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COMPARISON TEST OF

RIFLE, 5.56-MM, M16A1

FINAL REPORT

BY

ERIC KEELE

JULY 1971

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21005

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ABSTRACT

The purpose of this test was to evaluate the performance of M16A1 rifles to detect any deterioration of product quality during production. Testing was conducted at Aberdeen Proving Ground by the Materiel Testing Directorate from 25 February to 7 June 1971. Sixteen rifles from each of two producers were inspected for compliance with the purchase description, were fired for accuracy and reliability, and were subjected to low-temperature tests. Three of the seven code B rifles, fired 6000 rounds for reliability, failed to meet requirements of the purchase description because of excessive failures to feed from the magazine. Similarly, four of the seven code C rifles failed to meet the endurance requirements because of broken extractor springs and broken bolt rings. Both the occurrence of excessive malfunctions and broken parts were classified as shortcomings. The reliability level of the M16A1 rifle was substantially degraded with continued usage in a low-temperature environment (-65°F) and was classified as a deficiency. This is an uncorrected deficiency and has been reported previously (Reference 6). Seventy-five per cent of the malfunctions occurred within the first three rounds of the first magazine after conditioning periods; this was attributed to the freezing of fouling and combustion residue in and around the bolt and firing pin, which seriously impaired the operational capability of the rifle. Recommendations were made to perform low-temperature firing with various maintenance procedures to determine optimum maintenance schedules for reduction and/or elimination of first-magazine malfunctions.

FOREWORD

The Quality Assurance Branch, US Army Weapons Command, was responsible for preparing the test plan. The Materiel Testing Directorate was responsible for conducting the test and preparing the final test report. Acknowledgement is made to Lloyd Staley and Walter Eller for their technical assistance in the conduct of the various phases of this test.

ABERDEEN PROVING GROUND
ABERDEEN PROVING GROUND, MARYLAND 21005

USATECOM PROJECT NO. 8-WE-600-016-012

FINAL REPORT ON COMPARISON TEST OF RIFLE, 5.56-MM, M16A1

25 FEBRUARY TO 7 JUNE 1971

SECTION 1. SUMMARY

1.1 BACKGROUND

Production samples of items are subjected to comparison tests in accordance with a continuing program under the jurisdiction of USAWECOM to assure the quality of production items. The tests reported herein were conducted to evaluate the quality of a sample of production M16A1 rifles.

1.2 DESCRIPTION OF MATERIEL

The M16A1 rifle is a lightweight, air-cooled, gas-operated weapon capable of either semiautomatic or automatic fire. The rifle employs a 20-round magazine and fires 5.56-mm ball (M193) and tracer (M196) cartridges. More detailed information is contained in TM 9-1005-249-12 (Reference 2). Right and left side views of the M16A1 rifle are shown in Figure 1.2-1.

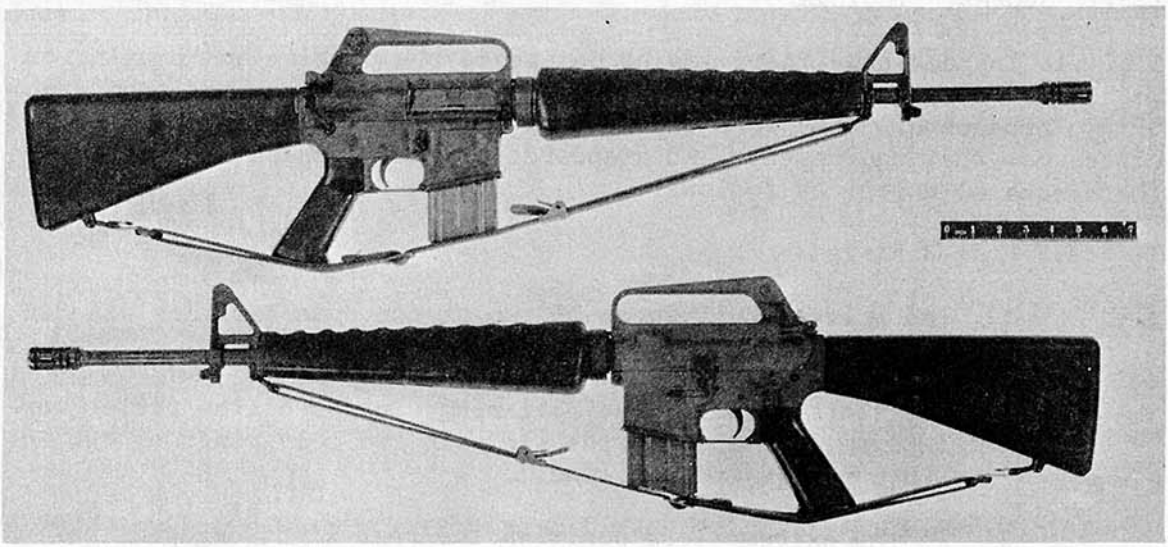

Figure 1.2-1: Right and Left Side Views of an M16A1 Rifle.

1.3 TEST OBJECTIVES

a. To detect any deterioration of product quality during production.

b. To verify that all deficiencies and shortcomings reported during previous tests had been corrected.

c. To evaluate the effect of any product changes on the performance of the present weapon system.

d. To provide data to AMSWE-QAA for an independent reliability, maintainability, and availability assessment per AR 705-50.

1.4 SCOPE

Testing was conducted by the Materiel Testing Directorate during the period from 25 February to 7 June 1971. The rifles were inspected, were fired for accuracy and endurance, and were subjected to low-temperature tests. Throughout the testing functional and maintenance data were recorded for use by USAWECOM in performance of a reliability - maintainability assessment. The data are included in Appendix I. Statistical analysis was not used for evaluation of the M16A1 rifle performance because no criteria were provided which required this type of evaluation.

1.5 SUMMARY OF RESULTS

1.5.1 Subtest Findings

1.5.1.1 Inspection. There was no damage to the packing and crating or to the weapons and accessories. Sixteen rifles were received from each of two producers. They were clean and the markings were legible. The rifles met the requirements and standards of the purchase description (Reference 4) except as follows:

a. Code B Rifles:

1) The trigger-pull force of two of the code B rifles was 8.6 and 9.2 pounds, exceeding the 8.5-pound maximum.

2) The slots in all three bolt rings in two of the rifles were in line. Similarly, the slots in two bolt rings of two other rifles were in line.

3) In the extreme left position the rear sight engaged the inside of the rifle-carrying handle and would not pivot from the normal to the long-range position on 13 of the 16 rifles inspected.

b. Code C Rifles:

1) The buttstock screw was loose in three rifles.

2) The finish on the outside of the magazine well on three of the rifles was spotty and uneven. Also, the finish on the bolt carrier in 11 of the 16 rifles was in similar condition.

3) The slots in two of the three bolt rings in three of the rifles were in line.

4) In the extreme left position the rear sight engaged the inside of the rifle-carrying handle and would not pivot from the normal to the long-range position on all 16 of the rifles.

1.5.1.2 Accuracy Test. The dispersion data for both producers' rifles from the benchrest show the performance to be well within the 4.8-inch extreme-spread limit permitted by the purchase description. A slight degradation in dispersion and a detectable shift in group center-of-impact, relative to the benchrest firings, resulted with the attachment of the bayonet and when shooting with the rifle supported on the bipod. However, the average extreme-spread data for the groups were within the 4.8-inch requirement for the benchrest firings and the shifts in group impact were not considered to be significant.

1.5.1.3 Low-Temperature Test (-65°F). The reliability level of both the code B and code C rifles was substantially degraded by continued exposure to the low-temperature environment while attempting to fire 1000 rounds without maintenance. The over-all performance at -65°F was unsatisfactory as evidenced by a malfunction rate of 23.9 per 1000 rounds fired with the code B rifles and 15.4 per 1000 rounds with the code C rifles. It should be noted, however, that exposure to the low-temperature conditions alone does not degrade initial (clean) rifle performance. With the rifles cleaned and lubricated an average malfunction rate of 1.2 per 1000 rounds fired was obtained during 24 initial 100-round cycles which were the first 100 rounds of the 1000-round intervals.

It should also be pointed out that during the remaining nine 100-round cycles in each 1000-round interval, 75% of the total malfunctions occurred within the first three rounds of the first magazine (five 20-round magazines in each 100-round cycle). Considering all rounds in the final four magazines (80% of the total test) only 2% of the malfunctions occurred during these firings, resulting in a malfunction rate of 0.5 per 1000 rounds fired.

1.5.1.4 Endurance Test (6000-Round). Seven rifles from each of the two producers were fired 6000 rounds each. Ten failures to feed from

the magazine occurred with one code B rifle; five similar failures were experienced with each of two other code B rifles. The purchase description for the M16A1 rifle (Reference 4) establishes an allowable number of four with a single rifle or nine with four rifles combined. If either of the two rifles with which five failures to feed occurred were combined with any three other rifles, except the rifle which experienced ten failures to feed, then the requirements would be met with one of the two rifles. No broken or unserviceable parts occurred with the code B rifles.

Twelve broken extractor springs and two broken bolt rings occurred with the seven code C rifles. Two of the rifles broke three springs, one broke two springs, and the remaining four rifles broke one spring each. Both broken bolt rings occurred in one rifle. The purchase description for the M16A1 rifle (Reference 4) establishes a requirement of one broken extractor spring with a minimum life of 2000 rounds with a single rifle in 6000 rounds of firing. Four of the 12 broken extractor springs occurred at a round life below 2000 rounds. Also, the breakage of bolt rings is not permitted.

1.5.2 Deficiencies and Shortcomings

1.5.2.1 Deficiency. One deficiency occurred. During the low-temperature test the freezing of fouling and combustion residue in and around the bolt and firing pin of the rifle seriously impaired the operational capability, and at times temporarily put the weapon out of operation. This is an uncorrected deficiency, having been previously reported in Reference 6.

1.5.2.2 Shortcomings. The shortcomings were as follows:

a. Three of the seven code B rifles fired for endurance exceeded the permitted number of failures to feed from the magazine in a 6000-round test.

b. Four of the seven code C rifles exceeded the permitted number of broken parts in a 6000-round test.

c. Four of 12 broken code C extractor springs failed prior to the required 2000-round minimum life.

d. Two code C bolt rings failed prior to the required 6000-round minimum life.

1.6 CONCLUSIONS

It was concluded that:

a. The quality of the extractor springs in the code C rifles has deteriorated since the last comparison test (ref para 2.5).

b. The operational performance of the M16A1 rifle under continued use at low temperatures has not been improved (ref para 2.4).

c. The incorporation of the redesigned bolt catch since the last comparison test (Reference 6) is effective in reducing the occurrence of failures of the bolt to be engaged and held open in a rearward position after the last round in the magazine is fired (ref para 2.2 and 2.5).

1.7 RECOMMENDATION

It is recommended that low-temperature firing with various maintenance procedures be performed to determine the optimum maintenance schedules for reduction or elimination of malfunctions when firing is reinitiated under cold conditions.

SECTION 2. DETAILS OF TEST

2.1 INTRODUCTION

2.1.1 General

All subtests were conducted in accordance with the test plan (Reference 5) which was prepared by USAWECOM.

Sixteen M16A1 rifles from each of two producers were received for test. To aid in programming in the various subtests the rifles were designated individually No. 1 through 16 with the appropriate letter code for the manufacturer. Rifle serial numbers are identified with these designations in Table 2.2-I. The subtests to which the rifles were subjected are outlined in Table 2.1-I.

Table 2.1-I. Subtests to Which the Individual Rifles Were Subjected

Subtest No.	Title	Rifle No.
2.2	Inspection	All
2.3	Accuracy	1, 2, and 3
2.4	Low-temperature	4 through 9
2.5	Endurance	10 through 16

2.1.2 Maintenance

With the exception of initial inspection, during which the rifles were disassembled, inspected, and maintained following the instructions in TM 9-1005-249-34 (Reference 3), maintenance throughout the subtests was performed per TM 9-1005-249-12 (Reference 2). The rifles were lubricated with MIL-L-46000A (LSA) semifluid lubricating oil during the accuracy and endurance tests and MIL-L-14107 (low-temperature lubricant) during the low-temperature test.

2.1.3 Malfunction Data

The abbreviations used in this report to identify malfunctions are listed in Appendix III. All malfunctions were identified by round number on the rifle and round number within a magazine. The failure of the bolt to remain to the rear malfunction always occurred after round 20 from the magazine. All other malfunctions are counted as occurring on whatever round number was being fired at the time of the malfunction.

Table 2.1-II shows identification of the rifles by manufacturer numbers.

Table 2.1-II. Weapon Identification

APG Rifle No.	Manufacturer Serial No.	APG Rifle No.	Manufacturer Serial No.
B1	3406589	C1	4376282
B2	3409232	C2	4377858
B3	3410211	C3	4380292
B4	3411896	C4	4380626
B5	3411953	C5	4381520
B6	3412510	C6	4381565
B7	3412979	C7	4381843
B8	3414340	C8	4381849
B9	3415684	C9	4383076
B10	3415808	C10	4383254
B11	3416342	C11	4383545
B12	3416501	C12	4383965
B13	3417271	C13	4384193
B14	3417501	C14	4384329
B15	3418020	C15	4384343
B16	3418534	C16	4384391

2.2 INSPECTION TEST

2.2.1 Objectives

a. To determine that the test items and support materiel had been received in proper condition for test and were free from damage.

b. To inspect and to measure certain physical characteristics, and to test fire each rifle.

2.2.2 Criteria

a. The test items shall be adequately and clearly marked and undamaged.

b. Each rifle shall be packed with those items specified as basic issue items.

c. Trigger-pull force shall be 5.5 to 8.5 pounds and free of creep.

d. Headspace shall be 1.4646 to 1.4706 inches.

e. Firing-pin indent, from inertia force, shall not exceed 0.008 inch and shall not be less than 0.020 inch as a result of normal hammer fall. The indent shall not be off-center more than one-half the diameter of the firing-pin point.

f. Firing-pin protrusion shall be 0.028 to 0.036 inch.

g. The average cyclic rate of fire for a 20-round continuous burst shall be 700 to 900 rpm.

h. The rifles shall meet the inspection requirements of Appendix J, para 5.0 of SAPD-253F (Reference 4).

2.2.3 Method

A thorough disassembly, inspection, and maintenance operation (per TM 9-1005-249-34) was performed on each rifle and physical characteristics were obtained as follows:

a. Trigger pull was determined by averaging five dry-firing trials as measured by a hand-held spring scale.

b. Headspace was determined by employing in a graduated set of headspace gages (1.4646 to 1.4706 inch) to determine the longest gage which could be accepted in the rifle chamber with the bolt closed and locked.

c. Firing-pin protrusion was measured with a dial-indicator gage.

d. Bore measurements were obtained with the use of an air gage.

e. Firing-pin indent was measured employing copper-compression cylinders and a holding fixture inserted in the rifle chamber. The firing-pin indent test was conducted in two trials, first by measuring the depth of indent as a result of normal hammer fall against the firing pin, and then by measuring indent caused by inertia motion of the firing pin when the bolt carrier was freely released from the bolt catch position.

f. The rifle bolts were subjected to a magnetic-particle inspection for cracks, seams, or other defects.

Each rifle was then fired 40 rounds (20 rounds in 3- to 5-round bursts immediately followed by a continuous 20-round burst) from a benchrest position. The cyclic rate of fire for each rifle was recorded during the continuous 20-round burst.

At the conclusion of firing in the low-temperature and endurance tests, the rifles fired in these subtests were again inspected and headspace and firing-pin protrusion were measured; in addition, the trigger pull, firing-pin indent, and barrel bores were also measured on the rifles which had been fired in the endurance test (para 2.5). After-test measurements were not recorded on the rifles fired in the accuracy test; these rifles were fired very few rounds (approximately 200).

2.2.4 Results

The rifles were packaged two per fiberboard carton; within the cartons they were individually contained in a sealed bag, type MIL-B-131E, class 1 and 2. There was no damage to the packing, the crating, or the rifles and accessories. The items received with each rifle were seven magazines, one cleaning rod, one sling, one chamber brush, one bore brush, one maintenance equipment case, and one maintenance manual (DA Pam 750-30). The rifles and accessories were clean and the markings were legible.

The trigger-pull, headspace, firing-pin protrusion, and indent measurements, as well as cyclic rates of fire recorded on the rifles during inspection, are all given in Table 2.2-I. The only failure to comply with the requirements of the purchase description (Reference 4) was the trigger pull on two of the code B rifles. The two rifles exceeded the allowable 8.5-pound maximum by 0.7 and 0.1 pound. No problems were experienced during test with these rifles and the after-test measurements given in Table 2.2-II show the trigger-pull force to be within the 5.5- to 8.5-pound requirement.

Barrel-bore measurements recorded on all rifles before test are contained in the APG library file copy of this report. Magnetic-particle inspection of the rifle bolts disclosed no cracks or defects.

It was noted during the inspection that all rifles were assembled with the redesigned bolt catch. The new catch incorporates an angular charge to the surface which is impacted by the rear of the stripping lug on the rifle bolt. This product improvement was made to reduce the occurrence of the FBR-type malfunction.

Table 2.2-I. Before-Test Measurements

APG No.	Manufacturer's Serial No.		Measurements											
			Trigger Pull[a], lb		Headspace, in.		Firing-Pin Protrusion, in.		Firing-Pin Indent, in.				Cyclic Rate of Fire, spm	
									Inertia		Hammer Fall			
	B	C	B	C	B	C	B	C	B	C	B	C	B	C
1	3406589	4376282	7.4	6.2	1.4666	1.4666	0.031	0.030	0.005	0.004	0.024	0.024	778	861
2	3409232	4377858	8.2	6.0	1.4666	1.4646	.031	.033	.004	.005	.023	.023	804	811
3	3410211	4380292	7.7	5.7	1.4666	1.4656	.032	.033	.004	.005	.024	.022	804	825
4	3411896	4380626	7.5	6.5	1.4656	1.4666	.031	.032	.004	.005	.025	.023	808	831
5	3411953	4381520	8.1	7.1	1.4666	1.4656	.031	.033	.004	.005	.024	.022	750	778
6	3412510	4381565	8.2	5.6	1.4666	1.4666	.032	.032	.004	.004	.024	.023	749	791
7	3412979	4381843	8.3	7.4	1.4666	1.4666	.030	.032	.004	.005	.024	.023	706	765
8	3414340	4381849	9.2	8.5	1.4646	1.4646	.031	.032	.004	.005	.025	.022	765	743
9	3415684	4383076	8.6	5.8	1.4666	1.4656	.030	.033	.006	.005	.023	.023	756	759
10	3415808	4383254	8.4	5.9	1.4676	1.4646	.031	.032	.004	.005	.023	.023	816	849
11	3416342	4383545	8.2	5.7	1.4666	1.4656	.031	.032	.005	.005	.024	.022	842	804
12	3416501	4383965	8.1	7.7	1.4646	1.4666	.031	.032	.004	.004	.023	.023	775	859
13	3417271	4384193	7.6	7.2	1.4666	1.4666	.031	.032	.004	.004	.024	.023	851	815
14	3417501	4384329	6.4	8.4	1.4656	1.4656	.031	.033	.004	.006	.023	.023	838	853
15	3418020	4384343	8.0	7.9	1.4676	1.4666	.030	.031	.005	.004	.023	.022	845	811
16	3418534	4384391	7.5	6.9	1.4666	1.4646	.030	.031	.004	.005	.023	.023	831	822

[a]Trigger-pull data are an average of five trials.

Note: The individual manufacturer is designated by code letters B and C.

Table 2.2-II. After-Test Measurements

APG No.[a]	Trigger Pull, lb		Headspace, in.		Firing-Pin Protrusion, in.		Firing-Pin Indent, in.			
							Inertia		Hammer Fall	
	B	C	B	C	B	C	B	C	B	C
4	6.4	6.1	1.4666	1.4666	0.032	0.033	0.005	0.004	0.024	0.023
5	6.6	5.9	1.4676	1.4656	.032	.034	.005	.004	.023	.022
6	6.7	6.2	1.4676	1.4666	.033	.033	.004	.003	.024	.023
7	6.2	6.6	1.4666	1.4666	.032	.033	.005	.005	.024	.023
8	6.8	6.0	1.4656	1.4656	.032	.033	.004	.005	.024	.022
9	6.5	5.7	1.4666	1.4666	.031	.034	.004	.005	.023	.023
10	7.3	6.8	1.4676	1.4656	.032	.033	.004	.005	.023	.021
11	7.4	7.0	1.4676	1.4666	.032	.032	.005	.003	.024	.021
12	6.8	6.9	1.4656	1.4666	.032	.032	.005	.004	.024	.022
13	7.1	7.0	1.4676	1.4666	.032	.032	.004	.005	.023	.022
14	7.3	7.8	1.4666	1.4666	.029	.034	.005	.005	.023	.023
15	7.8	7.2	1.4676	1.4676	.031	.032	.004	.004	.022	.023
16	7.2	7.7	1.4676	1.4646	.031	.032	.005	.005	.023	.023

[a]Numbers 4 through 9 were fired in the low-temperature test and 10 through 16 in the endurance test.

Note: The individual manufacturer is designated by code letters B and C.

The results of the examination of the rifles for compliance with the standards established in the various subparagraphs of paragraph 5.0 in Appendix J of SAPD-253F (Reference 4) are as follows (comments are made regarding only those subparagraphs where standards were not met):

a. Code B Rifles:

1) The slots in all three bolt rings of two of the rifles were in line. In addition, the slots in two of the bolt rings of five other rifles were in line.

2) In the extreme left position the rear sight engaged the inside of the rifle-carrying handle and would not pivot from the normal to the long-range position on 13 of the rifles.

b. Code C Rifles:

1) The buttstock screw was loose in three rifles.

2) The finish on the outside of the magazine well was spotty and uneven on three of the rifles.

3) The slots in two of the three bolt rings in three of the rifles were in line.

4) The finish on the bolt carrier in 11 of the rifles was spotty and uneven.

5) In the extreme left position the rear sight engaged the inside of the rifle-carrying handle and would not pivot from the normal to the long-range position on all 16 of the rifles.

2.2.5 Analysis

The M16A1 rifles from both producers met the requirement standards of the purchase description, with the exception of the areas as commented on in paragraph 2.2.4. None of these exceptions were serious enough to be classified as shortcomings.

2.3 ACCURACY TEST

2.3.1 Objective

The objective was to determine the accuracy and dispersion characteristics of the test rifles.

2.3.2 Criteria

The criteria are as shown below, except that they do not apply to the accuracy firing with the bayonet attached or firing from the bipod:

a. The extreme spread of a 10-shot group shall not exceed 4.8 inches at a range of 100 yards.

b. All impacts of each 10-shot group at 100 yards shall be within the rectangular outline of the targeting and accuracy diagram (17.6 inches vertical by 11.6 inches horizontal) as specified in Figure 1 of the purchase description.

c. Sight adjustments may be made in order to place the 10-shot group within the rectangular outline cited above but the sight adjustments shall not exceed the following:

1) The front sight shall be no higher than flush, nor below flush by more than 0.030 inch.

