shock resistance requirement using the test method specified in 4.6.3. Failure of any stock assembly to meet the requirements shall cause rejection of the represented lot.

4.5.3.3.4 Packaging testing.

4.5.3.3.4.1 Determination of cleanliness. The contractor shall test items from each inspection lot for cleanliness using the test method specified in 4.6.10.1. Sampling shall be in accordance with MIL-P-116.

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4.5.3.3.4.2 Heat-sealed seam and quick leak. The contractor shall test the heat-sealed bag in level A unit packages from each inspection lot for heat-seal and quick leak using the test methods specified in 4.6.10.2. Sampling shall be in accordance with MIL-P-116.

4.5.3.3.5 Barcol harness. Five (5) stock shall halves each (left side and right side) shall be selected at random from each day's production of each molding press used. Two (2) readings each shall be taken at the receiver, butt and forearm area of the external surface of the stock shall half. These measurements shall be taken within twenty-four (24) hours after the shells are removed from the molds. The six readings shall be averaged and the average reading shall be Barcol 50 minimum.

4.5.4 Inspection equipment. Unless otherwise specified in the procurement documents (see 6.1), responsibilities for acquisition, maintenance, and disposition of measuring and testing equipment prescribed on List of Inspection Equipment, Drawing IEL11686427, and for all other inspection equipment required to perform inspection required by applicable specifications, shall be in accordance with MIL-I-45607.

4.6 Methods of inspection. When the stock assembly is tested as a component part of the M14 rifle, a butt plate assembly with shoulder rest (Drawing D 7790686) and a butt swivel shall be assembled to the stock so that the test is performed using a complete rifle (see 4.6.3 through 4.6.9).

4.6.1 Adhesive and foam test. The stock assembly shall be tested for the adhesive and foam requirements (see 3.2.3.5 and 3.2.3.6) by cutting the stock assembly along the planes indicated in Figure 1. Any suitable means may be used to cut the stock assembly. The specimens suitable means may be used to cut the stock assembly. The specimens shall be visually examined to determine if the requirements have been met. At the discretion of the Government representative additional cuts may be made to determine the extent of a questionable defect.

4.6.2 Twist test. Stock assemblies shall be tested for the twist requirement (see 3.2.4) using a test fixture conforming to Drawing D11015482. A torque of 40 pound-feet shall be applied once in the clockwise direction and once in the counterclockwise direction. After application of the torque, the stock assembly shall be visually examined to determine compliance with the requirement.

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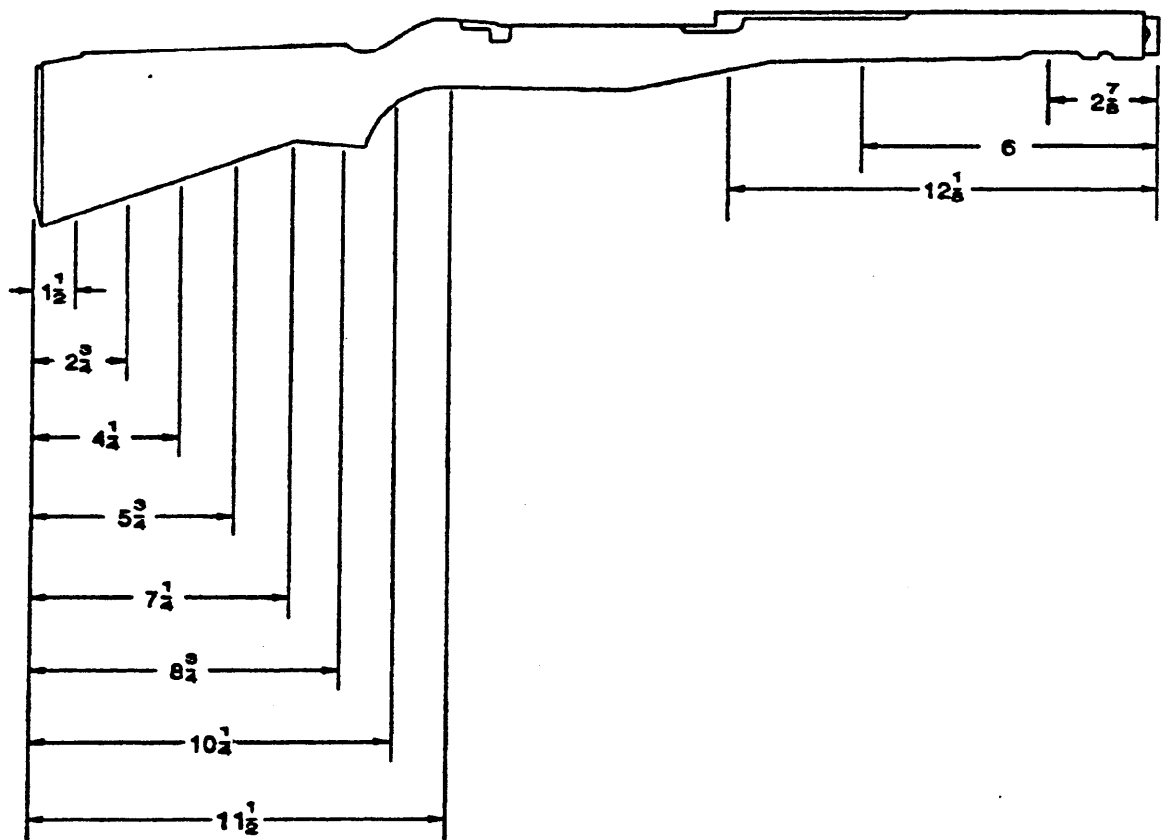