2) The rear sight shall be within two clicks right or left of mechanical zero.

2.3.3 Method

Three rifles from each manufacturer were fired employing M193 ammunition which was quality-certified to group within a mean radius of 1.2 to 1.4 inches at 200 yards as measured in accordance with MIL-C-9963.

Prior to the first record target, three sighting shots were fired with the sights centrally located (rear sight at mechanical zero, front sight at a point 0.015 inch below flush position). The sights were then adjusted, if necessary, within the limits cited in paragraph 2.3.2c. This setting of the sights was used throughout the remainder of the accuracy test.

Five 10-shot targets were then fired semiautomatically with each rifle from a benchrest position in a closed range. The test was repeated with an M7 bayonet attached to each rifle. The test was again repeated from the prone firing position using the M3 bipod without bayonet.

All targets were fired by a rifleman holding a current NRA Master classification. The targets were fired no faster than 10 to 30 spm; the rifles were cooled to ambient range temperature between each set of five targets.

2.3.4 Results

The target data are summarized in Table 2.3-I. The individual target data are contained in Appendix I.

At the completion of the accuracy test each of the six rifles had been fired 193 rounds and no malfunctions were experienced.

Table 2.3-I. Summary of Accuracy Firings from a Benchrest

Rifle No.	CI from AP[a] H	V	Extreme Spread	Mean Radius		No. of Rds Outside Rectangular Outline[b]	No. of Fliers[c]
Range: 100 yards. Ammunition: Cartridge, ball, 5.56-mm, M193, lot TW-1-145. Condition: Benchrest.							
B1	-2.5	+6.3	2.8	0.8		0	0
B2	-3.6	-1.6	3.5	1.1		d_1	0
B3	+1.3	+3.1	3.9	1.2		0	0
Avg	-1.6	-2.6	3.4	1.0	Total	1	0

See footnotes on pages 14 and 15.

Table 2.3-I (Cont'd)

Rifle No.	CI from AP[a] H	V	Extreme Spread	Mean Radius		No. of Rds Outside Rectangular Outline[b]	No. of Fliers[c]
C1	+2.2	-1.8	3.1	1.0		0	0
C2	+1.1	-0.8	2.8	0.8		0	0
C3	+0.4	+1.6	3.1	1.0		0	0
Avg	+1.2	-0.3	3.0	0.9	Total	0	0
Condition: Benchrest with bayonet.							
B1	-0.8	+6.4	3.0	0.9		0	0
B2	-2.0	-2.7	4.0	1.2		0	0
B3	+2.2	+1.5	3.4	1.1		0	0
Avg	-0.2	+1.7	3.5	1.0	Total	0	0
C1	+3.6	-3.2	3.3	1.0		0	0
C2	+3.0	-1.6	3.0	1.0		0	0
C3	+1.0	+1.4	2.9	1.0		0	0
Avg	+2.5	-1.1	3.1	1.0	Total	0	0
Condition: Prone with bipod.							
B1	-3.0	+4.3	4.3	1.4		1	0
B2	-4.7	-2.4	4.5	1.5		10	0
B3	+0.4	+2.7	4.3	1.4		0	0
Avg	-2.4	+1.5	4.3	1.4	Total	11	0
C1	+2.6	-4.0	5.7	1.8		0	0
C2	+0.6	-2.5	4.0	1.3		0	0
C3	+1.0	0.0	4.1	1.3		0	0
Avg	+1.4	-2.2	4.6	1.5	Total	0	0

[a]Center of impact from aiming point; the aiming point was at the 6 o'clock position on an 8-inch black bull's-eye. The aiming point was located midway vertically and horizontally within a rectangular outline measuring 17.6 inches vertically by 11.6 inches horizontally.

[b]Outside the rectangular outline is defined as any shot outside the outline or whose center intersects the inside edge of the outline. The corners of the outline were circular with a 2.8-inch radius.

Footnotes continued on following page.

Table 2.3-I (Cont'd)

[c]A flyer is defined as a shot hole which is a greater distance from the nearest shot hole than the extreme spread of the other nine holes.
[d]Occurred on the tenth round of the fourth 10-round target.

Note: The target measurements are in inches and the data are the average of five 10-round targets for each rifle. The individual target data are in Appendix I.

2.3.5 Analysis

The dispersion data show the performance of all rifles from both producers to be well within the 4.8-inch extreme-spread limit permitted in the purchase description (Reference 4). The data in Table 2.3-I show one shot from one code B rifle failed to impact within the specified rectangular outline. This occurred on the tenth round of the fourth 10-round target and the impact was 0.4 inch outside the left side of the outline. The rear sight on the rifle was set at mechanical zero during the firings. Two clicks right or left of mechanical zero are permitted. One click in windage adjustment will shift projectile impact approximately 1 inch; therefore, had one click right adjustment been made all rounds would have impacted within the specified outline.

A slight degradation in dispersion and a detectable shift in center of impact can be noted by comparing data for the benchrest, benchrest with bayonet attached, and prone with bipod. However, the average extreme-spread measurements were within the 4.8-inch benchrest requirement and the center-of-impact changes were not considered to be significant.

2.4 LOW-TEMPERATURE TEST (-65°F)

2.4.1 Objective

The objective was to determine the reliability and durability of the test weapons when fired in a low-temperature environment.

2.4.2 Criterion

The criterion is that the reliability and durability of the test weapons shall not be adversely affected, to any significant degree, when subjected to and fired at low temperatures.

2.4.3 Method

Six rifles from each producer were fired a total of 2000 rounds each from a climatic chamber at a temperature of -65°F. All firing was conducted from a benchrest position. The following procedures were used:

a. Rifles B4 through B6 and C4 through C6 were fired with M193 ball-projectile ammunition only. Rifles B7 through B9 and C7 through C9 were fired with a 4 to 1 mix of M193 ball and M196 tracer ammunition. The ball-tracer mix was loaded in the magazines so that the first four rounds fired were ball cartridges followed by one tracer cartridge, etc.

b. All rifles were removed from the climatic chamber after each 1000 rounds of firing and maintained per TM 9-1005-249-12 (Reference 2).

c. The rifles and ammunition were conditioned for a minimum period of 6 hours prior to initiation of each 1000-round interval; each 1000-round interval was divided into 100-round cycles with a 2-hour conditioning period between cycles.

d. During the first 1000 rounds of firing the rifles were conditioned between 100-round cycles with the bolt closed on an empty chamber and during the second 1000 rounds with the bolt closed with a live round in the chamber.

e. Each 100-round cycle was fired as follows:

   1) Twenty rounds in bursts of approximately five rounds each.

   2) Twenty rounds in a single continuous burst (record cyclic rate).

   3) Twenty rounds semiautomatically.

   4) Twenty rounds in bursts of approximately five rounds each.

   5) Twenty rounds semiautomatically.

f. Twelve magazines were employed throughout the test with each rifle and were used in rotation.

g. The rifle bolts were subjected to magnetic-particle inspection initially and after the 2000-round test.

2.4.4 Results

Plans were to fire 3000 rounds with each rifle under low-temperature conditions of -65°F; however, due to the excessive number and type of

malfunctions experienced the test was terminated after 2000 rounds with the concurrence of USATECOM (AMSTE-BC) and USAWECOM (AMSWE-QA).

Due to the nature and persistence of certain types of malfunctions in this test and because of the difficulty encountered in many instances in overcoming malfunctions, it is suggested that the function data contained in Appendix I be reviewed in conjunction with the data tables presented in this paragraph. A summary of the malfunctions, by type, which occurred during the low-temperature firings is given in Table 2.4-I. The malfunction rates for the test were 23.9 per 1000 rounds for the code B rifles and 15.4 per 1000 rounds for the code C rifles.

During the first 1000 rounds of firing when the rifles were being conditioned with the bolt closed, the predominant malfunction was of the failure-to-feed type which normally is readily clearable through use of the bolt-assist and/or charging handle. These were all classified as type I malfunctions. From the fifth 100-round cycle through the seventh cycle the bolt carrier was hand-cycled once on all rifles before inserting the magazine. This was done in an attempt to free the components within the bolt carrier. At the beginning of the eighth cycle and for the remainder of the 1000-round interval, the buttstock of the rifle was impacted on a wooden firing bench while pulling the charging handle rearward in order to retract the bolt-carrier group. At this time the bolt carrier was hand-cycled several times until the bolt would move to the locked position; the trigger was actuated once prior to inserting a loaded magazine into the rifle.

During the second 1000 rounds of firing, when the rifles were being conditioned with the bolt closed with a live round in the chamber, the predominant malfunctions were failures to feed and failures to fire.

When a failure to fire occurred on the first round of a cycle after conditioning, extreme difficulty was experienced clearing the malfunction because the bolt was frozen in the forward position with a round chambered. Clearing action required the gunner to hold the rifle while a second individual pulled rearward on the charging handle. If this failed, the gunner had to rap the charging handle sharply on the edge of the metal firing port. These failure-to-fire malfunctions were not readily clearable and therefore were classified as type II. A total of 40 type II failure-to-fire malfunctions occurred.

Table 2.4-I. Summary of Malfunctions Recorded during the Low-Temperature Test (-65°F)

Rifle No.[a]	1000-Rd Cycle No.	Malfunction Type								
		FBL	FFM	FFB	COEC	FFR[b]	FJ	BOB	FBR	Total
B4	1	13		1		1				15
	2	15	2			2	14	2		35
	Total	28	2	1		3	14	2		50
B5	1	16	1	2		2	1			22
	2	19	1		2	4				26
	Total	35	2	2	2	6	1			48
B6	1	13	1	1						15
	2	4			1	3				8
	Total	17	1	1	1	3				23
B7	1	27			3			2	1	33
	2	29			2	4	1	4		40
	Total	56			5	4	1	6	1	73
B8	1	9						2		11
	2	7			1	2	1			11
	Total	16			1	2	1	2		22
B9	1	22	5		1	1	4			33
	2	24			5	2	1	4	1	37
	Total	46	5		6	3	5	4	1	70
All Code B	1	100	7	4	4	4	5	4	1	129
	2	98	3	0	11	17	17	10	1	157
	Total	198	10	4	15	21	22	14	2	286

[a]Rifles 4, 5, and 6 were fired with M193 ball ammunition only and rifles 7, 8, and 9 were fired with a 4 to 1 mix of M193 ball and M196 tracer.
[b]After the test all rounds that failed to fire were again loaded in a rifle and did fire on the second attempt; therefore, none of the FFR malfunctions were attributed to ammunition failures.

Table 2.4-I (Cont'd)

Rifle No.[a]	1000-Rd Cycle No.	Malfunction Type								
		FBL	FFM	FFB	COEC	FFR[b]	FJ	BOB	FBR	Total
C4	1	9				5	2			16
	2	6	2			7	1			16
	Total	15	2			12	3			32
C5	1	13		1		7				21
	2	9			2	12				23
	Total	22		1	2	19				44
C6	1	9		1		5	3			18
	2	8				10			1	19
	Total	17		1		15	3		1	37
C7	1	11				1				12
	2	7			2	5		1		15
	Total	18			2	6		1		27
C8	1	10				1	2			13
	2	3			1	1		1		6
	Total	13			1	2	2	1		19
C9	1	10	2	1			2			15
	2	5			1	5				11
	Total	15	2	1	1	5	2			26
All Code C	1	62	2	3	0	19	9	0	0	95
	2	38	2	0	6	40	1	2	1	90
	Total	100	4	3	6	59	10	2	1	185

[a]Rifles 4, 5, and 6 were fired with M193 ball ammunition only and rifles 7, 8, and 9 were fired with a 4 to 1 mix of M193 ball and M196 tracer.
[b]After the test all rounds that failed to fire were again loaded in a rifle and did fire on the second attempt; therefore, none of the FFR malfunctions were attributed to ammunition failures.

The cyclic rates of fire recorded during the test on the 20-round automatic bursts (second magazine in each 100-round cycle) are given in Table 2.4-II. The rates were in the range normally expected with the M16A1 rifle in an extreme low-temperature environment; however, all rifles failed to maintain a consistent cyclic rate within the 700 to 940 spm requirement of the purchase description (Reference 4).

Table 2.4-II. Cyclic Rate-of-Fire Data Recorded during the Low-Temperature Test[a]

100-Rd Cycle No.	Rifle No.[b] B4	B5	B6	Rifle No.[c] B7	B8	B9
Round Count: 1 to 1000.						
1	699	-	-	672	716	706
2	693	654	664	666	678	674
3	684	668	649	674	691	696
4	675	660	658	671	678	677
5	683	633	660	672	667	666
6	670	630	657	675	679	680
7	680	648	664	675	672	682
8	680	629	660	657	664	665
9	674	652	679	678	666	683
10	664	649	659	673	670	673
Avg	680	647	661	671	678	680
Round Count: 1001 to 2000.						
1	-	698	703	702	722	720
2	755	664	682	675	686	693
3	737	730	753	675	689	680
4	732	688	724	657	666	675
5	702	718	677	668	679	682
6	-	653	730	675	677	755
7	-	675	-	682	698	707
8	-	-	-	673	677	700
9	-	675	683	684	688	706
10	694	682	635	675	680	688
Avg	724	687	698	677	686	701

[a]Measurements are in shots per minute.
[b]Only ball ammunition was fired in these rifles.
[c]A 4 to 1 mix of ball and tracer ammunition was fired in these rifles.

Table 2.4-II (Cont'd)

100-Rd Cycle No.	Rifle No.[b] C4	C5	C6	Rifle No.[c] C7	C8	C9
Round Count: 1 to 1000.						
1	-	-	-	706	694	691
2	746	693	693	693	678	672
3	716	714	688	710	689	684
4	703	680	675	698	688	678
5	704	690	686	638	675	673
6	686	693	682	696	682	686
7	693	700	680	686	686	675
8	660	699	678	680	665	657
9	714	727	710	684	675	658
10	668	686	662	686	680	658
Avg	699	698	684	688	681	673
Round Count: 1001 to 2000.						
1	741	752	719	723	720	719
2	707	711	693	693	727	694
3	708	729	706	703	691	686
4	710	726	688	694	660	691
5	684	706	677	694	675	653
6	657	707	674	694	666	660
7	-	-	-	706	684	714
8	-	-	-	688	671	666
9	684	719	671	688	675	677
10	685	727	689	667	673	672
Avg	697	722	690	695	684	683

[a]Measurements are in shots per minute.
[b]Only ball ammunition was fired in these rifles.
[c]A 4 to 1 mix of ball and tracer ammunition was fired in these rifles.

No broken or unserviceable parts occurred during firing and magnetic particle inspection of the rifle bolts after test disclosed no cracks or discontinuities resulting from the low-temperature test.

2.4.5 Analysis

The reliability level of all test rifles was substantially degraded by continued exposure to the low-temperature environment while attempting to fire 1000 rounds without maintenance. It should be emphasized, however, that exposure to low-temperature conditions alone does not

degrade initial (clean) weapon performance. During the first 100-round cycle of each 1000-round interval, after cleaning and lubricating, the malfunction rates, as calculated from the data in Table 2.4-III, were 0.8 per 1000 rounds for the code B rifles and 1.6 per 1000 rounds for the code C rifles. These rates are derived from a total of 1200 rounds of firing with each of the code B and code C rifles.

Table 2.4-III. Malfunction Occurrence in the First 100-Round Cycle of Each 1000-Round Interval

Rifle	1000-Rd Interval	Total Malfunctions Rifle No. 4	5	6	7	8	9
Code B	1	0	0	0	1	0	0
	2	0	0	0	0	0	0
Code C	1	0	0	0	0	0	2
	2	0	0	0	0	0	0

With both the code B and code C rifles the predominant occurrence of malfunctions was experienced within the first three rounds of the first magazine immediately following the conditioning periods. The malfunction occurrence relative to magazine number (five 20-round magazines per cycle) and round sequence from the magazine is shown in Table 2.4-IV.

Table 2.4-IV. Relationship of Malfunction Occurrence to Magazine Number and Round Number from Magazine

Rifle	Rd No. from Magazine	Total Malfunctions Magazine No. 1	2	3	4	5
Code B	1	76	0	1	2	0
	2	68	0	0	0	0
	3	41	0	0	0	0
	4 to 20	97	1	0	0	0
Total		282	1	1	2	0
Code C	1	96	1	0	1	0
	2	63	0	0	0	0
	3	11	0	3	0	0
	4 to 20	9	0	0	1	0
Total		179	1	3	2	0

Table 2.4-IV (Cont'd)

Rifle	Rd No. from Magazine	Total Malfunctions Magazine No. 1	2	3	4	5
All rifles	1	173	1	1	3	0
	2	131	0	0	0	0
	3	52	0	3	0	0
	4 to 20	106	1	0	1	0
Total		462	2	4	4	0

Approximately 75% of the total malfunctions (code B and code C rifles combined) occurred within the first three rounds of the first magazine in each 100-round cycle. Considering all rounds in the final four magazines in all cycles (80% of the total test or 19,200 rounds) only ten malfunctions occurred, resulting in a malfunction rate of 0.5 per 1000 rounds fired.

In summary, the initial round (first three) problems experienced on the first magazine, after a conditioning period, were attributed to fouling and combustion residue which froze inside the bolt and around the firing pin during conditioning periods. Since at times these components were temporarily immobilized and the operational capability of the weapon was seriously impaired, the performance of the rifle at low temperature was classified as an inherent deficiency of the present rifle - ammunition system. This is an uncorrected deficiency, having been previously reported in Reference 6.

2.5 ENDURANCE TEST (6000-ROUND)

2.5.1 Objective

The objective was to determine the reliability and durability of the test weapons.

2.5.2 Criteria

a. The cyclic rate of fire for each rifle shall be within 700 to 940 spm as measured at the beginning of the test and at 1000-round intervals thereafter.

b. The reliability and durability of the test weapons during 6000 rounds of firing shall not exceed the limits cited in Table L of the purchase description for the M16A1 rifle (Reference 4).

2.5.3 Method

Seven rifles from each manufacturer were each fired 6000 rounds. Five of the rifles from each manufacturer were fired with M193 ball ammunition only, and two rifles were fired with a 4 to 1 mix of M193 ball and M196 tracer ammunition. The ball - tracer mix was loaded in the magazines so that the first four rounds fired were ball cartridges followed by one tracer cartridge, etc.

For round-count purposes, the 40 rounds fired for functioning and cyclic rate during the initial inspection were included in the 6000-round total for the test. With the exception of the first cycle which consisted of 60 rounds, to maintain 100-round increments on the rifles, the rifles were fired in 100-round cycles and air cooled after each cycle. All firing was accomplished from a benchrest position. The 100-round cycles were fired in the manner outlined in paragraph 2.4.3e of the low-temperature test.

Maintenance (per TM 9-1005-249-12) was performed following each 1000 rounds of firing. The rifle bolts were magnetic-particle inspected initially (subtest 2.2, Initial Inspection) and after 6000 rounds. An inspection, which included trigger pull, firing-pin protrusion, firing-pin indent, headspace, and barrel-bore measurements, was conducted initially and at the conclusion of the test.

Twelve magazines were used with each rifle. The magazines were numbered consecutively 1 through 12 and coded to one rifle. For example, the magazines used with rifle B9 were numbered B9-1 through B9-12. The magazines were employed in rotation throughout the test. Magazines from three different producers were used. The magazine numbers matched with the appropriate letter code for the manufacturer are contained in Table I of Appendix I.

2.5.4 Results

The reliability and durability data are summarized from the performance data contained in Appendix I and are presented in Table 2.5-I. The cyclic rate-of-fire data recorded throughout the test are summarized for each 1000-round cycle and are presented in Table 2.5-II. Numerous lots of ammunition were fired in the rifles throughout the endurance test. These quantities of ammunition were from previously conducted quality assurance tests at Materiel Testing Directorate. During the recording of cyclic rates ball, M193, lot FA-1-50 was fired in rifles 10 through 14. A 4 to 1 mix consisting of ball, M193, lot FA-1-50 and tracer, M196, lot TW-18028 was fired in rifles 15 and 16.

Table 2.5-I. Summary of Endurance and Reliability Data

Rifle No.	Malfunctions							Total Rifle Mal-funct	Defective, Damaged or Broken Parts[a]	
	FFM	FFB	FBL	FF/ BOB	FBR	FFR	FJ		Extractor Spring	Bolt Ring
Producer: Code B.										
B10	1		1	2	1			5		
B11			1	10	2	[b]2		13		
B12		1		1	2			4		
B13				5				5		
B14								0		
B15					1			1		
B16				5				5		
Producer: Code C.										
C10		1	1					2	1 (6000)	
C11					1		[c]3	3	3 (2000), (1326), (1735)	
C12		1			1				1 (3000)	
C13		1					1	2	2 (3444), (2556)	
C14		1	1	1	7			10	1 (6000)	[d]2 (2000), (4000)
C15							1	1	1 (5775)	
C16		3		3			2		3 (3000), (1533), (1052)	

[a]The numbers appearing in parenthesis indicate the life of the broken part in rounds fired.

[b]Both failures to fire were attributable to ammunition. The firing-pin indent in the first round was deep, but the round failed to fire, and the second cartridge had an inverted primer.

[c]Two failures to eject occurred with the second broken extractor spring, only the first occurrence was charged against the rifle.

[d]During the 1000-round maintenance period it was noted that approximately 1/4 inch of the front bolt ring had broken away. At the 2000-round maintenance only a thin circular portion was remaining; therefore, it was replaced. At the 4000-round maintenance it was again noted that approximately 1/4 inch of the front bolt ring had broken away. At the conclusion of the 6000-round test a thin circular portion was remaining. A new bolt ring was installed.

Table 2.5-II. Summary of Cyclic-Rate-of-Fire Data during Endurance Test

Rifle No.		Cyclic Rate of Fire, spm, 1000-Round Cycle Number 1	2	3	4	5	6
Ammunition:	Ball, M193, lot FA-1-50.						
B10	Max	875	859	844	873	879	853
	Min	808	791	794	809	825	826
	Ex Var	67	68	50	64	54	27
	Avg	846	829	824	840	844	839
B11	Max	902	885	877	902	919	924
	Min	842	844	809	840	867	877
	Ex Var	60	41	68	62	52	47
	Avg	875	863	844	872	886	894
B12	Max	883	844	861	871	881	895
	Min	775	759	773	794	832	822
	Ex Var	108	85	88	77	49	73
	Avg	816	814	805	831	851	853
B13	Max	919	883	869	889	900	902
	Min	799	847	809	818	844	829
	Ex Var	120	36	60	71	56	73
	Avg	877	868	842	853	865	861
B14	Max	863	859	883	908	871	889
	Min	815	820	809	776	831	818
	Ex Var	48	39	74	132	40	71
	Avg	849	846	841	832	848	854
Ammunition:	Ball, M193, lot FA-1-50 and tracer, M196, lot TW-18028 (4 to 1 mix).						
B15	Max	863	863	857	865	865	883
	Min	788	792	801	809	822	847
	Ex Var	75	71	56	56	43	36
	Avg	840	830	831	833	835	867
B16	Max	906	853	845	877	879	887
	Min	831	804	794	789	816	834
	Ex Var	75	49	51	88	63	53
	Avg	854	832	820	838	837	870

Table 2.5-II (Cont'd)

Rifle No.		Cyclic Rate of Fire, spm 1000-Round Cycle Number 1	2	3	4	5	6
Ammunition:	Ball, M193, lot FA-1-50.						
C10	Max	867	912	906	933	908	906
	Min	798	844	865	847	829	813
	Ex Var	69	68	41	86	79	93
	Avg	841	881	889	881	865	863
C11	Max	857	883	908	863	869	924
	Min	775	798	831	811	827	806
	Ex Var	82	85	77	52	42	118
	Avg	822	844	865	838	841	871
C12	Max	859	900	859	867	926	926
	Min	746	781	813	822	849	799
	Ex Var	113	119	46	45	77	127
	Avg	796	849	844	849	877	880
C13	Max	815	885	859	853	861	908
	Min	741	791	823	829	822	791
	Ex Var	74	94	36	24	39	117
	Avg	788	839	841	841	838	850
C14	Max	853	906	879	908	881	889
	Min	[a]590	703	804	823	788	758
	Ex Var	263	203	75	85	93	131
	Avg	722	768	844	853	819	817
Ammunition:	Ball, M193, lot FA-1-50 and tracer, M196, lot TW-18028 (4 to 1 mix).						
C15	Max	823	847	869	865	863	879
	Min	744	788	825	781	816	813
	Ex Var	79	59	44	84	47	66
	Avg	790	817	842	831	841	851
C16	Max	822	926	857	877	879	883
	Min	714	788	806	806	813	746
	Ex Var	108	138	51	71	66	137
	Avg	750	839	826	828	835	829

[a]Not within the 700 to 940 requirement.

The before- and after-test measurements on trigger pull, firing-pin protrusion, firing-pin indent and headspace are given in Tables 2.2-I and II (subtest 2.2, Inspection). The before- and after-test barrel-bore measurements are contained in the APG library file copy of this report. The after-test magnetic-particle inspection of the rifle bolts from both producers disclosed only those from code C contained imperfections. Rifles C-10 and C-14 had small cracks in the rear fillet of the lugs located on the lower side of the extractor slot. The remaining five rifle bolts contained microscopic indications in the same area. Due to an oversight, a current of 600 amperes was used in the magnetic-particle inspection rather than 200 to 300 amperes as stated in the purchase description for the rifle (Reference 4). The test was not repeated; however, in the opinion of the test agency it was doubtful that the cracks would have been detected using the lower amperage.

Three of the code C extractor springs which failed and three code B springs which did not fail through 6000 rounds of firing were subjected to a metallurgical examination. The code C springs had a left-hand coil while the code B springs were right-hand. The drawing stated the direction of the helix was optional; however, the significance of this is uncertain. An X-ray emission scan revealed no qualitative difference in composition between the code C and code B springs. Microscopic examination of the fractured surfaces of the code C springs revealed typical fatigue patterns over at least half of the wire. Also, all failures appeared to originate on the inside of the coil which is the area of highest stress concentration in a helical compression spring and therefore the most susceptible to fatigue. The examination also revealed evidence of seams across the diameter of the wire in the code C springs. These would be undesirable in a spring of such small diameter and would reduce resistance to fatigue, thus lowering the round life of the spring. Also, a transverse crack was found at the inside surface of the coil in one of the code C springs which could indicate the possibility that these springs were not fully stress-relieved after forming.

2.5.5 Analysis

The purchase description SAPD-253F (Reference 4) establishes an allowable number of malfunctions and parts breakage for a 6000-round endurance test. This reliability and durability standard has been extracted from the purchase description and is contained in Table I-II. The performance of the seven M16A1 rifles from each of the two producers were assessed against these requirements and the assessment is given in Table 2.5-III.

Table 2.5-III. Rifle Performance Data Assessed Against Purchase Description Requirements

APG No.	SAPD Requirement Met	SAPD Requirement Failed	Reason for Failure
Producer: Code B[a].			
B10	X		
B11		X	Ten failures to feed from the magazine occurred.
B12	X		
B13		X	Five failures to feed from the magazine occurred.
B14	X		
B15	X		
B16		X	Five failures to feed from the magazine occurred.
Producer: Code C[b].			
C10	X		
C11		X	Three broken extractor springs occurred.
C12	X		
C13		X	Two broken extractor springs occurred.
C14		X	Two broken bolt rings and seven failures of the bolt to remain at the rear were experienced[c].
C15	X		
C16		X	Three broken extractor springs occurred.

[a]A total of four failures to feed from the magazine with a single rifle or nine with 4 rifles combined are allowed. If the malfunctions with rifle B13 were combined with any three rifles except B11 or B16, the requirements would be met. Similarly, if the malfunctions with rifle B16 were combined with any three rifles except B11 or B13 the requirements would be met.

[b]One broken extractor spring with a minimum life of 2000 rounds with a single rifle or four with four rifles combined are allowed. All code C rifles experienced at least one broken extractor spring.

[c]Although the effect on functioning resulting with a broken bolt ring has not been fully evaluated, this component is considered critical and failure prior to 6000 rounds is not permitted. Also, only three failures of the bolt to remain to the rear are allowed with a single rifle.

The cause of the FF/BOB malfunction with the code B rifles was not determined. The malfunction occurred during both semiautomatic and automatic fire with various magazines and did not appear to be related to any particular round from the magazine. The cause could probably be determined through the use of time-displacement cameras or high-speed motion-pictures; however, because of the infrequent and random occurrence of the malfunction, the time and costs for photography would be prohibitive.

Throughout the 6000 rounds of firing, with the exception of rifle C14 during the first 1000-round cycle, all rifles met the cyclic-rate requirement of 700 to 900 spm. Failure to meet cyclic-rate requirements occurred during the seventh and eighth 100-round increments of the cycle when the rates of the 20-round bursts dropped to 628 and 590 rpm. The average cyclic rate for the 1000-round cycle was 722 spm with a maximum rate of 853 and a minimum of 590; the cause could not be determined.

During the previous comparison test (Reference 6) no code B rifles failed to meet the purchase description requirements because of failures to feed from the magazine, particularly the FF/BOB type of malfunction. The BOB (bolt overrode base of round) is a critical malfunction because an inexperienced rifleman can easily pull the charging handle back too far during clearing operation and allow a second round to move into position in the magazine. Then, with release of the charging handle, a double feed will occur which normally requires removal of the magazine for clearing. The predominant reasons for failure of code B rifles during the previous comparison test was an excessive number of failures of the bolt to remain to the rear (FBR) and broken parts.

With the code C rifles during the previous comparison test (Reference 6) no rifles failed to meet requirements because of broken extractor springs. In fact, the code C rifles demonstrated a definite superiority over the other producer's weapons with respect to extractor-spring life. The predominant causes for failure of the code C rifles were FBR's and broken bolt rings.

SECTION 3. APPENDICES

APPENDIX I - TEST DATA

Index for Target Data

1. The letter of the target number identifies the manufacturer and the first digit represents the APG rifle number, e.g.

   C-1-1 = Code C manufacturer, rifle No. 1, and target No. 1.

   B-1-1 = Code B manufacturer, rifle No. 1, and target No. 1.

2. The first group of five targets with all rifles was fired from a benchrest; the second group of five targets was benchrest with bayonet attached; and the third group was prone position from a bipod, e.g.

   C-1-1 through -5 = benchrest position.
   C-1-6 through -10 = benchrest with bayonet attached.
   C-1-11 through -15 = prone position from bipod.

   B-1-46 through -50 = benchrest position.
   B-1-51 through -55 = benchrest with bayonet attached.
   B-1-56 through -60 = prone position from bipod.

3. The target data are recorded relative to the aiming point (the six o'clock position on the bull's-eye).

4. Barrel-bore measurements are available in the report copy at the APG library.

TGT NO.	EVD	MVD	VSD	EHD	MHD	HSD	ES	MR	CI H	CI V
C-1-1	1.7	0.4	0.6	2.1	0.6	0.7	2.1	0.8	2.6	-1.2
C-1-2	3.7	0.9	1.1	1.6	0.5	0.6	3.7	1.0	1.9	-2.2
C-1-3	3.2	0.8	1.0	2.4	0.6	0.8	3.6	1.0	2.3	-1.7
C-1-4	3.5	0.8	1.0	2.3	0.4	0.6	3.6	1.0	1.6	-1.5
C-1-5	2.1	0.5	0.7	2.7	0.6	0.8	2.7	0.9	2.5	-2.4
MEAN	2.8	0.7	0.9	2.2	0.5	0.7	3.1	1.0	2.2	-1.8
C-1-6	2.4	0.6	0.7	2.9	0.7	1.0	3.7	1.0	3.5	-3.0
C-1-7	3.7	0.9	1.2	2.7	0.7	0.9	4.6	1.3	3.6	-3.6
C-1-8	1.4	0.5	0.6	1.9	0.5	0.6	2.3	0.7	4.1	-3.2
C-1-9	3.0	0.7	0.9	2.0	0.7	0.8	3.1	1.1	3.6	-3.3
C-1-10	2.0	0.5	0.6	2.7	0.8	0.9	2.8	1.0	3.0	-2.8
MEAN	2.5	0.6	0.8	2.4	0.7	0.8	3.3	1.0	3.6	-3.2
C-1-11	5.4	1.4	1.8	3.5	0.8	1.0	5.9	1.7	3.0	-4.1
C-1-12	3.0	0.7	0.9	2.7	0.7	0.9	3.8	1.1	2.5	-2.2
C-1-13	4.1	1.2	1.4	3.1	1.0	1.1	4.3	1.6	3.4	-3.1
C-1-14	3.7	0.9	1.1	5.9	1.2	1.7	6.1	1.7	2.0	-5.9
C-1-15	6.6	2.1	2.5	6.4	2.2	2.5	8.6	3.2	2.3	-4.5
MEAN	4.6	1.3	1.5	4.3	1.2	1.4	5.7	1.8	2.6	-4.0
C-2-16	2.4	0.6	0.8	1.8	0.4	0.6	2.4	0.8	1.1	-0.9
C-2-17	1.3	0.4	0.4	1.5	0.4	0.5	1.7	0.6	1.0	-0.6
C-2-18	2.2	0.6	0.7	2.7	0.7	0.8	2.7	1.0	1.0	-0.6
C-2-19	2.2	0.5	0.6	2.5	0.6	0.9	2.6	0.9	1.3	-0.8
C-2-20	4.4	0.8	1.2	1.8	0.5	0.6	4.7	1.0	1.3	-1.3
MEAN	2.5	0.6	0.7	2.1	0.5	0.7	2.8	0.8	1.1	-0.8
C-2-21	1.7	0.4	0.5	1.5	0.4	0.5	2.3	0.6	3.1	-0.9
C-2-22	3.0	0.5	0.8	2.6	0.7	0.8	3.0	1.0	3.2	-2.1
C-2-23	2.9	0.9	1.0	2.2	0.6	0.8	2.9	1.2	2.3	-2.5
C-2-24	3.4	0.9	1.1	3.2	0.9	1.1	4.0	1.3	2.9	-0.7
C-2-25	2.8	0.6	0.8	1.9	0.3	0.5	2.8	0.8	3.2	-1.8
MEAN	2.8	0.6	0.8	2.3	0.6	0.7	3.0	1.0	3.0	-1.6

TGT NO.	EVD	MVD	VSD	EHD	MHD	HSD	ES	MR	CI H	CI V
C-2-26	3.7	0.9	1.1	2.3	0.7	0.8	3.9	1.2	1.0	-2.6
C-2-27	2.9	0.9	1.1	3.2	0.8	1.1	3.9	1.3	1.1	-3.8
C-2-28	3.4	0.8	1.1	3.9	0.9	1.2	4.4	1.3	-0.4	-1.1
C-2-29	3.5	1.0	1.2	2.9	0.8	1.0	3.7	1.4	0.6	-1.8
C-2-30	3.7	0.8	1.1	1.5	0.4	0.5	3.8	1.0	0.8	-3.1
MEAN	3.4	0.9	1.1	2.8	0.7	0.9	4.0	1.3	0.6	-2.5
C-3-31	3.4	0.9	1.1	2.3	0.5	0.6	3.5	1.1	0.4	2.8
C-3-32	2.8	0.7	0.8	2.3	0.8	0.9	3.1	1.1	0.4	1.4
C-3-33	1.8	0.6	0.7	1.5	0.5	0.6	2.0	0.8	0.5	1.6
C-3-34	3.7	1.1	1.3	1.9	0.5	0.6	3.7	1.3	0.3	0.8
C-3-35	2.9	0.8	0.9	1.6	0.4	0.6	3.1	0.9	0.4	1.5
MEAN	2.9	0.8	1.0	1.9	0.5	0.7	3.1	1.0	0.4	1.6
C-3-36	2.0	0.6	0.7	2.9	0.8	1.0	2.9	1.1	0.6	2.0
C-3-37	3.3	0.8	1.0	2.7	0.7	0.9	3.8	1.1	0.7	1.3
C-3-38	1.3	0.4	0.5	2.1	0.5	0.6	2.2	0.7	0.6	1.3
C-3-39	2.0	0.5	0.7	1.9	0.4	0.6	2.6	0.7	1.5	1.6
C-3-40	3.0	0.7	0.9	3.0	0.9	1.1	3.2	1.2	1.4	1.0
MEAN	2.3	0.6	0.8	2.5	0.7	0.8	2.9	1.0	1.0	1.4
C-3-41	4.7	0.9	1.3	5.3	1.1	1.5	6.0	1.6	-0.7	-1.1
C-3-42	3.1	0.8	1.0	3.1	0.7	0.9	3.7	1.1	2.0	0.8
C-3-43	2.3	0.6	0.8	2.4	0.8	1.0	3.1	1.1	1.5	0.2
C-3-44	4.2	0.9	1.3	2.4	0.5	0.7	4.3	1.2	0.7	0.6
C-3-45	3.3	1.0	1.2	2.5	0.7	0.8	3.5	1.4	1.4	-0.5
MEAN	3.5	0.9	1.1	3.1	0.8	1.0	4.1	1.3	1.0	-0.0
B-1-46	3.6	0.7	1.0	1.9	0.5	0.6	3.8	1.0	-2.2	6.0
B-1-47	2.9	0.6	0.9	1.3	0.4	0.5	3.0	0.8	-2.2	6.4
B-1-48	2.2	0.5	0.7	2.2	0.4	0.6	2.6	0.8	-2.3	6.7
B-1-49	2.1	0.6	0.7	1.8	0.4	0.6	2.2	0.8	-2.7	6.2
B-1-50	1.9	0.5	0.6	2.5	0.6	0.8	2.5	0.9	-3.0	6.0
MEAN	2.5	0.6	0.8	1.9	0.5	0.6	2.8	0.8	-2.5	6.3

TGT NO.	EVD	MVD	VSD	EHD	MHD	HSD	ES	MR	H	V
B-1-51	3.1	0.8	1.0	1.8	0.5	0.7	3.1	1.1	-0.9	6.0
B-1-52	2.0	0.5	0.6	1.8	0.4	0.5	2.4	0.7	-0.6	6.2
B-1-53	2.6	0.6	0.8	2.2	0.7	0.8	2.8	1.0	-0.6	6.9
B-1-54	2.4	0.5	0.7	3.0	0.5	0.8	3.8	0.7	-1.2	6.8
B-1-55	2.5	0.6	0.8	2.6	0.6	0.8	2.8	1.0	-0.7	6.2
MEAN	2.5	0.6	0.8	2.3	0.6	0.7	3.0	0.9	-0.8	6.4
B-1-56	4.6	1.0	1.3	4.9	1.0	1.5	6.3	1.6	-4.1	5.0
B-1-57	2.1	0.6	0.7	2.1	0.7	0.8	2.6	1.0	-2.3	2.4
B-1-58	3.7	1.0	1.3	4.6	1.3	1.6	4.8	1.8	-1.8	3.9
B-1-54	4.5	1.0	1.3	3.7	1.0	1.2	4.5	1.5	-4.0	4.6
B-1-60	1.9	0.4	0.5	3.1	0.8	1.0	3.1	1.0	-2.6	5.4
MEAN	3.4	0.8	1.0	3.7	1.0	1.2	4.3	1.4	-3.0	4.3
B-2-61	2.7	0.7	0.9	2.4	0.6	0.8	3.2	1.0	-4.3	-1.7
B-2-62	1.8	0.5	0.6	3.5	0.8	1.1	3.6	1.1	-3.1	-1.5
B-2-63	3.1	0.7	0.9	3.6	0.8	1.1	3.6	1.2	-3.4	-1.6
B-2-64	3.7	0.8	1.0	3.7	0.9	1.1	4.1	1.2	-4.3	-1.0
B-2-65	2.7	0.4	0.7	2.8	0.7	0.9	2.9	0.9	-3.0	-2.4
MEAN	2.8	0.6	0.8	3.2	0.8	1.0	3.5	1.1	-3.6	-1.6
B-2-66	5.5	1.0	1.5	3.5	0.8	1.1	5.5	1.5	-2.0	-2.4
B-2-67	2.6	0.6	0.8	3.1	0.9	1.1	4.0	1.2	-1.9	-2.7
B-2-68	3.5	0.9	1.1	2.3	0.6	0.8	3.7	1.2	-1.5	-3.2
B-2-69	2.8	0.7	0.9	3.1	0.9	1.1	4.0	1.2	-2.6	-2.2
B-2-70	2.8	0.8	1.0	1.6	0.5	0.6	2.8	1.0	-1.8	-2.7
MEAN	3.4	0.8	1.1	2.7	0.7	0.9	4.0	1.2	-2.0	-2.7
B-2-71	4.1	1.1	1.4	4.5	0.9	1.3	5.0	1.6	-4.8	-1.4
B-2-72	3.5	0.9	1.1	3.3	1.1	1.2	4.0	1.5	-4.1	-2.0
B-2-73	3.2	0.9	1.0	3.0	0.8	1.0	3.4	1.3	-3.6	-2.7
B-2-74	2.3	0.6	0.7	4.2	1.2	1.5	4.3	1.4	-6.6	-3.8
B-2-75	4.0	1.1	1.4	5.5	1.0	1.5	5.6	1.7	-4.3	-2.1
MEAN	3.4	0.9	1.1	4.1	1.0	1.3	4.5	1.5	-4.7	-2.4

TGT NO.	EVD	MVD	VSD	EHD	MHD	HSD	ES	MR	CI H	CI V
B-3-76	3.4	0.7	1.0	2.6	0.6	0.8	3.5	1.1	-0.0	2.9
B-3-77	3.3	0.8	1.0	2.6	0.8	1.0	3.8	1.2	1.6	3.5
B-3-78	3.0	0.8	1.0	3.6	0.8	1.0	4.1	1.2	1.9	3.4
B-3-79	2.6	0.6	0.8	3.7	0.9	1.2	4.0	1.1	1.2	3.3
B-3-80	3.8	0.9	1.2	2.6	0.8	1.0	4.0	1.3	2.0	2.6
MEAN	3.2	0.8	1.0	3.0	0.8	1.0	3.9	1.2	1.3	3.1
B-3-81	3.2	0.6	0.9	3.6	1.0	1.2	3.8	1.3	2.2	1.7
B-3-82	3.3	0.8	1.0	4.0	0.6	1.0	4.2	1.1	2.3	1.1
B-3-83	3.6	0.7	1.0	2.7	0.8	0.9	3.7	1.2	2.9	1.8
B-3-84	2.5	0.5	0.7	2.1	0.7	0.8	2.5	1.0	1.3	1.3
B-3-85	2.3	0.6	0.7	2.5	0.7	0.9	2.6	1.0	2.2	1.7
MEAN	3.0	0.6	0.9	3.0	0.8	1.0	3.4	1.1	2.2	1.5
B-3-86	4.4	0.9	1.3	4.6	1.2	1.5	5.2	1.7	-0.5	3.8
B-3-87	3.0	0.7	0.9	3.1	0.5	0.8	3.4	1.0	0.8	3.3
B-3-88	2.8	0.6	0.8	2.9	0.7	0.9	3.1	0.9	-0.6	2.5
B-3-89	5.0	1.2	1.6	5.2	1.3	1.6	5.6	2.0	0.5	1.4
B-3-90	2.9	0.9	1.1	4.3	1.2	1.5	4.3	1.7	1.8	2.5
MEAN	3.6	0.9	1.1	4.0	1.0	1.3	4.3	1.4	0.4	2.7

Table I-I. Magazine Index

Gun No.	Code Index for Magazine Manufacturer[a] APG Assigned No. 1	2	3	4	5	6	7	8	9	10	11	12
Subtest: Low temperature.												
B4	D	D	D	D	D	D	D	D	D	D	D	D
B5	D	D	D	D	D	D	D	D	D	D	D	D
B6	D	D	D	D	D	D	D	D	D	D	D	D
B7	D	D	D	D	D	D	D	D	D	D	D	D
B8	D	D	D	D	D	D	D	D	D	D	D	D
B9	D	D	D	D	D	D	D	D	D	D	D	D
C4	E	E	E	E	E	E	E	D	D	D	D	D
C5	E	E	E	E	E	E	E	D	D	D	D	D
C6	E	E	E	E	E	E	E	D	D	D	D	D
C7	E	E	E	E	E	E	E	D	D	D	D	D
C8	E	E	E	E	E	E	E	D	D	D	D	D
C9	E	E	E	E	E	E	E	D	D	D	D	D
Subtest: Endurance.												
B10	D	D	D	D	D	D	D	A	A	A	A	D
B11	D	D	D	D	D	D	D	A	A	A	A	D
B12	D	D	D	D	D	D	D	A	A	A	A	D
B13	D	D	D	D	D	D	D	A	A	A	A	D
B14	D	D	D	D	D	D	D	A	A	A	A	D
B15	D	D	D	D	D	D	D	D	D	D	D	D
B16	D	D	D	D	D	D	D	D	D	D	D	D
C10	E	E	E	E	E	E	E	A	A	A	A	D
C11	E	E	E	E	E	E	E	A	A	A	A	D
C12	E	E	E	E	E	E	E	A	A	A	A	D
C13	E	E	E	E	E	E	E	A	A	A	A	D
C14	E	E	E	E	E	E	E	A	A	A	A	D
C15	E	E	E	E	E	E	E	A	A	A	A	D
C16	E	E	E	E	E	E	E	D	D	D	D	D

[a]For example, magazine B4-1 was assigned to rifle B4 and was manufactured by producer Code D; magazine C4-1 was assigned to rifle C4 and was manufactured by producer Code E.