FIGURE 1. Sectioning diagram for obtaining test specimen for adhesive and foam test.

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4.6.3 Shock resistance test. The stock assembly shall be assembled as a component of the M14 rifle and tested for the shock resistance requirement (see 3.2.5). The rifle shall be equipped with the M76 grenade launcher. The rifle shall be placed in a fixture so that the support will be at the toe of the butt and at 45 degrees with the longitudinal axis of the rifle- The screw driver slot in the gas cut-off valve of the rifle shall be in a position parallel to the barrel, so that the valve prevents the gas from entering the gas cylinder. Five Government standard practice anti-tank grenades shall be launched using Government standard 7.62mm, M64 grenade cartridges. The stock assembly shall be disassembled from the rifle and examined to determine if the requirement has been met.

4.6.4 Functioning firing test. The stock assembly shall be assembled-as-a component of the M14 rifle and tested for functioning requirement (see 3.2.6), with the rifle held in a firing stand simulating shoulder firing and conforming to Drawing F7273901. The rifle shall be function fired as follows using ball cartridges: 5 rounds semiautomatic (selector set with the blank face to the rear); 15 rounds automatic (selector set with the letter "A" facing to the rear) in bursts of approximately 5 rounds each; and 20 rounds automatic in one burst. All firing in this test shall be performed with fully loaded magazines and using Government standard 7.62mm, M59 or M80 ball cartridges.

4.6.5 Targeting and accuracy test. The stock assembly shall be tested for targeting and accuracy requirement (see 3.2.7) using the following method.

4.6.5.1 Targeting and accuracy procedure. One rifle shall be fired for targeting and accuracy with each of 40 stock assemblies of the first article sample assembled as a component of the rifle. The rifle shall be held in a targeting jack simulating shoulder firing and conforming to Drawing F6511841. The rear sight shall be set at zero windage, the aperature elevated eight clicks from the lower position, and the rifle sights aligned at 6 o'clock on the sighting image specified on the targeting and accuracy diagram, Drawing C11686842. One ten shot target shall be fired with each stock assembly in accordance with rifle testing procedures, specified in MIL-R-45012, to compare the targeting and accuracy capability of the 40 plastic stocks with 40 wooden stocks which have been determined to be satisfactory. The targeting and accuracy results shall be compared to determine whether the requirements of 3.2.7 have been met.

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4.6.6 Shock resistance endurance test. The stock assembly shall be tested for the shock resistance endurance requirement (see 3.2.8) using the test method specified in 4.6.3 except that 95 additional practice anti-tank grenades shall be fired for a total of 100 grenades.

4.6.7 Low temperature shock resistance test. The stock assembly shall be tested for the low temperature shock resistance requirement (see 3.2.9) using the test method specified in 4.6.3 except that the rifle shall be conditioned for 3 hours at minus 65° +/- 5° Fahrenheit (F) and tested at minus 65° +/- 5°F.

4.6.8 Low temperature abuse test. The stock assembly, assembled as a component of the M14 rifle, shall be conditioned for 3 hours at minus 65° +/- 5°F and tested at minus 65° +/- 5°F for the low temperature abuse requirement (see 3.2.10) using the following sequence:

The rifle shall be dropped from a height of 3 feet (from point to be impacted to hardwood bench) onto a hardwood bench, so that the left side, right side, the toe, and the heel of the stock assembly each strike the bench on individual drops. The stock shall be inspected after each drop.

b. The rifle shall be held by the muzzle in a horizontal position, allowed to pivot of its own weight about muzzle and through a full 90 degrees, so that the bottom, top, and each side of the stock strikes the flat surface on the side of a hardwood bench on individual drops. The stock shall be inspected after each drop.