Table I-II. Malfunctions and Unserviceable Parts Permitted in 6,000 Round Endurance Test (Extracted from Reference 4)

Malfunctions[1]	Single Rifle	Four Rifles
Failure of bolt to lock[2]	2	4
Failure to fire	2	4
Failure to feed (from magazine)	4	9
Failure to eject	2	4
Failure to chamber	3	7
Failure to extract	1	2
Bolt fails/hold rear	3	8
All other malfunctions[4]	0	0
Total - above malfunctions combined	9	22

Unserviceable Parts[1]	Minimum Life[5] Rounds	Four Rifles[6] Combined
Magazine assembly	250	2
Ejector spring	3000	2
Extractor spring	2000	4
Other parts	3000	1 (See note 3)
Total unserviceable parts - above unserviceable parts combined		4

[1]When malfunctions are traceable to particular parts, it is permissible to replace such parts and record them as unserviceable, subject to the limitations of Table I. When verified by the government representative that previously recorded malfunctions are attributable to an unserviceable part, such malfunctions shall not be counted against the rifle being tested, provided that they occurred not more than 200 rounds prior to replacement of the unserviceable part. These 200 rounds shall have been fired with the unserviceable part. However, such malfunctions shall remain recorded and properly identified. Malfunction attributable solely to ammunition defects, as verified by the government representative, shall not be counted against the rifle; however, such malfunctions shall be recorded.

Table I-II (Cont'd)

[2]In the event of any failure of bolt to lock malfunction, the forward assist assembly shall be operated. Failure of the forward assist assembly to remain engaged with the bolt carrier assembly during manual attempt to lock bolt shall be considered an additional malfunction in the category of "other malfunctions."

[3]Other parts shall be limited to trigger spring, disconnect spring, hammer spring, extractor pin, and extractor.

[4]Other malfunctions include, but are not limited to: Occurrence of doubling (two shots fired with a single trigger pull) during semi-automatic firing; failure to immediately stop firing when the trigger is released (uncontrolled fire) during burst firing; and failure of forward bolt assist assembly to remain engaged with bolt carrier assembly during manual attempt to lock the bolt, etc.

[5]Minimum life rounds is the minimum allowable life of an individual part, whether it is the original part or a replacement part, expressed in the number of weapon rounds fired prior to failure. For example, an extractor spring failing prior to firing 2000 rounds on a new rifle, has not met the minimum life rounds. The failure shall be recorded and shall be cause for test failure.

[6]The allowable number of unserviceable parts shown for 4 rifles combined applies only to parts failing after the minimum life rounds have been fired on the weapon. For example, ejector springs failing at 3500 rounds on one rifle and at 4100 rounds on a second weapon fall within the allowable limits of 2 on 4 rifles combined; however, failure of an ejector spring on a third rifle after firing 3000 rounds, exceeds the allowance and shall be cause for test failure.

Table I-III. Reliability and Maintenance Data for Codes B and C Rifles

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Malfunctions: Mag Code No.	Malfunctions: Mode of Fire	Malfunctions: Type	Malfunctions: Class	Unserviceable Parts: Part Name	Unserviceable Parts: No. Rds on Part at Replacement	Remarks
Rifle: Serial No. 3406589 (Code B-1).													
Subtest: Initial inspection.													
Ammunition: M193 ball, lot FA-1-50.													
S	DS	1.00	1.00	0									
				21 to 40	778		B1-2						Total rounds fired, 40.
Subtest: Accuracy.													
Ammunition: M193 ball, lot TW-1-145.													
S	GS	0.50	0.50	193									Total rounds fired, 153.
Rifle Serial No. 3409232 (Code B-2).													
Subtest: Initial inspection.													
Ammunition: M193 ball, lot FA-1-50.													
S	DS	0.93	0.93	0									
				21 to 40	804		B2-2						Total rounds fired, 40.
Subtest: Accuracy.													
Ammunition: M193 ball, lot TW-1-145.													
S	GS	0.52	0.52	193									Total rounds fired, 153.
Rifle: Serial No. 3410211 (Code B-3).													
Subtest: Initial inspection.													
Ammunition: M193 ball, lot FA-1-50.													
S	DS	0.92	0.92	0									
				21 to 40	804		B3-3						Total rounds fired, 40.

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Mag Code No.	Mode of Fire	Type	Class	Unserviceable Parts: Part Name	No. Rds on Part at Replacement	Remarks
Subtest: Accuracy. Ammunition: M193 ball, lot TW-1-145.													
S	GS	0.49	0.49	193									Total rounds fired, 153.
Rifle: Serial No. 3411896 (Code B-4). Subtest: Initial inspection. Ammunition: M193 ball, lot WCC-1-68.													
S	DS	0.70	0.70	0									
				21 to 40	808		B4-2						Total rounds fired, 40.
Subtest: Low temperature (-65°F). Ammunition: M193 ball, lot WCC-1-68 (rounds 1 to 2000).													
				21 to 40	699		B4-1						
				101		1	B4-6	Burst	FFB	I			BA.
				121 to 140	693		B4-7						
				201		1	B4-11	Burst	FBL	I			BA.
				202		2	B4-11	Burst	FBL	I			BA.
				203		3	B4-11	Burst	FBL	I			BA.
				221 to 240	684		B4-12						
				301		1	B4-4	Burst	FBL	I			BA.
				301		1	B4-4	Burst	FFR	I			CH.
				321 to 340	675		B4-5						
Prior to the starting the fifth 100-round cycle and until otherwise noted the bolt carrier was hand-cycled once before inserting a magazine in the rifle.													
				401		1	B4-9	Burst	FBL	I			BA.
				421 to 440	683		B4-10						

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Mag Code No.	Mode of Fire	Type	Class	Unserviceable Parts: Part Name	No. Rds on Part at Replacement	Remarks
				501		1	B4-2	Burst	FBL	I			BA.
				521 to 540	670		B4-3						
				601		1	B4-7	Burst	FBL	I			BA.
				621 to 640	680		B4-8						

For the remainder of the 100-round cycles, until maintenance was performed, the buttstock of the rifle was impacted on a wooden firing bench while pulling the charging handle in order to retract the bolt-carrier group. The bolt and carrier were then hand-cycled several times and the trigger was actuated once prior to inserting a magazine in the rifle.

				701		1	B4-12	Burst	FBL	I			BA.
				709		9	B4-12	Burst	FBL	I			BA.
				721 to 740	680		B4-1						
				801		1	B4-5	Burst	FBL	I			BA.
				802		2	B4-5	Burst	FBL	I			BA.
				821 to 840	674		B4-6						
				901		1	B4-10	Burst	FBL	I			BA.
				902		2	B4-10	Burst	FBL	I			BA.
				921 to 940	664		B4-11						
S	0	0.85	0.85	1000									
				1021 to 1040	Lost		B4-4						
				1102		2	B4-8	Burst	FBL	I			BA.
				1121 to 1140	755								
				1221 to 1240	737		B4-2						
				1301		1	B4-6	Burst	FJ	I			CH.
				1302		2	B4-6	Burst	FBL	I			BA.
				1321 to 1340	732		B4-7						
				1401		1	B4-11	Burst	FFR	II			-[a]
				1402		2	B4-11	Burst	FJ	I			CH.
				1402		2	B4-11	Burst	FBL	I			BA.

[a]With the occurrence of failures to fire on the first round of a cycle extreme difficulty was experienced clearing the malfunction. The bolt was frozen in the forward position. Clearing action normally required the gunner to hold the rifle while a second individual pulled rearward on the charging handle; if this failed, the gunner had to rap the charging handle sharply on the edge of the metal firing port.

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Mag Code No.	Mode of Fire	Type	Class	Unserviceable Parts: Part Name	No. Rds on Part at Replacement	Remarks
				1421 to 1440	702		B4-12						
				1501		1	B4-4	Burst	FFR	II			CH.
				1502		2	B4-4	Burst	FBL	I			BA.
				1502		2	B4-4	Burst	FJ	I			CH.
				1503		3	B4-4	Burst	FBL	I			BA.
				1503		3	B4-4	Burst	FJ	I			CH.
				1504		4	B4-4	Burst	FFM	I			CH.
				1508		8	B4-4	Burst	FFM	I			CH.
				1521 to 1540	Lost		B4-5						
				1584		4	B4-8	Semi	BOB	I			CH.
				1585		5	B4-8	Semi	BOB	I			CH.
				1601		1	B4-9	Burst	FJ	I			CH.
				1602		2	B4-9	Burst	FBL	I			BA.
				1602		2	B4-9	Burst	FJ	I			CH.
				1603		3	B4-9	Burst	FBL	I			BA.
				1621 to 1640	Lost		B4-10						
				1701		1	B4-2	Burst	FJ	I			CH.
				1702		2	B4-2	Burst	FBL	I			BA.
				1702		2	B4-2	Burst	FJ	I			CH.
				1703		3	B4-2	Burst	FBL	I			BA.
				1703		3	B4-2	Burst	FJ	I			CH.
				1704		4	B4-2	Burst	FBL	I			BA.
				1721 to 1740	Lost		B4-3						
				1802		2	B4-7	Burst	FBL	I			BA.
				1802		2	B4-7	Burst	FJ	I			CH.
				1803		3	B4-7	Burst	FBL	I			BA.
				1827		7	B4-8	Auto.	FJ	I			CH.
				1821 to 1840	Lost		B4-8						
				1901		1	B4-12	Burst	FJ	I			CH.
				1902		2	B4-12	Burst	FBL	I			BA.
				1902		2	B4-12	Burst	FJ	I			CH.
				1903		3	B4-12	Burst	FBL	I			BA.
				1907		7	B4-12	Burst	FJ	I			CH.

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Mag Code No.	Mode of Fire	Type	Class	Unserviceable Parts: Part Name	No. Rds on Part at Replacement	Remarks
				1908		8	B4-12	Burst	FBL	I			BA.
				1921 to 1940	694		B4-1						
S	0	1.05	1.05	2000									
Rifle: Serial No. 3411953 (Code B-5).													
Subtest: Initial inspection.													
Ammunition: M193 ball, lot LC-1-182.													
S	DS	0.70	0.70	0									
				21 to 40	750		B5-2						Total rounds fired, 40.
Subtest: Low temperature.													
Ammunition: M193 ball, lot LC-1-182 (round 1 to 2000).													
				21 to 40	Lost		B5-2						
				101		1	B5-6	Burst	FFM	I			BA.
				121 to 140	654		B5-7						
				201		1	B5-11	Burst	FFB	I			BA.
				221 to 240	668		B5-12						
				301		1	B5-4	Burst	FFB	I			BA.
				305		5	B5-4	Burst	FBL	I			BA.
				321 to 340	660		B5-5						
Same comment as with rifle B-4 prior to the fifth 100-round cycle.													
				404		4	B5-9	Burst	FBL	I			BA.
				421 to 440	663		B5-10						
				501		1	B5-2	Burst	FBL	I			BA.
				501		1	B5-2	Burst	FFR	I			CH.
				521 to 540	630		B5-3						
				601		1	B5-7	Burst	FBL	I			BA.
				621 to 640	648		B5-8						

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Mag Code No.	Mode of Fire	Type	Class	Unserviceable Parts: Part Name	No. Rds on Part at Replacement	Remarks
Same comment as with rifle B-4 prior to the eighth 100-round cycle.													
				701		1	B5-12	Burst	FBL	I			BA.
				702		2	B5-12	Burst	FBL	I			BA.
				703		3	B5-12	Burst	FBL	I			BA.
				721 to 740	629		B5-1						
				801		1	B5-5	Burst	FBL	I			BA.
				801		1	B5-5	Burst	FFR	I			CH.
				821 to 840	652		B5-6						
				901		1	B5-10	Burst	FBL	I			BA.
				901		1	B5-10	Burst	FJ	I			CH.
				902		2	B5-10	Burst	FBL	I			BA.
				903		3	B5-10	Burst	FBL	I			BA.
				904		4	B5-10	Burst	FBL	I			BA.
				905		5	B5-10	Burst	FBL	I			BA.
				906		6	B5-10	Burst	FBL	I			BA.
				907		7	B5-10	Burst	FBL	I			BA.
				908		8	B5-10	Burst	FBL	I			BA.
				921 to 940	649		B5-11						
S	0	1.47	1.47	1000									
				1021 to 1040	698		B5-4						
				1102		2	B5-8	Burst	FBL	I			BA.
				1103		3	B5-8	Burst	FBL	I			BA.
				1104		4	B5-8	Burst	FBL	I			BA.
				1105		5	B5-8	Burst	FBL	I			BA.
				1106		6	B5-8	Burst	FBL	I			BA.
				1107		7	B5-8	Burst	FBL	I			BA.
				1121 to 1140	664		B5-9						
				1202		2	B5-1	Burst	FBL	I			BA.
				1221 to 1240	730								
				1302		2	B5-6	Burst	COEC	I			CH.
				1303		3	B5-6	Burst	FBL	I			FBL.

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Mag Code No.	Mode of Fire	Type	Class	Unserviceable Parts: Part Name	No. Rds on Part at Replacement	Remarks
				1321 to 1340	688		B5-7						
				1341		1	B5-8	Semi	FFM	I			BA.
				1401		1	B5-11	Burst	FFR	II			See comment with rifle B-4 at 1400 rounds.
				1402		2	B5-11	Burst	FBL	I			BA.
				1421 to 1440	718		B5-12						
				1502		2	B5-4	Burst	FBL	I			BA.
				1503		3	B5-4	Burst	FFR	I			CH.
				1505		5	B5-4	Burst	FBL	I			BA.
				1521 to 1540	653		B5-5						
				1602		2	B5-9	Burst	FBL	I			BA.
				1603		3	B5-9	Burst	FBL	I			BA.
				1621 to 1640	675		B5-10						
				1702		2	B5-2	Burst	FBL	I			BA.
				1703		3	B5-2	Burst	FBL	I			BA.
				1704		4	B5-2	Burst	FBL	I			BA.
				1721 to 1740	Lost		B5-3						
				1801		1	B5-7	Burst	FFR	II			CH.
				1802		2	B5-7	Burst	FBL	I			BA.
				1802		2	B5-7	Burst	FFR	I			CH.
				1803		3	B5-7	Burst	FBL	I			BA.
				1821 to 1840	675		B5-10						
				1902		2	B5-12	Burst	COEC	I			CH.
				1903		3	B5-12	Burst	FBL	I			BA.
				1921 to 1940	682								
S	0	0.95	0.95	2000									

Rifle: Serial No. 3412510 (Code B-6).
Subtest: Initial inspection.
Ammunition: M193 ball, lot LC-1-403.

S	DS	0.62	0.62	0									
				21 to 40	749		B6-2						Total rounds fired, 40.

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Mag Code No.	Mode of Fire	Type	Class	Unserviceable Parts: Part Name	No. Rds on Part at Replacement	Remarks
Subtest: Low temperature (-65°F). Ammunition: M193 ball, lot LC-1-403 (rounds 1 to 2000).													
				21 to 40	Lost		B6-2						
				101		1	B6-6	Burst	FFB	I			BA.
				121 to 140	664		B6-7						
				201		1	B6-11	Burst	FBL	I			BA.
				221 to 240	649		B6-12						
				301		1	B6-4	Burst	FBL	I			BA.
				321 to 340	658		B6-5						
Same comment as with rifle B-4 prior to the fifth 100-round cycle.													
				401		1	B6-9	Burst	FBL	I			BA.
				421 to 440	660		B6-10						
				501		1	B6-2	Burst	FBL	I			BA.
				502		2	B6-2	Burst	FBL	I			BA.
				503		3	B6-2	Burst	FBL	I			BA.
				521 to 540	657		B6-3						
				601		1	B6-7	Burst	FBL	I			BA.
				602		2	B6-7	Burst	FBL	I			BA.
				621 to 640	664		B6-8						
Same comment as with rifle B-4 prior to the eighth 100-round cycle.													
				701		1	B6-12	Burst	FBL	I			BA.
				702		2	B6-12	Burst	FBL	I			BA.
				721 to 740	666		B6-1						
				801		1	B6-5	Burst	FBL	I			BA.
				802		2	B6-5	Burst	FBL	I			BA.
				821 to 840	679		B6-6						
				901		1	B6-10	Burst	FFM	I			BA.

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Mag Code No.	Mode of Fire	Type	Class	Unserviceable Parts: Part Name	No. Rds on Part at Replacement	Remarks
				902		2	B6-10	Burst	FBL	I			BA.
				921 to 940	659								
S	0	0.70	0.70	1000									
				1021 to 1040	703		B6-4						
				1121 to 1140	682		B6-9						
				1221 to 1240	753		B6-2						
				1301		1	B6-6	Burst	FFR	II			See comment with rifle B-4 at 1400 rounds.
				1321 to 1340	724		B6-7						
				1421 to 1440	677		B6-12						
				1504		4	B6-4	Burst	FBL	I			BA.
				1521 to 1540	730		B6-5						
				1621 to 1640	Lost		B6-10						
				1702		2	B6-2	Burst	FBL	I			BA.
				1703		3	B6-2	Burst	FFR	I			CH.
				1721 to 1740	Lost		B6-3						
				1801		1	B6-7	Burst	FFR	II			CH.
				1802		2	B6-7	Burst	FBL	I			BA.
				1821 to 1840	683		B6-8						
				1902		2	B6-12	Burst	COEC	I			CH.
				1903		3	B6-12	Burst	FBL	I			BA.
				1921 to 1940	635		B6-1						
S	0	1.48	1.48	2000									

Rifle: Serial No. 3412510 (Code B-7).
Subtest: Initial inspection.
Ammunition: M193 ball, lot LC-1-404 and M196 tracer, lot LC-12226 (4 to 1 mix).

S	DS	0.65	0.65	0									
				21 to 40	706		B7-2						Total rounds fired, 40.

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Mag Code No.	Mode of Fire	Type	Class	Unserviceable Parts: Part Name	No. Rds on Part at Replacement	Remarks
Subtest: Low temperature (-65°F). Ammunition: Same as above (rounds 1 to 3000).													
				7		7	B7-1	Burst	COEC	I			CH.
				21 to 40	672		B7-2						
				101		1	B7-6	Burst	FBL	I			BA.
				102		2	B7-6	Burst	FBL	I			BA.
				103		3	B7-6	Burst	FBL	I			BA.
				104		4	B7-6	Burst	FBL	I			BA.
				105		5	B7-6	Burst	FBL	I			BA.
				105		5	B7-6	Burst	COEC	I			CH.
				120		20	B7-6	Burst	FBR	I			
				121 to 140	666		B7-7						
				201		1	B7-11	Burst	FBL	I			BA.
				204		4	B7-11	Burst	FBL	I			BA.
				205		5	B7-11	Burst	FBL	I			BA.
				207		7	B7-11	Burst	BOB	I			CH.
				221 to 240	674		B7-12						
				301		1	B7-4	Burst	FBL	I			BA.
				302		2	B7-4	Burst	FBL	I			BA.
				321 to 340	671		B7-5						
Same comment as with rifle B-4 prior to the fifth 100-round cycle.													
				401		1	B7-9	Burst	FBL	I			BA.
				403		3	B7-9	Burst	FBL	I			BA.
				421 to 440	672		B7-10						
				501		1	B7-2	Burst	FBL	I			BA.
				502		2	B7-2	Burst	FBL	I			BA.
				521 to 540	675		B7-3						
				601		1	B7-7	Burst	FBL	I			BA.
				621 to 640	675		B7-8						

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Mag Code No.	Mode of Fire	Type	Class	Unserviceable Parts: Part Name	No. Rds on Part at Replacement	Remarks
Same comment as with rifle B-4 prior to the eighth 100-round cycle.													
				701		1	B7-12	Burst	FBL	I			BA.
				702		2	B7-12	Burst	FBL	I			BA.
				703		3	B7-12	Burst	FBL	I			BA.
				704		4	B7-12	Burst	FBL	I			BA.
				705		5	B7-12	Burst	FBL	I			BA.
				706		6	B7-12	Burst	FBL	I			BA.
				707		7	B7-12	Burst	COEC	I			CH.
				721 to 740	657		B7-1						
				801		1	B7-5	Burst	FBL	I			BA.
				802		2	B7-5	Burst	FBL	I			BA.
				803		3	B7-5	Burst	FBL	I			BA.
				804		4	B7-5	Burst	BOB	I			CH.
				821 to 840	678		B7-6						
				901		1	B7-10	Burst	FBL	I			BA.
				903		3	B7-10	Burst	FBL	I			BA.
				905		5	B7-10	Burst	FBL	I			BA.
				921 to 940	673		B7-11						
S	0	0.92	0.92	1000									
				1021 to 1040	702		B7-4						
				1102		2	B7-8	Burst	FBL	I			BA.
				1104		4	B7-8	Burst	FBL	I			BA.
				1105		5	B7-8	Burst	FBL	I			BA.
				1106		6	B7-8	Burst	FBL	I			BA.
				1107		7	B7-8	Burst	BOB	I			CH.
				1121 to 1140	675		B7-9						
				1206		6	B7-1	Burst	FBL	I			BA.
				1221 to 1240	675		B7-2						
				1301		1	B7-6	Burst	FJ	I			CH.
				1302		2	B7-6	Burst	FBL	I			BA.

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Mag Code No.	Mode of Fire	Type	Class	Unserviceable Parts: Part Name	No. Rds on Part at Replacement	Remarks
				1304		4	B7-6	Burst	FBL	I			BA.
				1321 to 1340	657		B7-7						
				1402		2	B7-11	Burst	COEC	I			CH.
				1402		2	B7-11	Burst	FBL	I			BA.
				1405		5	B7-11	Burst	COEC	I			CH.
				1405		5	B7-11	Burst	FBL	I			BA.
				1421 to 1440	668		B7-12						
				1502		2	B7-4	Burst	FBL	I			BA.
				1505		5	B7-4	Burst	FBL	I			BA.
				1510		10	B7-4	Burst	FBL	I			BA.
				1511		11	B7-4	Burst	BOB	I			CH.
				1521 to 1540	675								
				1601		1	B7-9	Burst	FFR	II			See comment with rifle B-4 at 1400 rounds.
				1602		2	B7-9	Burst	FBL	I			BA.
				1603		3	B7-9	Burst	FBL	I			BA.
				1604		4	B7-9	Burst	FBL	I			BA.
				1621 to 1640	682		B7-10						
				1701		1	B7-2	Burst	FFR	II			CH.
				1702		2	B7-2	Burst	FBL	I			BA.
				1703		3	B7-2	Burst	FBL	I			BA.
				1704		4	B7-2	Burst	FBL	I			BA.
				1705		5	B7-2	Burst	FBL	I			BA.
				1706		6	B7-2	Burst	FBL	I			BA.
				1708		8	B7-2	Burst	FBL	I			BA.
				1711		11	B7-2	Burst	BOB	I			CH.
				1721 to 1740	673		B7-3						
				1801		1	B7-7	Burst	FFR	II			CH.
				1802		2	B7-7	Burst	FBL	I			BA.
				1803		3	B7-7	Burst	FBL	I			BA.
				1805		5	B7-7	Burst	FBL	I			BA.
				1808		8	B7-7	Burst	FBL	I			BA.
				1821 to 1840	684		B7-8						

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Mag Code No.	Mode of Fire	Type	Class	Unserviceable Parts: Part Name	No. Rds on Part at Replacement	Remarks
				1901		1	B7-12	Burst	FFR	II			CH.
				1902		2	B7-12	Burst	FBL	I			BA.
				1903		3	B7-12	Burst	FBL	I			BA.
				1904		4	B7-12	Burst	FBL	I			BA.
				1905		5	B7-12	Burst	FBL	I			BA.
				1905		5	B7-12	Burst	BOB	I			CH.
				1921 to 1940	675		B7-1						
S	0	1.13	1.13	2000									

Rifle: Serial No. 3414340 (Code B-8).
Subtest: Initial inspection.
Ammunition: M193 ball, lot FA-2-18 and M196 tracer, lot LC-12226 (4 to 1 mix).

S	DS	0.70	0.70	0									
				21 to 40	765		B8-2						Total rounds fired, 40.

Subtest: Low temperature (-65°F).
Ammunition: Same as above (rounds 1 to 2000).

				21 to 40	716		B8-2						
				101		1	B8-6	Burst	FBL	I			BA.
				105		5	B8-6	Burst	BOB	I			CH.
				121 to 140	678		B8-7						
				201		1	B8-11	Burst	FBL	I			BA.
				221 to 240	691		B8-12						
				301		1	B8-4	Burst	FBL	I			BA.
				321 to 340	678		B8-5						

Same comment as with rifle B-4 prior to the fifth 100-round cycle.

				401		1	B8-9	Burst	FBL	I			BA.
				421 to 440	667		B8-10						
				501		1	B8-2	Burst	FBL	I			BA.

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Malfunctions: Mag Code No.	Malfunctions: Mode of Fire	Malfunctions: Type	Malfunctions: Class	Unserviceable Parts: Part Name	Unserviceable Parts: No. Rds on Part at Replacement	Remarks
				521 to 540	679		B8-3						
				601		1	B8-7	Burst	FBL	I			BA.
				621 to 640	672		B8-8						
Same comment as with rifle B-4 prior to the eighth 100-round cycle.													
				701		1	B8-12	Burst	FBL	I			BA.
				721 to 740	664		B8-6						
				801		1	B8-5	Burst	FBL	I			BA.
				821 to 840	666		B8-6						
				901		1	B8-10	Burst	FBL	I			BA.
				909		9	B8-10	Burst	BOB	I			CH.
				921 to 940	670		B8-11						
S	0	1.12	1.12	1000									
				1021 to 1040	722		B8-4						
				1121 to 1140	686		B8-9						
				1221 to 1240	689		B8-2						
				1302		2	B8-6	Burst	FBL	I			BA.
				1321 to 1340	666		B8-7						
				1401		1	B8-11	Burst	FJ	I			CH.
				1402		2	B8-11	Burst	FBL	I			BA.
				1405		5	B8-11	Burst	FBL	I			BA.
				1421 to 1440	679		B8-12						
				1521 to 1540	677		B8-5						
				1602		2	B8-9	Burst	FFR	I			CH.
				1603		3	B8-9	Burst	FBL	I			BA.
				1621 to 1640	698		B8-10						
				1701		1	B8-2	Burst	FFR	II			CH.
				1702		2	B8-2	Burst	FBL	I			BA.
				1721 to 1740	677		B8-3						
				1821 to 1840	688		B8-8						
				1902		2	B8-12	Burst	FBL	I			BA.
				1903		3	B8-12	Burst	COEC	I			CH.

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Mag Code No.	Mode of Fire	Type	Class	Unserviceable Parts: Part Name	No. Rds on Part at Replacement	Remarks
				1903		3	B8-12	Burst	FBL	I			BA.
				1921 to 1940	680		B8-1						
S	0	1.10	1.10	2000									
Rifle: Serial No. 3415684 (Code B-9).													
Subtest: Initial inspection.													
Ammunition: M193 ball, lot FC-2-27 and M196 tracer, lot TW-18028 (4 to 1 mix).													
S	DS	0.75	0.75	0									
				21 to 40	756		B9-2						Total rounds fired, 40.
Subtest: Low temperature (-65°F).													
Ammunition: Same as above (rounds 1 to 2000).													
				21 to 40	706		B9-2						
				101		1	B9-6	Burst	FBL	I			BA.
				103		3	B9-6	Burst	FFM	I			BA.
				104		4	B9-6	Burst	FFM	I			BA.
				105		5	B9-6	Burst	FFM	I			BA.
				106		6	B9-6	Burst	FFM	I			BA.
				121 to 140	674		B9-7						
				201		1	B9-11	Burst	FBL	I			BA.
				202		2	B9-11	Burst	FBL	I			BA.
				204		4	B9-11	Burst	FBL	I			BA.
				205		5	B9-11	Burst	BOB	I			CH.
				221 to 240	696		B9-12						
				301		1	B9-4	Burst	FBL	I			BA.
				306		6	B9-4	Burst	FBL	I			BA.
				321 to 340	677		B9-5						
Same comment as with rifle B-4 prior to the fifth 100-round cycle.													
				404		4	B9-9	Burst	FFM	I			BA.
				421 to 440	666		B9-10						

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Mag Code No.	Mode of Fire	Type	Class	Unserviceable Parts: Part Name	No. Rds on Part at Replacement	Remarks
				501		1	B9-2	Burst	FBL	I			BA.
				521 to 540	680		B9-3						
				601		1	B9-7	Burst	FBL	I			BA.
				621 to 640	682		B9-8						
Same comment as with rifle B-4 prior to the eighth 100-round cycle.													
				701		1	B9-12	Burst	FBL	I			BA.
				702		2	B9-12	Burst	FBL	I			BA.
				703		3	B9-12	Burst	FBL	I			BA.
				704		4	B9-12	Burst	FBL	I			BA.
				705		5	B9-12	Burst	FBL	I			BA.
				706		6	B9-12	Burst	FBL	I			BA.
				707		7	B9-12	Burst	BOB	I			CH.
				721 to 740	665		B9-1						
				801		1	B9-5	Burst	FBL	I			BA.
				802		2	B9-5	Burst	FBL	I			BA.
				804		4	B9-5	Burst	FBL	I			BA.
				805		5	B9-5	Burst	BOB	I			CH.
				811		11	B9-5	Burst	BOB	I			CH.
				821 to 840	683		B9-6						
				901		1	B9-10	Burst	FBL	I			BA.
				901		1	B9-10	Burst	FFR	I			CH.
				902		2	B9-10	Burst	FBL	I			BA.
				903		3	B9-10	Burst	FBL	I			BA.
				904		4	B9-10	Burst	FBL	I			BA.
				905		5	B9-10	Burst	FBL	I			BA.
				906		6	B9-10	Burst	COEC	I			CH.
				921 to 940	673								
S	0	0.88	0.88	1000									
				1021 to 1040	720		B9-4						
				1103		3	B9-8	Burst	FBL	I			BA.

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Mag Code No.	Mode of Fire	Type	Class	Unserviceable Parts: Part Name	No. Rds on Part at Replacement	Remarks
				1104		4	B9-8	Burst	FBL	I			BA.
				1105		5	B9-8	Burst	FBL	I			BA.
				1106		6	B9-8	Burst	BOB	I			CH.
				1107		7	B9-8	Burst	FBL	I			BA.
				1108		8	B9-8	Burst	FBL	I			BA.
				1120		20	B9-8	Burst	FBR	I			CH.
				1121 to 1140	693		B9-9						
				1205		5	B9-1	Burst	FBL	I			BA.
				1221 to 1240	680		B9-2						
				1302		2	B9-6	Burst	COEC	I			CH.
				1303		3	B9-6	Burst	FBL	I			BA.
				1306		6	B9-6	Burst	FBL	I			BA.
				1310		10	B9-6	Burst	FBL	I			BA.
				1313		13	B9-6	Burst	FBL	I			BA.
				1315		15	B9-6	Burst	FBL	I			BA.
				1321 to 1340	675		B9-7						
				1402		2	B9-11	Burst	COEC	I			CH.
				1402		2	B9-11	Burst	FBL	I			BA.
				1405		5	B9-11	Burst	FBL	I			BA.
				1407		7	B9-11	Burst	COEC	I			CH.
				1407		7	B9-11	Burst	FBL	I			BA.
				1421 to 1440	682		B9-12						
				1521 to 1540	755		B9-5						
				1602		2	B9-9	Burst	COEC	I			CH.
				1602		2	B9-9	Burst	FBL	I			BA.
				1621 to 1640	707		B9-10						
				1701		1	B9-2	Burst	FFR	II			CH.
				1702		2	B9-2	Burst	FBL	I			BA.
				1703		3	B9-2	Burst	COEC	I			CH.
				1703		3	B9-2	Burst	FBL	I			BA.
				1721 to 1740	700		B9-3						
				1802		2	B9-7	Burst	FBL	I			BA.

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Mag Code No.	Mode of Fire	Type	Class	Unserviceable Parts: Part Name	No. Rds on Part at Replacement	Remarks
				1805		5	B9-7	Burst	FBL	I			BA.
				1807		7	B9-7	Burst	FBL	I			BA.
				1808		8	B9-7	Burst	BOB	I			CH.
				1808		8	B9-7	Burst	FBL	I			BA.
				1821 to 1840	706		B9-8						
				1901		1	B9-12	Burst	FJ	I			CH.
				1902		2	B9-12	Burst	FJ	I			BA.
				1903		3	B9-12	Burst	BOB	I			CH.
				1903		3	B9-12	Burst	FBL	I			BA.
				1904		4	B9-12	Burst	BOB	I			CH.
				1904		4	B9-12	Burst	FBL	I			BA.
				1905		5	B9-12	Burst	FFR	I			CH.
				1921 to 1940	688		B9-1						
S	0	1.12	1.12	2000									

Rifle: Serial No. 3415808 (Code B-10).
Subtest: Initial inspection.
Ammunition: M193 ball, lot FA-1-50.

S	DS	1.03	1.03	0									
				21 to 40	816		B10-2						Total rounds fired, 40.

Subtest: Endurance (ball ammunition).
Ammunition: M193 ball, lot TW-18395 (rounds 1 to 200).

				121 to 140	831		B10-7						Ammunition lot FA-1-50 was fired in the rifle when cyclic rates were being recorded.

Ammunition: M193 ball, lot TW-18301 (rounds 201 to 300).

				221 to 240	859		B10-12						

Ammunition: M193 ball, various lots (rounds 301 to 1000).

				321 to 340	867		B10-5						

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Malfunctions: Mag Code No.	Malfunctions: Mode of Fire	Malfunctions: Type	Malfunctions: Class	Unserviceable Parts: Part Name	Unserviceable Parts: No. Rds on Part at Replacement	Remarks
				421 to 440	853		B10-10						
				521 to 540	875		B10-3						
				621 to 640	859		B10-8						
				721 to 740	857		B10-1						
				821 to 840	840		B10-6						
				921 to 940	808		B10-11						
S	C	0.57	0.57	1000									
Ammunition: M193 ball, lot RA-5089 (rounds 1001 to 1100).													
				1021 to 1040	804		B10-4						
Ammunition: M193 ball, lot WCC-6089 (rounds 1101 to 1500).													
				1121 to 1140	799		B10-9						
				1221 to 1240	791		B10-2						
				1321 to 1340	813		B10-7						
				1421 to 1440	838		B10-12						
Ammunition: M193 ball, lot TW-18302 (rounds 1501 to 2000).													
				1521 to 1540	847		B10-5						
				1621 to 1640	845		B10-10						
				1721 to 1740	842		B10-3						
				1821 to 1840	859		B10-8						
				1921 to 1940	851		B10-1						
S	C	0.42	0.42	2000									
Ammunition: M193 ball, lot LC-12630 (rounds 2001 to 2400).													
				2021 to 2040	836		B10-6						
				2121 to 2140	816		B10-11						
				2221 to 2240	813		B10-4						
				2321 to 2340	825		B10-9						

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Malfunctions: Mag Code No.	Malfunctions: Mode of Fire Type	Malfunctions: Class	Unserviceable Parts: Part Name	Unserviceable Parts: No. Rds on Part at Replacement	Remarks
Ammunition: M193 ball, lot TW-18149 (rounds 2401 to 2600).												
				2421 to 2440	806		B10-2					
				2521 to 2540	794		B10-7					
Ammunition: M193 ball, lot FC-1933 (rounds 2601 to 2900).												
				2621 to 2640	816		B10-12					
				2721 to 2740	844		B10-5					
				2743		3	B10-6	Semi 1-FBL	I			BA.
				2821 to 2840	844		B10-10					
Ammunition: M193 ball, lot WCC-1-22 (rounds 2901 to 3000).												
				2921 to 2940	844							
S	C	0.67	0.67	3000								
Ammunition: M193 ball, lot LC-12385 (rounds 3001 to 3300).												
				3021 to 3040	859		B10-8					
				3121 to 3140	832		B10-1					
Ammunition: M193 ball, various lots (rounds 3301 to 4000).												
				3221 to 3240	825		B10-6					
				3211		11	B10-5	Burst BOB	I			BA/CH.
				3321 to 3340	836		B10-11					
				3421 to 3440	809		B10-4					
				3521 to 3540	847		B10-9					
				3621 to 3640	838		B10-2					
				3721 to 3740	823		B10-7					
				3821 to 3840	853		B10-12					
				3921 to 3940	873		B10-5					
				3964		4	B10-7	Semi BOB	I			BA/CH.
S	C	0.67	0.67	4000								

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Malfunctions: Mag Code No.	Malfunctions: Mode of Fire	Malfunctions: Type	Malfunctions: Class	Unserviceable Parts: Part Name	Unserviceable Parts: No. Rds on Part at Replacement	Remarks
Ammunition: M193 ball, lot WCC-6089 (rounds 4001 to 4600).													
				4021 to 4040	879		B10-10						
				4121 to 4140	851		B10-3						
				4180		20	B10-5	Semi	FBR	I			
				4221 to 4240	849		B10-8						
				4321 to 4340	825		B10-1						
				4421 to 4440	844		B10-6						
				4521 to 4540	838		B10-11						
Ammunition: M193 ball, various lots (rounds 4601 to 5000).													
				4621 to 4640	842		B10-4						
				4721 to 4740	842		B10-9						
				4821 to 4840	831		B10-2						
				4921 to 4940	842		B10-7						
S	C	0.67	0.67	5000									
Ammunition: M193 ball, lot FA-41 (rounds 5001 to 5500).													
				5021 to 5040	853		B10-12						
				5121 to 5140	831		B10-5						
				5221 to 5240	826		B10-10						
				5321 to 5340	834		B10-3						
				5421 to 5440	842		B10-8						
Ammunition: M193 ball, lot TW-18206 (rounds 5501 to 5800).													
				5521 to 5540	853		B10-1						
				5621 to 5640	834		B10-6						
				5681		1	B10-9	Burst	FFM	I			

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Malfunctions: Mag Code No.	Malfunctions: Mode of Fire	Malfunctions: Type	Malfunctions: Class	Unserviceable Parts: Part Name	Unserviceable Parts: No. Rds on Part at Replacement	Remarks
				5721 to 5740	842		B10-11						
Ammunition: M193 ball, lot FA-1-50 (rounds 5801 to 6000).													
				5821 to 5840	829		B10-4						
				5921 to 5940	844		B10-9						
S	DS	1.15	1.15	6000									
Rifle: Serial No. 3416342 (Code B-11).													
Subtest: Initial inspection.													
Ammunition: M193 ball, lot FA-1-50.													
S	DS	1.05	1.05	0									
				21 to 40	842		B11-2						Total rounds fired, 40.
Subtest: Endurance (ball ammunition).													
Ammunition: M193 ball, lot IVI-44235 (rounds 1 to 100).													
Ammunition: M193 ball, lot TW-18301 (rounds 101 to 400).													
				121 to 140	861		B11-7						Ammunition lot FA-1-50 was fired in the rifle when cyclic rates were being recorded.
				221 to 240	883		B11-12						
				321 to 340	859		B11-5						
Ammunition: M193, ball, various lots (rounds 401 to 1000).													
				421 to 440	902		B11-10						
				521 to 540	900		B11-3						
				621 to 640	887		B11-8						
				721 to 740	857		B11-1						
				821 to 840	871		B11-6						
				921 to 940	887		B11-11						
S	C	0.62	0.62	1000									

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Mag Code No.	Mode of Fire	Type	Class	Unserviceable Parts: Part Name	No. Rds on Part at Replacement	Remarks
Ammunition: M193 ball, lot RA-5089 (rounds 1001 to 1100).													
				1021 to 1040	844		B11-4						
Ammunition: M193 ball, lot WCC-6089 (rounds 1101 to 1500).													
				1121 to 1140	845		B11-9						
				1221 to 1240	847		B11-2						
				1321 to 1340	855		B11-7						
				1403		3	B11-11	Burst	BOB	I			CH/M.
				1421 to 1440	863		B11-12						
Ammunition: M193 ball, lot TW-18302 (rounds 1501 to 2000).													
				1521 to 1540	875		B11-5						
				1621 to 1640	865		B11-10						
				1663		3	B11-12	Burst	BOB	I			CH/M.
				1721 to 1740	885		B11-3						
				1821 to 1840	879		B11-8						
				1921 to 1940	871		B11-1						
				1923		3	B11-1	Auto.	BOB	I			CH/M.
S	C	0.62	0.62	2000									
Ammunition: M193 ball, lot LC-12630 (rounds 2001 to 2300).													
				2021 to 2040	877		B11-6						
				2121 to 2140	842		B11-11						
				2221 to 2240	857		B11-4						
Ammunition: M193 ball, lot TW-18149 (rounds 2301 to 2600).													
				2321 to 2340	809		B11-9						
				2421 to 2440	811		B11-2						
				2521 to 2540	829		B11-7						

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Mag Code No.	Mode of Fire	Type	Class	Unserviceable Parts: Part Name	No. Rds on Part at Replacement	Remarks
Ammunition: M193 ball, lot FC-1933 (rounds 2601 to 2900).													
				2621 to 2640	834		B11-12						
				2721 to 2740	853		B11-5						
				2821 to 2840	857		B11-10						
Ammunition: M193 ball, lot WCC-1-22 (rounds 2901 to 3000).													
				2921 to 2940	871		B11-3						
S	C	0.67	0.67	3000									
Ammunition: M193 ball, lot LC-12385 (rounds 3001 to 3300).													
				3021 to 3040	869		B11-8						
				3121 to 3140	867		B11-1						
				3163		3	B11-3	Burst	BOB	I			BA/CH.
				3221 to 3240	883		B11-6						
				3262		2	B11-8	Burst	BOB	I			BA/CH.
Ammunition: M193 ball, various lots (rounds 3301 to 4000).													
				3321 to 3340	845		B11-11						
				3421 to 3440	840		B11-4						
				3521 to 3540	873		B11-9						
				3621 to 3640	879		B11-2						
				3623		3	B11-2	Auto.	BOB	I			BA/CH.
				3625		5	B11-2	Auto.	BOB	I			BA/CH.
				3626		6	B11-2	Auto.	FBL	I			BA.
				3721 to 3740	877		B11-7						
				3738		18	B11-7	Auto.	BOB	I			BA/CH.
				3821 to 3840	883		B11-12						
				3921 to 3940	902		B11-5						
				3962		2	B11-7	Burst	BOB	I			BA/CH.
				3964		4	B11-7	Burst	BOB	I			BA/CH.
S	C	0.67	0.67	4000									
Ammunition: M193 ball, lot WCC-6089 (rounds 4001 to 4600).													
				4021 to 4040	919		B11-10						
				4121 to 4140	889		B11-3						

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Mag Code No.	Mode of Fire	Type	Class	Unserviceable Parts: Part Name	No. Rds on Part at Replacement	Remarks
				4221 to 4240	893		B11-8						
				4321 to 4340	879		B11-1						
				4421 to 4440	867		B11-6						
				4510		10	B11-10	Burst	FFR	I			Deep indent in the primer.
				4521 to 4540	879		B11-11						
Ammunition: M193 ball, various lot (rounds 4601 to 5000).													
				4621 to 4640	900		B11-4						
				4721 to 4740	877		B11-9						
				4821 to 4840	881		B11-2						
				4921 to 4940	879		B11-7						
				4990		10	B11-10	Semi	FFR	I			Inverted primer.
S	C	0.77	0.77	5000									
Ammunition: M193 ball, lot FA-41 (rounds 5001 to 5600).													
				5021 to 5040	924		B11-12						
				5121 to 5140	889		B11-5						
				5221 to 5240	881		B11-10						
				5321 to 5340	902		B11-3						
				5421 to 5440	895		B11-8						
				5480		20	B11-10	Burst	FBR	I			
				5521 to 5540	904		B11-1						
Ammunition: M193 ball, lot TW-18206 (rounds 5601 to 5800).													
				5621 to 5640	877		B11-6						
				5700		20	B11-9	Semi	FBR	I			
				5721 to 5740	879		B11-11						
Ammunition: M193 ball, lot FA-1-50 (rounds 5801 to 6000).													
				5821 to 5840	877		B11-4						
				5921 to 5940	908		B11-9						
S	DS	1.17	1.17	6000									

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Malfunctions: Mag Code No.	Malfunctions: Mode of Fire	Malfunctions: Type	Malfunctions: Class	Unserviceable Parts: Part Name	Unserviceable Parts: No. Rds on Part at Replacement	Remarks
Rifle: Serial No. 3416501 (Code B-12).													
Subtest: Initial inspection.													
Ammunition: M193 ball, lot FA-1-50.													
S	DS	1.05	1.05	0 21 to 40	775		B12-2						Total rounds fired, 40.
Subtest: Endurance (ball ammunition).													
Ammunition: M193 ball, lot IVI-44235 (rounds 1 to 100).													
Ammunition: M193 ball, various lots (rounds 101 to 1000).													
				121 to 140	794		B12-7						Ammunition lot FA-1-50 was fired in the rifle when cyclic rates were being recorded.
				221 to 240	820		B12-12						
				321 to 340	811		B12-5						
				421 to 440	823		B12-10						
				521 to 540	822		B12-3						
				621 to 640	859		B12-8						
				721 to 740	794		B12-1						
				821 to 840	883		B12-6						
				921 to 940	775		B12-11						
S	C	0.77	0.77	1000									
Ammunition: M193 ball, lot RA-5089 (rounds 1001 to 1100).													
				1021 to 1040	811		B12-4						
Ammunition: M193 ball, lot WCC-6089 (rounds 1101 to 1500).													
				1121 to 1140	778		B12-9						
				1221 to 1240	779		B12-2						
				1321 to 1340	759		B12-7						
				1421 to 1440	820		B12-12						