4.6.9 Heat resistance test.

4.6.9.1 Preparation. Stock assemblies, assembled as components of the M14 rifle shall be tested for the heat resistance requirement (see 3.2.11) with the bolt, firing mechanism, and operating rod spring removed for the rifle. A stand shall be employed to hold a rifle in a horizontal position. A high speed tabular heating rod (maximum temperature of 1,500°F, 115 volt, 1,000 watt, effective heating length of 24 inches, and modified as necessary for clearance and positioning of the effective heating range in the barrel) shall be inserted in the barrel so that the effective heating range is centered in the barrel. The heating rod shall be connected by leads to a variable voltage control. A pyrometer with chromelalumel thermocouple and leads shall be employed to measure the temperature of the barrel. The thermocouple shall be fastened by glass roving winding to the top side of the barrel approximately 10.5 inches from the muzzle end. An electric timer shall be used for all necessary timing.

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4.6.9.2 Procedure. The variable voltage control shall be set to deliver 60 volts to the heating rod. At the end of 5 minutes (using the electric timer), the setting of the variable voltage control shall be increased to 100 volts. When the temperature of the barrel reaches 700°F, the setting of the variable voltage control shall be increase to 120 volts and maintained at that setting until the temperature of the barrel reaches 1,200°F, the current shall be discontinued and the rifle allowed to cool. After cooling, the stock assembly without butt plate shall be examined to determine if the requirements have been met.

4.6.10 Packaging tests.

4.6.10.1 Determination of cleanliness. The surfaces of each sample unit shall be subjected to the determination of cleanliness test specified in MIL-P-116.

4.6.10.2 Heat-sealed seam and quick leak. The heat-sealed bags in the level A sample unit packages shall be subjected to the heat-sealed seam test and the quick leak test specified in MIL-P-116. The static load for the heat-sealed seam test shall be 36 ounces.

## 5. PACKAGING

5.1 Pilot pack. A pilot pack consisting of a complete and packed unit and intermediate packages, as applicable, packaged in accordance with Packaging Data Sheet P5910348 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. Stock assemblies shall be preserved, unit packaged, packed and marked in accordance with the requirements of Packaging Data Sheet P5910348 for the applicable level of protection specified (see 6.1).

## 6. NOTES

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

6.1 Intended use. The stock is intended for use with the Rifle, 7.62mm: M14.



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6.2 Acquisition requirements. Acquisition documents must specify the following:

- a. Title, number, and date of this specification;
- b. Issue of DODISS to be cited in the solicitation, and if required, the specific issue of individual documents referenced (see 2.1.2).
- c. Requirement for submission of first article sample.
- d. Inspection criteria not specified herein (See 4.5.2.1).
- e. List of inspection equipment pertinent to the stock assembly, showing applicable revision dates.
- f. That packages opened for examination shall be repackaged by the contractor at the contractor's expense.
- g. Shipping instructions for first article samples and pilot packs (see 3.1, 4.5.3.3.3 and 5.1).
- h. When monthly samples are required (see 3.1.2, 4.5.3.3.3 and 5.1)
- i. Selection of applicable levels of preservation, packaging and packing (see 5.1 and 5.2).
- 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 4.5.4) and responsibilities for other Government property to be furnished the contractor.
- l. Procedures and methods for demilitarizing and disposing of rejected material.
- m. Disposition of Government furnished property.

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

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6.4 Supersession data. This specification includes the requirements of Springfield Armory Purchase Description SAPD-301 dated 7 February 66.

6.5 Inspection system. 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.

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

6.7 Submission of contractor inspection equipment designs for approval. Submit copies of designs as require 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.

6.8 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), Frandford Arsenal, Rock Island Arsenal or Picatinny Arsenal drawings. Technical data originally prepared by these activities is now under cognizance of ARDEC .

6.9 Subject term (key word) listing.

Small Arms  
Weapon

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  
Navy-OS  
Air Force-84

Preparing activity  
Army-AR

(Project 1005-A772)

User activity:

Navy-MC

# 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.

<b>RECOMMEND A CHANGE</b>	1. DOCUMENT NUMBER	2. DOCUMENT DATE (YYMMDD)
3. DOCUMENT TITLE		
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 (Include Title, Name, Initials)	b. ORGANIZATION	
c. ADDRESS (Include Zip Code)	d. TELEPHONE (Include Area Code) (1) Commercial (2) AUTOVON (If applicable)	e. DATE SUBMITTED (YYMMDD)
8. PREPARING ACTIVITY		
a. NAME	b. TELEPHONE (Include Area Code) (1) Commercial (2) AUTOVON	
c. ADDRESS (Include Zip Code)	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	