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Malfunctions: Mag Code No.	Malfunctions: Mode of Fire	Malfunctions: Type	Malfunctions: Class	Unserviceable Parts: Part Name	Unserviceable Parts: No. Rds on Part at Replacement	Remarks
Ammunition: M193 ball, lot TW-18302 (rounds 1501 to 2000).													
				1521 to 1540	836		B12-5						
				1621 to 1640	831		B12-10						
				1721 to 1740	825		B12-3						
				1821 to 1840	844		B12-8						
				1921 to 1940	842		B12-1						
S	C	0.70	0.70	2000									
Ammunition: M193 ball, lot LC-12630 (rounds 2001 to 2300).													
				2021 to 2040	861		B12-6						
				2121 to 2140	799		B12-11						
				2221 to 2240	811		B12-4						
Ammunition: M193 ball. lot TW-18149 (rounds 2301 to 2500).													
				2321 to 2340	775		B12-9						
				2421 to 2440	773		B12-2						
Ammunition: M193 ball, lot FC-1933 (rounds 2501 to 2900).													
				2521 to 2540	804		B12-7						
				2621 to 2640	780		B12-12						
				2721 to 2740	813		B12-5						
				2821 to 2840	832		B12-10						
Ammunition: M193 ball, lot WCC-1-22 (rounds 2901 to 3000).													
				2921 to 2940	806		B12-3						
				2981		1	B12-6	Semi	FFM	I			CH
S	C	0.60	0.60	3000									

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Mag Code No.	Mode of Fire	Type	Class	Unserviceable Parts: Part Name	No. Rds on Part at Replacement	Remarks
Ammunition: M193 ball, lot LC-12385 (rounds 3001 to 3300).													
				3021 to 3040	849		B12-8						
				3121 to 3140	845		B12-1						
				3221 to 3240	836		B12-6						
Ammunition: M193 ball, lot TW-18153 (rounds 3301 to 3400).													
				3321 to 3340	794		B12-11						
Ammunition: M193 ball, lot FA-18 (rounds 3401 to 3500).													
				3421 to 3440	811		B12-4						
Ammunition: M193 ball, lot LC-12580 (rounds 3501 to 4000).													
				3521 to 3540	840		B12-9						
				3621 to 3640	822		B12-2						
				3721 to 3740	825		B12-7						
				3821 to 3840	816		B12-12						
				3863		3	B12-2	Burst	BOB	I			BA/CH
				3921 to 3940	871		B12-5						
S	C	0.63	0.63	4000									
Ammunition: M193 ball, lot WCC-6089 (rounds 4001 to 4600).													
				4021 to 4040	861		B12-10						
				4121 to 4140	840		B12-3						
				4221 to 4240	834		B12-8						
				4321 to 4340	834		B12-1						Magazine B12-12 removed from test because of bent feed lip. Cause unknown.
				4421 to 4440	832		B12-6						
				4521 to 4540	855		B12-11						

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Malfunctions: Mag Code No.	Malfunctions: Mode of Fire	Malfunctions: Type	Malfunctions: Class	Unserviceable Parts: Part Name	Unserviceable Parts: No. Rds on Part at Replacement	Remarks
Ammunition: M193 ball, various lots (rounds 4601 to 5000).													
				4621 to 4640	849		B12-4						
				4721 to 4740	855		B12-9						
				4821 to 4840	865		B12-2						
				4921 to 4940	881		B12-7						
S	C	0.67	0.67	5000									
Ammunition: M193 ball, lot FA-41 (rounds 5001 to 5500).													
				5021 to 5040	895		B12-12						
				5121 to 5140	853		B12-5						
				5160		20	B12-6	Semi	FBR	I			
				5221 to 5240	853		B12-10						
				5321 to 5340	847		B12-3						
				5421 to 5440	849		B12-8						
Ammunition: M193 ball, lot TW-18206 (rounds 5501 to 5700).													
				5521 to 5540	865		B12-1						
				5621 to 5640	822		B12-6						
Ammunition: M193 ball, lot FA-1-50 (rounds 5701 to 6000).													
				5721 to 5740	845		B12-11						
				5780		20	B12-1	Burst	FBR	I			
				5821 to 5840	842		B12-4						
				5921 to 5940	859		B12-9						
S	DS	1.17	1.17	6000									

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Mag Code No.	Mode of Fire	Type	Class	Unserviceable Parts: Part Name	No. Rds on Part at Replacement	Remarks
Rifle: Serial No. 3417271 (Code B-13).													
Subtest: Initial inspection.													
Ammunition: M193 ball, lot FA-1-50.													
S	DS	1.03	1.03	0									
				21 to 40	851		B13-2						Total rounds fired, 40.
Subtest: Endurance (ball ammunition).													
Ammunition: M193 ball, lot IVI-44235 (rounds 1 to 100).													
Ammunition: M193 ball, various lots (rounds 101 to 1000).													
				121 to 140	873		B13-7						Ammunition lot FA-1-50 was fired in the rifle when cyclic rates were being recorded.
				221 to 240	885		B13-12						
				321 to 340	881		B13-5						
				421 to 440	799		B13-10						
				521 to 540	889		B13-3						
				583		3	B13-6	Semi	BOB	I			CH/M.
				621 to 640	908		B13-8						
				721 to 740	867		B13-1						
				821 to 840	919		B13-6						
				921 to 940	895		B13-11						
S	C	0.80	0.80	1000									
Ammunition: M193 ball, lot WCC-6089 (rounds 1001 to 1500).													
				1021 to 1040	863		B13-4						
				1121 to 1140	857		B13-9						
				1221 to 1240	847		B13-2						
				1321 to 1340	863		B13-7						
				1421 to 1440	879		B13-12						
Ammunition: M193 ball, lot TW-18302 (rounds 1501 to 2000).													
				1521 to 1540	883		B13-5						
				1621 to 1640	877		B13-10						

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Malfunctions: Mag Code No.	Malfunctions: Mode of Fire	Malfunctions: Type	Malfunctions: Class	Unserviceable Parts: Part Name	Unserviceable Parts: No. Rds on Part at Replacement	Remarks
				1721 to 1740	875		B13-3						
				1764		4	B13-5	Burst	BOB	I			CH/M.
				1783		3	B13-6	Semi	BOB	I			CH/M.
				1821 to 1840	877		B13-8						
				1921 to 1940	863		B13-1						
S	C	0.57	0.57	2000									

Ammunition: M193 ball, lot LC-12630 (rounds 2001 to 2300).

				2021 to 2040	859		B13-6						
				2121 to 2140	838		B13-11						
				2221 to 2240	832		B13-4						

Ammunition: M193 ball, lot TW-18149 (rounds 2301 to 2400).

				2321 to 2340	809		B13-9						

Ammunition: M193 ball, lot FC-1933 (rounds 2401 to 3000).

				2421 to 2440	842		B13-2						
				2521 to 2540	842		B13-7						
				2621 to 2640	832		B13-12						
				2721 to 2740	838		B13-5						
				2821 to 2840	861		B13-10						
				2921 to 2940	869		B13-3						
S	C	0.75	0.75	3000									

Ammunition: M193 ball, lot LC-12385 (rounds 3001 to 3300).

				3021 to 3040	869		B13-8						
				3121 to 3140	857		B13-1						
				3221 to 3240	857		B13-6						

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Mag Code No.	Mode of Fire	Type	Class	Unserviceable Parts: Part Name	No. Rds on Part at Replacement	Remarks
Ammunition: M193 ball, various lots (rounds 3301 to 3500).													
				3321 to 3340	818		B13-11						
				3421 to 3440	820		B13-4						
Ammunition: M193 ball, lot LC-12580 (rounds 3501 to 3900).													
				3521 to 3540	847		B13-9						
				3621 to 3640	849		B13-2						
				3721 to 3740	853		B13-7						
				3821 to 3840	871		B13-12						
Ammunition: M193 ball, lot unknown (rounds 3901 to 4000).													
				3921 to 3940	889		B13-5						
S	C	0.77	0.77	4000									
Ammunition: M193 ball, lot WCC-6089 (rounds 4001 to 4600).													
				4021 to 4040	900		B13-10						
				4121 to 4140	881		B13-3						
				4163		3	B13-5	Burst	BOB	I			BA/CH.
				4221 to 4240	887		B13-8						
				4321 to 4340	844		B13-1						
				4421 to 4440	859		B13-6						
				4521 to 4540	869		B13-11						
Ammunition: M193 ball, various lots (rounds 4601 to 5000).													
				4621 to 4640	845		B13-4						
				4721 to 4740	847		B13-9						
				4821 to 4840	859		B13-2						
				4864		4	B13-4	Burst	BOB	I			BA/CH.
				4921 to 4940	859		B13-7						
S	C	0.70	0.70	5000									

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Malfunctions: Mag Code No.	Malfunctions: Mode of Fire	Malfunctions: Type	Malfunctions: Class	Unserviceable Parts: Part Name	Unserviceable Parts: No. Rds on Part at Replacement	Remarks
Ammunition: M193 ball, lot FA-41 (rounds 5001 to 5400).													
				5021 to 5040	902		B13-12						
				5121 to 5140	859		B13-5						
				5221 to 5240	853		B13-10						
				5321 to 5340	855		B13-3						
Ammunition: M193 ball, lot TW-18206 (rounds 5401 to 5700).													
				5421 to 5440	873		B13-8						
				5521 to 5540	865		B13-1						
				5621 to 5640	829		B13-6						
Ammunition: M193 ball, lot FA-1-50 (rounds 5701 to 6000).													
				5721 to 5740	838		B13-11						
				5821 to 5840	861		B13-4						
				5921 to 5940	879		B13-9						
S	DS	1.15	1.15	6000									
Rifle: Serial No. 3417501 (Code B-14).													
Subtest: Initial inspection.													
Ammunition: M193 ball, lot FA-1-50.													
S	DS	1.07	1.07	0									
				21 to 40	838		B14-2						Total rounds fired, 40.
Subtest: Endurance (ball ammunition).													
Ammunition: M193 ball, lot IVI-44235 (rounds 1 to 100).													
Ammunition: M193 ball, various lots (rounds 101 to 1000).													
				121 to 140	847		B14-7						Ammunition lot FA-1-50 was fired in the rifle when cyclic rates were being recorded.
				221 to 240	859		B14-12						

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Malfunctions: Mag Code No.	Malfunctions: Mode of Fire	Malfunctions: Type	Malfunctions: Class	Unserviceable Parts: Part Name	Unserviceable Parts: No. Rds on Part at Replacement	Remarks
				321 to 340	859		B14-5						
				421 to 440	863		B14-10						
				521 to 540	863		B14-3						
				621 to 640	857		B14-8						
				721 to 740	859		B14-1						
				821 to 840	827		B14-6						
				921 to 940	815		B14-11						
S	C	0.80	0.80	1000									
Ammunition: M193 ball, lot WCC-6089 (rounds 1001 to 1500).													
				1021 to 1040	847		B14-4						
				1121 to 1140	822		B14-9						
				1221 to 1240	820		B14-2						
				1321 to 1340	855		B14-7						
				1421 to 1440	845		B14-12						
Ammunition: M193 ball, lot TW-18302 (rounds 1501 to 2000).													
				1521 to 1540	853		B14-5						
				1621 to 1640	845		B14-10						
				1721 to 1740	853		B14-3						
				1821 to 1840	859		B14-8						
				1921 to 1940	857		B14-1						
S	C	0.60	0.60	2000									
Ammunition: M193 ball, lot LC-12630 (rounds 2001 to 2300).													
				2021 to 2040	883		B14-6						
				2121 to 2140	809		B14-11						
				2221 to 2240	842		B14-4						
Ammunition: M193 ball, lot TW-18149 (rounds 2301 to 2400).													
				2321 to 2340	813		B14-9						

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Malfunctions: Mag Code No.	Malfunctions: Mode of Fire	Malfunctions: Type	Malfunctions: Class	Unserviceable Parts: Part Name	Unserviceable Parts: No. Rds on Part at Replacement	Remarks
Ammunition: M193 ball, lot FC-1933 (rounds 2401 to 2900).													
				2421 to 2440	831		B14-2						
				2521 to 2540	847		B14-7						
				2621 to 2640	813		B14-12						
				2721 to 2740	832		B14-5						
				2821 to 2840	865		B14-10						
Ammunition: M193 ball, lot WCC-1-22 (rounds 2901 to 3000).													
				2921 to 2940	873		B14-3						
S	C	0.73	0.73	3000									
Ammunition: M193 ball, lot LC-12385 (rounds 3001 to 3200).													
				3021 to 3040	859		B14-8						
				3121 to 3140	844		B14-1						
Ammunition: M193 ball, various lots (rounds 3201 to 4000).													
				3221 to 3240	831		B14-6						
				3321 to 3340	776		B14-11						
				3421 to 3440	796		B14-4						
				3521 to 3540	816		B14-9						
				3621 to 3640	818		B14-2						
				3721 to 3740	818		B14-7						
				3821 to 3840	857		B14-12						
				3921 to 3940	908		B14-5						
S	C	0.70	0.70	4000									
Ammunition: M193 ball, lot WCC-6089 (rounds 4001 to 4600).													
				4021 to 4040	871		B14-10						
				4121 to 4140	845		B14-3						

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Malfunctions: Mag Code No.	Malfunctions: Mode of Fire	Malfunctions: Type	Malfunctions: Class	Unserviceable Parts: Part Name	Unserviceable Parts: No. Rds on Part at Replacement	Remarks
				4221 to 4240	842		B14-8						
				4321 to 4340	831		B14-1						
				4421 to 4440	831		B14-6						
				4521 to 4540	855		B14-11						
Ammunition: M193 ball, various lots (rounds 4601 to 5000).													
				4621 to 4640	851		B14-4						
				4721 to 4740	838		B14-9						
				4821 to 4840	847		B14-2						
				4921 to 4940	867		B14-7						
S	C	0.72	0.72	5000									
Ammunition: M193 ball, lot FA-41 (rounds 5001 to 5400).													
				5021 to 5040	889		B14-12						
				5121 to 5140	845		B14-5						
				5221 to 5240	855		B14-10						
				5321 to 5340	840		B14-3						
Ammunition: M193 ball, lot TW-18206 (rounds 5401 to 5700).													
				5421 to 5440	853		B14-8						
				5521 to 5540	859		B14-1						
				5621 to 5640	818		B14-6						
Ammunition: M193 ball, lot FA-1-50 (rounds 5701 to 6000).													
				5721 to 5740	838		B14-11						
				5821 to 5840	859		B14-4						
				5921 to 5940	883		B14-9						
S	DS	1.13	1.13	6000									

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Malfunctions: Mag Code No.	Malfunctions: Mode of Fire	Malfunctions: Type	Malfunctions: Class	Unserviceable Parts: Part Name	Unserviceable Parts: No. Rds on Part at Replacement	Remarks
Rifle: Serial No. 3418020 (Code B-15).													
Subtest: Initial inspection.													
Ammunition: M193 ball, lot FA-1-50 and M196 tracer, lot TW-18028 (4 to 1 mix).													
S	DS	1.10	1.10	0									
				21 to 40	845		B15-2						Total rounds fired, 40.
Subtest: Endurance (4 to 1 mix).													
Ammunition: M196 tracer, lot TW-18028 (continually throughout the test).													
Ammunition: M193 ball, lot IVI-1-6 (rounds 1 to 100).													
Ammunition: M193 ball, various lots (rounds 101 to 1000).													
				121 to 140	851		B15-7						Ammunition lots FA-1-50 (ball) and TW-18028 (tracer) were fired in the rifle when cyclic rates were being recorded.
				221 to 240	847		B15-12						
				321 to 340	845		B15-5						
				421 to 440	863		B15-10						
				521 to 540	840		B15-3						
				621 to 640	844		B15-8						
				721 to 740	816		B15-1						
				821 to 840	859		B15-6						
				921 to 940	788		B15-11						
S	C	0.87	0.87	1000									
Ammunition: M193 ball, lot WCC-6089 (rounds 1001 to 1500).													
				1021 to 1040	813		B15-4						
				1121 to 1140	799		B15-9						
				1221 to 1240	792		B15-2						
				1321 to 1340	836		B15-7						
				1421 to 1440	842		B14-12						

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Malfunctions: Mag Code No.	Malfunctions: Mode of Fire	Malfunctions: Type	Malfunctions: Class	Unserviceable Parts: Part Name	Unserviceable Parts: No. Rds on Part at Replacement	Remarks
Ammunition: M193 ball, lot TW-18302 (rounds 1501 to 2000).													
				1521 to 1540	840		B15-5						
				1621 to 1640	838		B15-10						
				1721 to 1740	863		B15-3						
				1821 to 1840	845		B15-8						
				1921 to 1940	836		B15-1						
S	C	0.63	0.63	2000									
Ammunition: M193 ball, lot LC-12630 (rounds 2001 to 2300).													
				2021 to 2040	845		B15-6						
				2121 to 2140	801		B15-11						
				2221 to 2240	813		B15-4						
Ammunition: M193 ball, lot TW-18149 (rounds 2301 to 2400).													
				2321 to 2340	809		B15-9						
Ammunition: M193 ball, lot FC-1933 (rounds 2401 to 2900).													
				2421 to 2440	836		B15-2						
				2521 to 2540	844		B15-7						
				2621 to 2640	816		B15-12						
				2721 to 2740	842		B15-5						
				2821 to 2840	844		B15-10						
Ammunition: M193 ball, lot WCC-1-22 (rounds 2901 to 3000).													
				2921 to 2940	857		B15-3						
S	C	0.52	0.52	3000									

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Mag Code No.	Mode of Fire	Type	Class	Unserviceable Parts: Part Name	No. Rds on Part at Replacement	Remarks
Ammunition: M193 ball, various lots (rounds 3001 to 4000).													
				3021 to 3040	847		B15-8						
				3121 to 3140	855		B15-1						
				3221 to 3240	840		B15-6						
				3321 to 3340	809		B15-11						
				3421 to 3440	822		B15-4						
				3521 to 3540	809		B15-9						
				3621 to 3640	813		B15-2						
				3721 to 3740	829		B15-7						
				3821 to 3840	840		B15-12						
				3921 to 3940	865		B15-5						
S	C	0.75	0.75	4000									
Ammunition: M193 ball, lot WCC-6089 (rounds 4001 to 4600).													
				4021 to 4040	865		B15-10						
				4121 to 4140	842		B15-3						
				4221 to 4240	831		B15-8						
				4321 to 4340	822		B15-1						
				4421 to 4440	834		B15-6						
				4521 to 4540	822		B15-11						
				4621 to 4640	827		B15-4						
				4721 to 4740	825		B15-9						
				4821 to 4840	838		B15-2						
				4921 to 4940	844		B15-7						
S	C	0.75	0.75	5000									
Ammunition: M193 ball, lot FA-41 (rounds 5001 to 5400).													
				5021 to 5040	883		B15-12						
				5121 to 5140	877		B15-5						
				5221 to 5240	863		B15-10						
				5321 to 5340	865		B15-3						

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Malfunctions: Mag Code No.	Malfunctions: Mode of Fire	Malfunctions: Type	Malfunctions: Class	Unserviceable Parts: Part Name	Unserviceable Parts: No. Rds on Part at Replacement	Remarks
Ammunition: M193 ball, lot TW-18206 (rounds 5401 to 5700).													
				5421 to 5440	853		B15-8						
				5521 to 5540	883		B15-1						
				5540		20	B15-1	Auto.	FBR	I			
				5621 to 5640	847		B15-6						
Ammunition: M193 ball, lot FA-1-50 (rounds 5701 to 6000).													
				5721 to 5740	857		B15-11						
				5821 to 5840	859		B15-4						
				5921 to 5940	879		B15-9						
S	DS	1.20	1.20	6000									
Rifle: Serial No. 3418534 (Code B-16).													
Subtest: Initial inspection.													
Ammunition: M193 ball, lot FA-1-50 and M196 tracer, lot TW-18028 (4 to 1 mix).													
S	DS	1.00	1.00	0									
				21 to 40	831		B16-2						Total rounds fired, 40.
Subtest: Endurance (4 to 1 mix).													
Ammunition: M196 tracer, lot TW-18028 (continually throughout the test).													
Ammunition: M193 ball, lot IVI-44235 (rounds 1 to 100).													
Ammunition: M193 ball, various lots (rounds 101 to 1000).													
				121 to 140	842		B16-7						Ammunition lots FA-1-50 (ball) and TW-18028 (tracer) were fired in the rifle when cyclic rates were being recorded.
				221 to 240	867		B16-12						
				321 to 340	842		B16-5						
				421 to 440	861		B16-10						
				521 to 540	853		B16-3						
				621 to 640	906		B16-8						
				721 to 740	847		B16-1						

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Mag Code No.	Mode of Fire	Malfunctions: Type	Malfunctions: Class	Unserviceable Parts: Part Name	Unserviceable Parts: No. Rds on Part at Replacement	Remarks
				821 to 840	838		B16-6						
				921 to 940	853		B16-11						
S	C	0.57	0.57	1000									
Ammunition: M193 ball, lot WCC-6089 (rounds 1001 to 1400).													
				1021 to 1040	816		B16-4						
				1121 to 1140	811		B16-9						
				1221 to 1240	804		B16-2						
				1321 to 1340	829		B16-7						
Ammunition: M193 ball, lot TW-18302 (rounds 1401 to 2000).													
				1421 to 1440	834		B16-12						
				1521 to 1540	853		B16-5						
				1621 to 1640	838		B16-10						
				1721 to 1740	844		B16-3						
				1763		3	B16-5	Burst	BOB	I			CH/M.
				1821 to 1840	844		B16-8						
				1921 to 1940	844		B16-1						
				1963		3	B16-3	Burst	BOB	I			CH/M.
S	C	0.73	0.73	2000									
Ammunition: M193 ball, lot LC-12630 (rounds 2001 to 2300).													
				2021 to 2040	845		B16-6						
				2121 to 2140	798		B16-11						
				2221 to 2240	811		B16-4						
Ammunition: M193 ball, lot TW-18149 (rounds 2301 to 2400).													
				2321 to 2340	794		B16-9						

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Mag Code No.	Mode of Fire	Type	Class	Unserviceable Parts: Part Name	No. Rds on Part at Replacement	Remarks
Ammunition: M193 ball, lot FC-1933 (rounds 2401 to 2900).													
				2421 to 2440	825		B16-2						
				2521 to 2540	827		B16-7						
				2621 to 2640	809		B16-12						
				2721 to 2740	829		B16-5						
				2821 to 2840	834		B16-10						
Ammunition: M193 ball, lot WCC-1-22 (rounds 2901 to 3000).													
				2921 to 2940	832		B16-3						
S	C	0.63	0.63	3000									
Ammunition: M193 ball, lot LC-12385 (rounds 3001 to 3300).													
				3021 to 3040	844		B16-8						
				3121 to 3140	831		B16-1						
				3163		3	B16-3	Burst	BOB	I			CH/M.
				3221 to 3240	831		B16-6						
Ammunition: M193 ball, various lots (rounds 3301 to 4000).													
				3321 to 3340	789		B16-11						
				3421 to 3440	829		B16-4						
				3521 to 3540	836		B16-9						
				3621 to 3640	845		B16-2						
				3721 to 3740	836		B16-7						
				3821 to 3840	863		B16-12						
				3921 to 3940	877		B16-5						
				3963		3	B16-7	Burst	BOB	I			CH/M.
S	C	0.73	0.73	4000									

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Mag Code No.	Mode of Fire	Type	Class	Unserviceable Parts: Part Name	No. Rds on Part at Replacement	Remarks
Ammunition: M193 ball, lot WCC-6089 (rounds 4001 to 4600).													
				4021 to 4040	879		B16-10						
				4121 to 4140	840		B16-3						
				4163		3	B16-5	Burst	BOB	I			CH/M.
				4221 to 4240	853		B16-8						
				4321 to 4340	825		B16-1						
				4421 to 4440	825		B16-6						
				4521 to 4540	829		B16-11						
Ammunition: M193 ball, various lots (rounds 4601 to 5000).													
				4621 to 4640	845		B16-4						
				4721 to 4740	816		B16-9						
				4821 to 4840	820		B16-2						
				4921 to 4940	842		B16-7						
S	C	0.72	0.72	5000									
Ammunition: M193 ball, lot FC-41 (rounds 5001 to 5400).													
				5021 to 5040	887		B16-12						
				5121 to 5140	879		B16-5						
				5221 to 5240	877		B16-10						
				5321 to 5340	867		B16-3						
Ammunition: M193 ball, lot TW-18206 (rounds 5401 to 5700).													
				5421 to 5440	857		B16-8						
				5521 to 5540	879		B16-1						
				5621 to 5640	834		B16-6						

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Malfunctions: Mag Code No.	Malfunctions: Mode of Fire	Malfunctions: Type	Malfunctions: Class	Unserviceable Parts: Part Name	Unserviceable Parts: No. Rds on Part at Replacement	Remarks
Ammunition: M193 ball, lot FA-1-50 (rounds 5701 to 6000).													
				5721 to 5740	857		B16-11						
				5821 to 5840	877		B16-4						
				5921 to 5940	883		B16-9						
S	DS	1.18	1.18	6000									
Rifle: Serial No. 4376282 (Code C-1).													
Subtest: Initial inspection.													
Ammunition: M193 ball, lot FA-1-50.													
S	DS	0.98	0.98	0									
				21 to 40	861		C1-2						Total rounds fired, 40.
Subtest: Accuracy.													
Ammunition: M193 ball, lot TW-1-145.													
S	O	0.50	0.50	193									Total rounds fired, 153.
Rifle: Serial No. 4377858 (Code C-2).													
Subtest: Initial inspection.													
Ammunition: M193 ball, lot FA-1-50.													
S	DS	1.27	1.27	0									
				21 to 40	811		C2-2						Total rounds fired, 40.
Subtest: Accuracy.													
Ammunition: M193 ball, lot TW-1-145.													
S	O	0.57	0.57	193									Total rounds fired, 153.

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Mag Code No.	Mode of Fire	Type	Class	Unserviceable Parts: Part Name	No. Rds on Part at Replacement	Remarks
Rifle: Serial No. 4380292 (Code C-3).													
Subtest: Initial inspection.													
Ammunition: M193 ball, lot FA-1-50.													
S	DS	1.12	1.12	0									
				21 to 40	825		C3-2						Total rounds fired, 40.
Subtest: Accuracy.													
Ammunition: M193 ball, lot TW-1-145.													
S	GS	0.53	0.53	193									Total rounds fired, 153.
Rifle: Serial No. 4380626 (Code C-4).													
Subtest: Initial inspection.													
Ammunition: M193 ball, lot WCC-1-68.													
S	DS	0.78	0.78	0									
				21 to 40	831		C4-2						Total rounds fired, 40.
Subtest: Low temperature (-65°F).													
Ammunition: M193 ball, lot WCC-1-68 (rounds 1 to 2000).													
				21 to 40	Lost		C4-2						
				121 to 140	746		C4-7						
				221 to 240	716		C4-12						
				301		1	C4-4	Burst	FBL	I			BA.
				321 to 340	703		C4-5						
Prior to starting the fifth 100-round cycle and until otherwise noted the bolt carrier was hand-cycled once before inserting a magazine in the rifle.													
				401		1	C4-9	Burst	FBL	I			BA.
				401		1	C4-9	Burst	FFR	I			CH.
				421 to 440	704		C4-10						

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Mag Code No.	Mode of Fire	Type	Class	Unserviceable Parts: Part Name	No. Rds on Part at Replacement	Remarks
				501		1	C4-2	Burst	FBL	I			BA.
				501		1	C4-2	Burst	FFR	I			CH.
				521 to 540	686		C4-3						
				601		1	C4-7	Burst	FBL	I			BA.
				601		1	C4-7	Burst	FFR	I			CH.
				602		2	C4-7	Burst	FFR	I			CH.
				621 to 640	693		C4-8						

For the remainder of the 100-round cycles, until maintenance was performed the buttstock of the rifle was impacted on a wooden firing bench while pulling the charging handle in order to retract the bolt-carrier group. The bolt and carrier were then hand-cycled several times and the trigger was actuated once prior to inserting a magazine in the rifle.

				701		1	C4-12	Burst	FBL	I			BA.
				702		2	C4-12	Burst	FBL	I			BA.
				721 to 740	660		C4-1						
				801		1	C4-5	Burst	FBL	I			BA.
				801		1	C4-5	Burst	FJ	I			CH.
				802		2	C4-5	Burst	FBL	I			BA.
				821 to 840	714		C4-6						
				901		1	C4-10	Burst	FBL	I			BA.
				901		1	C4-10	Burst	FFR	I			CH.
				901		1	C4-10	Burst	FJ	I			CH.
				921 to 940	668		C4-11						
S	O	0.95	0.95	1000									
				1021 to 1040	741		C4-4						
				1121 to 1140	707		C4-9						
				1201		1	C4-1	Burst	FFR	II			[b]

[b] With the occurrence of failures to fire on the first round of a cycle extreme difficulty was experienced clearing the malfunction. The bolt was frozen in the forward position. Clearing action normally required the gunner to hold the rifle while a second individual pulled rearward on the charging handle; if this failed, the gunner had to rap the charging handle sharply on the edge of the metal firing port.

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Mag Code No.	Mode of Fire	Type	Class	Unserviceable Parts: Part Name	No. Rds on Part at Replacement	Remarks
				1221 to 1240	708		C4-2						
				1301		1	C4-6	Burst	FFR	II			CH.
				1321		1	C4-7	Auto.	FFM	I			CH.
				1321 to 1340	710		C4-7						
				1341		1	C4-8	Semi	FFM	I			CH.
				1401		1	C4-11	Burst	FFR	II			CH.
				1402		2	C4-11	Burst	FBL	I			BA.
				1421 to 1440	684								
				1501		1	C4-4	Burst	FFR	II			CH.
				1502		2	C4-4	Burst	FBL	I			BA.
				1521 to 1540	657		C4-5						
				1621 to 1640	Lost		C4-10						
				1701		1	C4-2	Burst	FFR	II			CH.
				1702		2	C4-2	Burst	FBL	I			BA.
				1721 to 1740	Lost		C4-3						
				1801		1	C4-7	Burst	FFR	II			CH.
				1802		2	C4-7	Burst	FBL	I			BA.
				1821 to 1840	684		C4-8						
				1901		1	C4-1	Burst	FFR	II			CH.
				1901		1	C4-1	Burst	FJ	I			CH.
				1902		2	C4-1	Burst	FBL	I			BA.
				1921 to 1940	685		C4-1						
				1963		3	C4-3	Burst	FBL	I			BA.
S	O	0.95	0.95	2000									

Rifle: Serial No. 4381520 (Code C-5).
Subtest: Initial inspection.
Ammunition: M193 ball, lot LC-1-182.

S	DS	0.88	0.88	0									
				21 to 40	778		C5-2						Total rounds fired, 40.

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Mag Code No.	Mode of Fire	Type	Class	Unserviceable Parts: Part Name	No. Rds on Part at Replacement	Remarks
Subtest: Low temperature (-65°F). Ammunition: Same as above (rounds 1 to 2000).													
				21 to 40	Lost		C5-2						
				101		1	C5-6	Burst	FFB	I			BA.
				121 to 140	693		C5-7						
				201		1	C5-11	Burst	FBL	I			BA.
				221 to 240	714		C5-12						
				301		1	C5-4	Burst	FBL	I			BA.
				302		2	C5-4	Burst	FBL	I			BA.
				321 to 340	680		C5-5						
Same comment as with rifle C-4 prior to the fifth 100-round cycle.													
				401		1	C5-9	Burst	FBL	I			BA.
				402		2	C5-9	Burst	FBL	I			BA.
				402		2	C5-9	Burst	FFR	I			BA.
				421 to 440	690		C5-10						
				501		1	C5-2	Burst	FBL	I			BA.
				501		1	C5-2	Burst	FFR	I			CH.
				521 to 540	693		C5-3						
				601		1	C5-7	Burst	FBL	I			BA.
				601		1	C5-7	Burst	FFR	I			CH.
				621 to 640	700		C5-8						
Same comment as with rifle C-4 prior to the eighth 100-round cycle.													
				704		4	C5-12	Burst	FBL	I			BA.
				705		5	C5-12	Burst	FBL	I			BA.
				705		5	C5-2	Burst	FFR	I			CH.
				721 to 740	699		C5-1						
				801		1	C5-5	Burst	FBL	I			BA.

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Mag Code No.	Mode of Fire	Type	Class	Unserviceable Parts: Part Name	No. Rds on Part at Replacement	Remarks
				801		1	C5-5	Burst	FFR	I			CH.
				821 to 840	727		C5-6						
				901		1	C5-10	Burst	FBL	I			BA.
				901		1	C5-10	Burst	FFR	I			CH.
				902		2	C5-10	Burst	FBL	I			BA.
				902		2	C5-10	Burst	FFR	I			CH.
				903		3	C5-10	Burst	FBL	I			BA.
				921 to 940	686		C5-11						
S	0	0.90	0.90	1000									
				1021 to 1040	752		C5-4						
				1121 to 1140	711		C5-9						
				1201		1	C5-1	Burst	FFR	II			See comment with rifle C-4 at 1200 rounds.
				1221 to 1240	729		C5-2						
				1301		1	C5-6	Burst	FFR	II			CH.
				1321 to 1340	726		C5-7						
				1401		1	C5-11	Burst	FFR	II			CH.
				1402		2	C5-11	Burst	FBL	I			BA.
				1421 to 1440	706		C5-12						
				1501		1	C5-4	Burst	FFR	II			CH.
				1502		2	C5-4	Burst	FBL	I			BA.
				1521 to 1540	707		C5-5						
				1602		2	C5-9	Burst	COEC	I			CH.
				1602		2	C5-9	Burst	FFR	I			CH.
				1621 to 1640	Lost		C5-10						
				1701		1	C5-2	Burst	FFR	II			CH.
				1701		1	C5-2	Burst	FBL	I			BA.
				1702		2	C5-2	Burst	FFR	I			CH.
				1702		2	C5-2	Burst	FBL	I			BA.
				1703		3	C5-2	Burst	FFR	I			CH.
				1703		3	C5-2	Burst	FBL	I			BA.
				1704		4	C5-2	Burst	FFR	I			CH.
				1704		4	C5-2	Burst	FBL	I			BA.

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Mag Code No.	Mode of Fire	Type	Class	Unserviceable Parts: Part Name	No. Rds on Part at Replacement	Remarks
				1705		5	C5-2	Burst	FFR	I			CH.
				1705		5	C5-2	Burst	FBL	I			BAc.
				1721 to 1740	Lost		C5-3						
				1801		1	C5-7	Burst	FFR	II			CH.
				1802		2	C5-7	Burst	FBL	I			BA.
				1821 to 1840	719		C5-8						
				1861		1	C5-10	Burst	FFR	I			CH.
				1902		2	C5-12	Burst	COEC	I			CH.
				1902		2	C5-12	Burst	FBL	I			BA.
				1921 to 1940	727		C5-1						
S	O	1.07	1.07	2000									
Rifle: Serial No. 4381565 (Code C-6).													
Subtest: Initial inspection.													
Ammunition: M193 ball, lot LC-1-403.													
S	DS	0.80	0.80	0									
				21 to 40	791		C6-2						Total rounds fired, 40.
Subtest: Low temperature (-65°F).													
Ammunition: Same as above (rounds 1 to 2000).													
				21 to 40	Lost		C6-2						
				121 to 140	693		C6-7						
				201		1	C6-11	Burst	FFB	I			BA.
				221 to 240	688		C6-12						
				301		1	C6-4	Burst	FBL	I			BA.
				321 to 340	675		C6-5						

[c]The bolt carrier was removed from the rifle and disassembled. The firing pin was pried from the bolt carrier with a screwdriver, wiped clean, and reassembled.

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Mag Code No.	Mode of Fire	Type	Class	Unserviceable Parts: Part Name	No. Rds on Part at Replacement	Remarks
Same comment as with rifle C-4 prior to the eighth 100-round cycle.													
				401		1	C6-9	Burst	FBL	I			BA.
				401		1	C6-9	Burst	FFR	I			CH.
				421 to 440	686		C6-10						
				502		2	C6-2	Burst	FBL	I			BA.
				502		2	C6-2	Burst	FJ	I			CH.
				521 to 540	682								
				601		1	C6-7	Burst	FBL	I			BA.
				601		1	C6-7	Burst	FFR	I			CH.
				602		2	C6-7	Burst	FFR	I			CH.
				603		3	C6-7	Burst	FFR	I			CH.
				621 to 640	680		C6-8						
Same comment as with rifle C-4 prior to the eighth 100-round cycle.													
				701		1	C6-12	Burst	FBL	I			BA.
				721 to 740	678		C6-1						
				801		1	C6-5	Burst	FBL	I			BA.
				801		1	C6-5	Burst	FJ	I			CH.
				802		2	C6-5	Burst	FBL	I			BA.
				804		4	C6-5	Burst	FJ	I			CH.
				821 to 840	710		C6-6						
				901		1	C6-10	Burst	FBL	I			BA.
				901		1	C6-10	Burst	FFR	I			CH.
				902		2	C6-10	Burst	FBL	I			BA.
				921 to 940	662		C6-11						
S	O	0.68	0.68	1000									
				1021 to 1040	719		C6-4						
				1121 to 1140	693		C6-9						
				1221 to 1240	706		C6-2						
				1301		1	C6-6	Burst	FFR	II			See comment with rifle C-4 at 1200 rounds.

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Mag Code No.	Mode of Fire	Type	Class	Unserviceable Parts: Part Name	No. Rds on Part at Replacement	Remarks
				1302		2	C6-6	Burst	FFR	I			CH.
				1321 to 1340	688		C6-7						
				1401		1	C6-11	Burst	FFR	II			CH.
				1402		2	C6-11	Burst	FBL	I			BA.
				1402		2	C6-11	Burst	FFR	I			CH.
				1403		3	C6-11	Burst	FBL	I			BA.
				1421 to 1440	677		C6-12						
				1501		1	C6-4	Burst	FFR	II			CH.
				1502		2	C6-4	Burst	FBL	I			BA.
				1521 to 1540	674		C6-5						
				1601		1	C6-9	Burst	FFR	II			CH.
				1602		2	C6-9	Burst	FBL	I			BA.
				1621 to 1640	Lost		C6-10						
				1701		1	C6-2	Burst	FFR	II			CH.
				1702		2	C6-2	Burst	FBL	I			BA.
				1721 to 1740	Lost		C6-3						
				1801		1	C6-7	Burst	FFR	II			CH.
				1802		2	C6-7	Burst	FBL	I			BA.
				1821 to 1840	671		C6-8						
				1901		1	C6-12	Burst	FFR	II			CH.
				1902		2			FBL	I			BA.
				1902		2			FFR	I			BA.
				1903		3	C6-12	Burst	FBL	I			BA.
				1921 to 1940	689		C6-1						
S	O	1.02	1.02	2000		20	C6-4	Semi	FBR	I			CH.

Rifle: Serial No. 4381843 (Code C-7).
Subtest: Initial inspection.
Ammunition: M193 ball, lot LC-1-404 and M196 tracer, lot LC-12226 (4 to 1 mix).

S	DS	0.78	0.78	0									
				21 to 40	765		C7-2						Total rounds fired, 40.

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Mag Code No.	Mode of Fire	Type	Class	Unserviceable Parts: Part Name	No. Rds on Part at Replacement	Remarks
Subtest: Low temperature (-65°F). Ammunition: Same as above (rounds 1 to 2000).													
				21 to 40	706		C7-2						
				121 to 140	693		C7-5						
				201		1	C7-11	Burst	FBL	I			BA.
				221 to 240	710		C7-12						
				301		1	C7-4	Burst	FBL	I			BA.
				321 to 340	698		C7-5						
Same comment as with rifle C-4 prior to the fifth 100-round cycle.													
				401		1	C7-9	Burst	FBL	I			BA.
				421 to 440	638		C7-10						
				501		1	C7-2	Burst	FBL	I			BA.
				502		2	C7-2	Burst	FBL	I			BA.
				503		3	C7-2	Burst	FBL	I			BA.
				521 to 540	696		C7-3						
				601		1	C7-7	Burst	FBL	I			BA.
				601		1	C7-7	Burst	FFR	I			CH.
				602		2	C7-7	Burst	FBL	I			BA.
				621 to 640	686		C7-8						
Same comment as with rifle C-4 prior to the eighth 100-round cycle.													
				701		1	C7-12	Burst	FBL	I			BA.
				721 to 740	680		C7-1						
				801		1	C7-5	Burst	FBL	I			BA.
				821 to 840	684		C7-6						
				901		1	C7-10	Burst	FBL	I			BA.
				921 to 940	686								
S	O	1.05	1.05	1000									
				1021 to 1040	723		C7-4						
				1121 to 1140	693		C7-9						
				1221 to 1240	703		C7-2						
				1301		1	C7-6	Burst	FFR	II			CH.

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Mag Code No.	Mode of Fire	Type	Class	Unserviceable Parts: Part Name	No. Rds on Part at Replacement	Remarks
				1321 to 1340	694		C7-7						
				1402		2	C7-11	Burst	COEC	I			CH.
				1402		2	C7-11	Burst	FBL	I			BA.
				1421 to 1440	694		C7-5						
				1521 to 1540	694		C7-10						
				1602		2	C7-9	Burst	COEC	I			CH.
				1602		2	C7-9	Burst	FBL	I			BA.
				1602		2	C7-9	Burst	FFR	I			CH.
				1603		3	C7-9	Burst	FBL	I			BA.
				1621 to 1640	706		C7-10						
				1701		1	C7-2	Burst	FFR	II			CH.
				1702		2	C7-2	Burst	FBL	I			BA.
				1721 to 1740	688		C7-3						
				1801		1	C7-7	Burst	FFR	II			CH.
				1802		2	C7-7	Burst	FBL	I			BA.
				1802		2	C7-7	Burst	FFR	I			CH.
				1803		3	C7-7	Burst	FBL	I			BA.
				1821 to 1840	688		C7-8						
				1902		2	C7-12	Burst	BOB	I			CH.
				1902		2	C7-12	Burst	FBL	I			BA.
				1921 to 1940	667		C7-1						
S	O	1.12	1.12	2000									

Rifle: Serial No. 4381849 (Code C-8).
Subtest: Initial inspection.
Ammunition: M193 ball, lot FA-2-18 and M196 tracer, lot LC-12226 (4 to 1 mix).

S	DS	0.90	0.90	0									
				21 to 40	743		C8-2						Total rounds fired, 40.

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Mag Code No.	Mode of Fire	Type	Class	Unserviceable Parts: Part Name	No. Rds on Part at Replacement	Remarks
Subtest: Low temperature (-65°F). Ammunition: Same as above (rounds 1 to 2000).													
				21 to 40	694		C8-2						
				121 to 140	678		C8-7						
				201		1	C8-11	Burst	FBL	I			BA.
				221 to 240	689		C8-12						
				301		1	C8-4	Burst	FBL	I			BA.
				301		1	C8-4	Burst	FFR	I			CH.
				321 to 340	688		C8-5	Burst					
Same comment as with rifle C-4 prior to the fifth 100-round cycle.													
				401		1	C8-9	Burst	FBL	I			BA.
				401		1	C8-9	Burst	FJ	I			CH.
				421 to 440	675		C8-10						
				501		1	C8-2	Burst	FBL	I			BA.
				521 to 540	682		C8-3						
				601		1	C8-7	Burst	FBL	I			BA.
				602		2	C8-7	Burst	FBL	I			BA.
				621 to 640	686		C8-8						
Same comment as with rifle C-4 prior to the eighth 100-round cycle.													
				701		1	C8-12	Burst	FBL	I			BA.
				701		1	C8-12	Burst	FJ	I			CH.
				702		2	C8-12	Burst	FBL	I			BA.
				721 to 740	665		C8-1						
				801		1	C8-5	Burst	FBL	I			BA.
				821 to 840	675		C8-6						
				901		1	C8-10	Burst	FBL	I			BA.
				921 to 940	680		C8-11						
S	O	1.15	1.15	1000									
				1021 to 1040	720		C8-4						

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Mag Code No.	Mode of Fire	Type	Class	Unserviceable Parts: Part Name	No. Rds on Part at Replacement	Remarks
				1121 to 1140	727		C8-9						
				1221 to 1240	691		C8-2						
				1321 to 1340	660		C8-7						
				1421 to 1440	675		C8-12						
				1521 to 1540	666		C8-5						
				1601		1	C8-9	Burst	FFR	II			CH.
				1602		2	C8-9	Burst	FBL	I			BA.
				1621 to 1640	684		C8-10						
				1702		2	C8-2	Burst	BOB	I			CH.
				1702		2	C8-2	Burst	FBL	I			BA.
				1721 to 1740	671		C8-3						
				1821 to 1840	675		C8-8						
				1902		2	C8-12	Burst	COEC	I			CH.
				1902		2	C8-12	Burst	FBL	I			BA.
				1921 to 1940	673		C8-1						
S	O	1.13	1.13	2000									

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Mag Code No.	Mode of Fire	Type	Class	Unserviceable Parts: Part Name	No. Rds on Part at Replacement	Remarks
Rifle: Serial No. 4383076 (Code C-9).													
Subtest: Initial inspection.													
Ammunition: M193 ball, lot FC-2-27 and M196 tracer, lot LC-12225 (4 to 1 mix).													
S	DS	0.97	0.97	0									
				21 to 40	759		C9-2						Total rounds fired, 40.
Subtest: Low temperature (-65°F).													
Ammunition: Same as above (rounds 1 to 2000).													
				21 to 40	691		C9-2						
				44		4	C9-3	Semi	FFM	I			CH.
				48		8	C9-3	Semi	FFM	I			CH.
				101		1	C9-6	Burst	FBL	I			BA.
				121 to 140	672		C9-7						
				201		1	C9-11	Burst	FBL	I			BA.
				221 to 240	684		C9-12						
				301		1	C9-4	Burst	FBL	I			BA.
				321 to 340	678		C9-5						
Same comment as with rifle C-4 prior to the fifth 100-round cycle.													
				401		1	C9-9	Burst	FBL	I			BA.
				420 to 421	673		C9-10						
				475		15	C9-12	Burst	FFB	I			BA.
				521 to 540	686		C9-3						
				601		1	C9-7	Burst	FBL	I			BA.
				601		1	C9-7	Burst	FJ	I			CH.
				602		2	C9-7	Burst	FBL	I			BA.
				621 to 640	675		C9-8						
Same comment as with rifle C-4 prior to the eighth 100-round cycle.													
				701		1	C9-12	Burst	FBL	I			BA.

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Mag Code No.	Mode of Fire	Type	Class	Unserviceable Parts: Part Name	No. Rds on Part at Replacement	Remarks
				721 to 740	657		C9-1						
				801		1	C9-5	Burst	FBL	I			BA.
				821 to 840	658		C9-6						
				901		1	C9-11	Burst	FBL	I			BA.
				901		1	C9-11	Burst	FJ	I			CH.
				902		2	C9-11	Burst	FBL	I			BA.
				921 to 940	658								
S	0	1.13	1.13	1000									
				1021 to 1040	719		C9-4						
				1121 to 1140	694		C9-9						
				1221 to 1240	686		C9-2						
				1302		2	C9-6	Burst	FFR	I			CH.
				1321 to 1340	691		C9-7						
				1401		1	C9-11	Burst	FFR	II			CH.
				1402		2	C9-11	Burst	FBL	I			BA.
				1421 to 1440	653		C9-12						
				1521 to 1540	660		C9-5						
				1601		1	C9-9	Burst	FFR	II			CH.
				1602		2	C9-9	Burst	FBL	I			BA.
				1621 to 1640	714		C9-10						
				1701		1	C9-2	Burst	FFR	II			CH.
				1702		2	C9-2	Burst	FBL	I			BA.
				1703		3	C9-2	Burst	COEC	I			CH.
				1703		3	C9-2	Burst	FBL	I			BA.
				1721 to 1740	666		C9-3						
				1821 to 1840	677		C9-8						
				1901		1	C9-12	Burst	FFR	II			CH.
				1902		2	C9-12	Burst	FBL	I			BA.
				1921 to 1940	672		C9-1						
S	0	1.13	1.13	2000									

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Malfunctions: Mag Code No.	Malfunctions: Mode of Fire	Malfunctions: Type	Malfunctions: Class	Unserviceable Parts: Part Name	Unserviceable Parts: No. Rds on Part at Replacement	Remarks
Rifle: Serial No. 4383545 (Code C-10).													
Subtest: Initial inspection.													
Ammunition: M193 ball, lot FA-1-50.													
S	DS	1.02	1.02	0									
				21 to 40	849		C10-2						Total rounds fired, 40.
Subtest: Endurance (ball ammunition).													
Ammunition: M193 ball, lot IVI-1-6 (rounds 61 to 200).													
				121 to 140	834		C10-7						Ammunition lot FA-1-50 was fired in the rifle when cyclic rates were being recorded.
Ammunition: M193 ball, lot LC-12414 (rounds 201 to 300).													
				221 to 240	823		C10-12						
Ammunition: M193 ball, lot TW-18301 (rounds 301 to 800).													
				321 to 340	838		C10-5						
				421 to 440	851		C10-10						
				521 to 540	847		C10-3						
				621 to 640	867		C10-8						
				721 to 740	798		C10-1						
Ammunition: M193 ball, lot IVI-44255 (rounds 801 to 900).													
				821 to 840	861		C10-6						
Ammunition: M193 ball, lot 12818 (rounds 901 to 1000).													
				921 to 940	838		C10-11						

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Malfunctions: Mag Code No.	Malfunctions: Mode of Fire	Malfunctions: Type	Malfunctions: Class	Unserviceable Parts: Part Name	Unserviceable Parts: No. Rds on Part at Replacement	Remarks
S	C	0.62	0.62	1000									
Ammunition: M193 ball, lot TW-18302 (rounds 1001 to 1200).													
				1021 to 1040	908		C10-4						
				1121 to 1140	904		C10-9						
Ammunition: M193 ball, various lots (rounds 1201 to 1500).													
				1221 to 1240	867		C10-2						
				1321 to 1340	844		C10-7						
				1421 to 1440	847		C10-12						
Ammunition: M193 ball, lot WCC-6089 (rounds 1501 to 1800).													
				1521 to 1540	873		C10-5						
				1621 to 1640	863		C10-10						
				1721 to 1740	912		C10-3						
Ammunition: M193 ball, lot RA-5089 (rounds 1801 to 2000).													
				1821 to 1840	908		C10-8						
				1921 to 1940	887		C10-1						
S	C	0.63	0.63	2000									
Ammunition: M193 ball, various lots (rounds 2001 to 2700).													
				2021 to 2040	904		C10-6						
				2121 to 2140	877		C10-11						
				2221 to 2240	865		C10-4						
				2321 to 2340	879		C10-9						
				2421 to 2440	900		C10-2						

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Mag Code No.	Mode of Fire	Type	Class	Unserviceable Parts: Part Name	No. Rds on Part at Replacement	Remarks
				2521 to 2540	885		C10-7						
				2621 to 2640	879		C10-12						
Ammunition: M193 ball, lot WCC-18302 (rounds 2701 to 2900).													
				2721 to 2740	906		C10-5						
				2821 to 2840	900		C10-10						
Ammunition: M193 ball, lot LC-12473 (rounds 2901 to 3000).													
				2921 to 2940	893		C10-3						
				2963		3	C10-5	Burst	FFB	I			BA.
S	C	0.60	0.60	3000									
Ammunition: M193 ball, lot WCC-1-22 (rounds 3001 to 3100).													
				3021 to 3040	904		C10-8						
Ammunition: M193 ball, lot LC-12473 (rounds 3101 to 3500).													
				3121 to 3140	867		C10-1						
				3221 to 3240	847		C10-6						
				3321 to 3340	897		C10-11						
				3381		1	C10-2	Semi	FBL	I			BA.
				3421 to 3440	933		C10-4						
Ammunition: M193 ball, lot FC-31150 (rounds 3501 to 4000).													
				3521 to 3540	891		C10-9						
				3621 to 3640	861		C10-2						
				3721 to 3740	877		C10-7						
				3821 to 3840	869		C10-12						

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Malfunctions: Mag Code No.	Malfunctions: Mode of Fire Type	Malfunctions: Class	Unserviceable Parts: Part Name	Unserviceable Parts: No. Rds on Part at Replacement	Remarks
				3921 to 3940	867		C10-5					
S	C	0.60	0.60	4000								
Ammunition: M193 ball, lot WCC-6183 (rounds 4001 to 4200).												
				4021 to 4040	908		C10-10					
				4121 to 4140	877		C10-3					
Ammunition: M193 ball, various lots (rounds 4201 to 5000).												
				4221 to 4240	877		C10-8					
				4321 to 4340	897		C10-1					
				4421 to 4440	865		C10-6					
				4521 to 4540	849		C10-11					
				4621 to 4640	829		C10-4					
				4721 to 4740	865		C10-9					
				4821 to 4840	847		C10-2					
				4921 to 4940	840		C10-7					
S	C	0.65	0.65	5000								
Ammunition: M193 ball, various lots (rounds 5001 to 5500).												
				5021 to 5040	900		C10-12					
				5121 to 5140	883		C10-5					
				5221 to 5240	887		C10-10					
				5321 to 5340	904		C10-3					
				5421 to 5440	813		C10-8					
Ammunition: M193 ball, lot WCC-6079 (rounds 5501 to 5700).												
				5521 to 5540	829		C10-1					
				5621 to 5640	869		C10-6					

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Malfunctions: Mag Code No.	Malfunctions: Mode of Fire	Malfunctions: Type	Malfunctions: Class	Unserviceable Parts: Part Name	Unserviceable Parts: No. Rds on Part at Replacement	Remarks
Ammunition: M193 ball, lot TW-18184 (rounds 5701 to 5800).													
				5721 to 5740	906		C10-11						
Ammunition: M193 ball, lot WCC-6079 (rounds 5801 to 6000).													
				5821 to 5840	820		C10-4						
				5921 to 5940	820		C10-9						
S	DS	1.23	1.23	6000							Broken extractor spring	6000	
Rifle: Serial No. 4383254 (Code C-11). Subtest: Initial inspection. Ammunition: M193 ball, lot FA-1-50.													
S	DS	1.02	1.02	0									
				21 to 40	804		C11-2						Total rounds fired, 40.
Subtest: Endurance (ball ammunition). Ammunition: M193 ball, lot IVI-1-6 (rounds 61 to 200).													
				121 to 140	823		C11-7						Ammunition lot FA-1-50 was fired in the rifle when cyclic rates were being recorded.
Ammunition: M193 ball, lot LC-12414 (rounds 201 to 300).													
				221 to 240	799		C11-12						
Ammunition: M193 ball, lot TW-18301 (rounds 301 to 800).													
				321 to 340	832		C11-5						
				421 to 440	842		C11-10						
				521 to 540	857		C11-3						

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Malfunctions: Mag Code No.	Malfunctions: Mode of Fire	Malfunctions: Type	Malfunctions: Class	Unserviceable Parts: Part Name	Unserviceable Parts: No. Rds on Part at Replacement	Remarks
				621 to 640	842		C11-8						
				721 to 740	775		C11-1						
Ammunition: M193 ball, lot IVI-44255 (rounds 801 to 900).													
				821 to 840	823		C11-6						
Ammunition: M193 ball, lot TW-18302 (rounds 901 to 1000).													
				921 to 940	823		C11-11						
S	C	0.67	0.67	1000									
Ammunition: M193 ball, lot TW-18302 (rounds 1001 to 1200).													
				1021 to 1040	877		C11-4						
				1121 to 1140	853		C11-9						
Ammunition: M193 ball, various lots (rounds 1201 to 1500).													
				1221 to 1240	802		C11-2						
				1321 to 1340	806		C11-7						
				1421 to 1440	798		C11-12						
Ammunition: M193 ball, lot WCC-6089 (rounds 1501 to 1800).													
				1521 to 1540	829		C11-5						
				1621 to 1640	836		C11-10						
				1721 to 1740	881		C11-3						
Ammunition: M193 ball, lot RA-5089 (rounds 1801 to 2000).													
				1821 to 1840	883		C11-8						
				1921 to 1940	871		C11-1						
S	O	0.62	0.62	2000							Extractor spring	2000	

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Malfunctions: Mag Code No.	Malfunctions: Mode of Fire	Malfunctions: Type	Malfunctions: Class	Unserviceable Parts: Part Name	Unserviceable Parts: No. Rds on Part at Replacement	Remarks
Ammunition: M193 ball, various lots (rounds 2001 to 2700).													
				2021 to 2040	881		C11-6						
				2121 to 2140	861		C11-11						
				2221 to 2240	844		C11-4						
				2321 to 2340	831		C11-9						
				2421 to 2440	859		C11-2						
				2521 to 2540	859		C11-7						
				2621 to 2640	847		C11-12						
Ammunition: M193 ball, lot WCC-18302 (rounds 2701 to 2900).													
				2721 to 2740	879		C11-5						
				2821 to 2840	879		C11-10						
Ammunition: M193 ball, lot LC-12473 (rounds 2901 to 3000).													
				2921 to 2940	908		C11-3						
S	C	0.73	0.73	3000									
Ammunition: M193 ball, lot WCC-1-22 (rounds 3001 to 3100).													
				3021 to 3040	847		C11-8						
Ammunition: M193 ball, lot LC-12473 (rounds 3101 to 3500).													
				3121 to 3140	811		C11-1						
				3221 to 3240	813		C11-6						
				3306		6	C11-10	Burst	FJ	I			
U	O	0.08	0.08	3326		6	C11-11	Auto.	FJ	I	Extractor spring	1306	
				3327 to 3340	820		C11-11						
				3421 to 3440	844		C11-4						

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Malfunctions: Mag Code No.	Malfunctions: Mode of Fire	Malfunctions: Type	Malfunctions: Class	Unserviceable Parts: Part Name	Unserviceable Parts: No. Rds on Part at Replacement	Remarks
Ammunition: M193 ball, lot FC-31150 (rounds 3501 to 4000).													
				3521 to 3540	863		C11-9						
				3621 to 3640	838		C11-2						
				3721 to 3740	849		C11-7						
				3821 to 3840	849		C11-12						
				3921 to 3940	847		C11-5						
S	C	0.65	0.65	4000									
Ammunition: M193 ball, lot WCC-6183 (rounds 4001 to 4200).													
				4021 to 4040	869		C11-10						
				4121 to 4140	831		C11-3						
Ammunition: M193 ball, lot RA-5356 (rounds 4201 to 4300).													
				4221 to 4240	842		C11-8						
Ammunition: M193 ball, lot FA-1-10 (rounds 4301 to 4400).													
				4321 to 4340	847		C11-1						
Ammunition: M193 ball, various lots (rounds 4401 to 5000).													
				4421 to 4440	838		C11-6						
				4521 to 4540	844		C11-11						
				4621 to 4640	827		C11-4						
				4721 to 4740	836		C11-9						
				4821 to 4840	838		C11-2						
				4921 to 4940	838		C11-7						
S	C	0.60	0.60	5000									

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Mag Code No.	Mode of Fire	Type	Class	Unserviceable Parts: Part Name	No. Rds on Part at Replacement	Remarks
Ammunition: M193 ball, various lots (rounds 5001 to 5300).													
				5021 to 5040	924		C11-12						
U	O	0.10	0.10	5044		4	C11-1	Semi	FJ	I	Extractor spring	1738	
				5121 to 5140	889		C11-5						
				5221 to 5240	900		C11-10						
Ammunition: M193 ball, lot TW-18266 (rounds 5301 to 5400).													
				5321 to 5340	897		C11-3						
Ammunition: M193 ball, lot TW-18184 (rounds 5401 to 5600).													
				5421 to 5440	887		C11-8						
				5521 to 5540	838		C11-1						
Ammunition: M193 ball, lot WCC-6079 (rounds 5601 to 6000).													
				5621 to 5640	847		C11-6						
				5721 to 5740	879		C11-11						
				5740		20	C11-11	Auto	FBR	I			
				5821 to 5840	806		C11-4						
				5921 to 5940	847		C11-9						
S	DS	1.23	1.23	6000									
Rifle: Serial No. 4383965 (Code C-12).													
Subtest: Initial inspection.													
Ammunition: M193 ball, lot FA-1-50.													
S	DS	1.03	1.03	0									
				21 to 40	859		C12-2						Total rounds fired, 40.

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Malfunctions: Mag Code No.	Malfunctions: Mode of Fire	Malfunctions: Type	Malfunctions: Class	Unserviceable Parts: Part Name	Unserviceable Parts: No. Rds on Part at Replacement	Remarks
Subtest: Endurance (ball ammunition).													
Ammunition: M193 ball, lot 1-6 (rounds 61 to 200).													
				121 to 140	820		C12-7						Ammunition lot FA-1-50 was fired in the rifle when cyclic rates were being recorded.
Ammunition: M193 ball, lot LC-12414 (rounds 201 to 300).													
				221 to 240	799		C12-12						
Ammunition: M193 ball, lot TW-18301 (rounds 301 to 800).													
				321 to 340	798		C12-5						
				421 to 440	813		C12-10						
				521 to 540	776		C12-3						
				621 to 640	746		C12-8						
				721 to 740	770		C12-1						
Ammunition: M193 ball, lot IVI-44255 (rounds 801 to 900).													
				821 to 840	772		C12-6						
Ammunition: M193 ball, lot TW-18302 (rounds 901 to 1000).													
				921 to 940	806		C12-11						
S	C	0.58	0.58	1000									
Ammunition: M193 ball, lot TW-18302 (rounds 1001 to 1200).													
				1021 to 1040	893		C12-4						
				1121 to 1140	863		C12-9						

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Malfunctions: Mag Code No.	Malfunctions: Mode of Fire	Malfunctions: Type	Malfunctions: Class	Unserviceable Parts: Part Name	Unserviceable Parts: No. Rds on Part at Replacement	Remarks
Ammunition: M193 ball, various lots (rounds 1201 to 1400).													
				1221 to 1240	808		C12-2						
				1321 to 1340	781		C12-7						
Ammunition: M193 ball, lot WCC-6089 (rounds 1401 to 1800).													
				1421 to 1440	809		C12-12						
				1521 to 1540	840		C12-5						
				1621 to 1640	849		C12-10						
				1721 to 1740	881		C12-3						
Ammunition: M193 ball, lot RA-5089 (rounds 1801 to 2000).													
				1821 to 1840	900		C12-8						
				1921 to 1940	867		C12-1						
S	C	0.65	0.65	2000									
Ammunition: M193 ball, various lots (rounds 2001 to 2700).													
				2021 to 2040	847		C12-6						
				2121 to 2140	831		C12-11						
				2221 to 2240	813		C12-4						
				2321 to 2340	844		C12-9						
				2421 to 2440	847		C12-2						
				2521 to 2540	853		C12-7						
				2621 to 2640	847		C12-12						
Ammunition: M193 ball, lot WCC-18302 (rounds 2701 to 2900).													
				2721 to 2740	857		C12-5						
				2821 to 2840	859		C12-10						

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Malfunctions: Mag Code No.	Malfunctions: Mode of Fire	Malfunctions: Type	Malfunctions: Class	Unserviceable Parts: Part Name	Unserviceable Parts: No. Rds on Part at Replacement	Remarks
Ammunition: M193 ball, lot LC-12473 (rounds 2901 to 3000).													
				2921 to 2940	847		C12-3						
				2917		17	C12-2	Burst	FF	I			CH.
S	0	0.55	0.55	3000							Extractor spring	3000	
Ammunition: M193 ball, lot WCC-1-22 (rounds 3001 to 3100).													
				3021 to 3040	865		C12-8						
Ammunition: M193 ball, lot LC-12473 (rounds 3101 to 3500).													
				3121 to 3140	822		C12-1						
				3221 to 3240	831		C12-6						
				3321 to 3340	840		C12-11						
				3421 to 3440	853		C12-4						
Ammunition: M193 ball, lot FC-31150 (rounds 3501 to 4000).													
				3521 to 3540	859		C12-9						
				3621 to 3640	855		C12-2						
				3721 to 3740	849		C12-7						
				3821 to 3840	869		C12-12						
				3921 to 3940	853		C12-5						
S	C	0.67	0.67	4000									
Ammunition: M193 ball, lot WCC-6183 (rounds 4001 to 4200).													
				4021 to 4040	926		C12-10						
				4121 to 4140	887		C12-4						
Ammunition: M193 Ball, various lots (rounds 4201 to 5000).													
				4221 to 4240	893		C12-8						
				4321 to 4340	879		C12-1						
				4421 to 4440	849		C12-6						

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Malfunctions: Mag Code No.	Malfunctions: Mode of Fire	Malfunctions: Type	Malfunctions: Class	Unserviceable Parts: Part Name	Unserviceable Parts: No. Rds on Part at Replacement	Remarks
				4521 to 4540	865		C12-11						
				4600		20	C12-2	Semi	FBR	I			
				4621 to 4640	869		C12-4						
				4721 to 4740	877		C12-9						
				4821 to 4840	865		C12-2						
				4921 to 4940	861		C12-7						
S	C	0.67	0.67	5000									
Ammunition: M193 ball, various lots (rounds 5001 to 5200).													
				5021 to 5040	926		C12-12						
				5121 to 5140	919		C12-5						
Ammunition: M193 ball, lot TW-18266 (rounds 5201 to 5400).													
				5221 to 5240	917		C12-10						
				5321 to 5340	915		C12-3						
Ammunition: M193 ball, lot TW-18184 (rounds 5401 to 5500).													
				5421 to 5440	889		C12-8						
Ammunition: M193 ball, lot WCC-6079 (rounds 5501 to 5700).													
				5521 to 5540	844		C12-1						
				5621 to 5640	875		C12-6						
Ammunition: M193 ball, lot TW-18184 (rounds 5701 to 5800).													
				5721 to 5740	863		C12-11						

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Malfunctions: Mag Code No.	Malfunctions: Mode of Fire	Malfunctions: Type	Malfunctions: Class	Unserviceable Parts: Part Name	Unserviceable Parts: No. Rds on Part at Replacement	Remarks
Ammunition: M193 ball, lot WCC-6079 (rounds 5801 to 6000).													
				5821 to 5840	799		C12-4						
				5921 to 5940	857		C12-9						
S	DS	0.67	0.67	6000									
Rifle: Serial No. 4384193 (Code C-13).													
Subtest: Initial inspection.													
Ammunition: M193 ball, lot FA-1-50.													
S	DS	1.10	1.10	0									
				21 to 40	815		C13-2						Total rounds fired, 40.
Subtest: Endurance (ball ammunition).													
Ammunition: M193 ball, lot IVI-1-6 (rounds 61 to 200).													
				121 to 140	815		C13-5						Ammunition lot FA-1-50 was fired in the rifle when cyclic rates were being recorded.
Ammunition: M193 ball, lot LC-12414 (rounds 201 to 300).													
				221 to 240	781		C13-12						
Ammunition: M193 ball, lot TW-18301 (rounds 301 to 800).													
				321 to 340	794		C13-5						
				421 to 440	799		C13-10						
				521 to 540	808		C13-3						
				621 to 640	741		C13-8						
				721 to 740	776		C13-1						
Ammunition: M193 ball, lot IVI-44255 (rounds 801 to 900).													
				821 to 840	759		C13-6						

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Malfunctions: Mag Code No.	Malfunctions: Mode of Fire	Malfunctions: Type	Malfunctions: Class	Unserviceable Parts: Part Name	Unserviceable Parts: No. Rds on Part at Replacement	Remarks
Ammunition: M193 ball, lot TW-18302 (rounds 901 to 1000).													
				921 to 940	789		C13-11						
S	C	0.74	0.74	1000									
Ammunition: M193 ball, lot TW-18302 (rounds 1001 to 1200).													
				1021 to 1040	867		C13-4						
				1121 to 1140	838		C13-9						
Ammunition: M193 ball, various lots (rounds 1201 to 1400).													
				1221 to 1240	808		C13-2						
				1321 to 1340	791		C13-7						
Ammunition: M193 ball, lot WCC-6089 (rounds 1401 to 1800).													
				1421 to 1440	811		C13-12						
				1521 to 1540	825		C13-5						
				1621 to 1640	836		C13-10						
				1721 to 1740	873		C13-3						
Ammunition: M193 ball, lot RA-5089 (rounds 1801 to 2000).													
				1821 to 1840	885		C13-8						
				1921 to 1940	859		C13-1						
S	C	0.55	0.55	2000									
Ammunition: M193 ball, various lots (rounds 2001 to 2700).													
				2021 to 2040	838		C13-6						
				2121 to 2140	840		C13-11						
				2221 to 2240	823		C13-4						

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Mag Code No.	Mode of Fire	Type	Class	Unserviceable Parts: Part Name	No. Rds on Part at Replacement	Remarks
				2321 to 2340	829		C13-9						
				2421 to 2440	842		C13-2						
				2521 to 2540	827		C13-7						
				2524		4	C13-7	Auto.	FF	I			CH.
				2621 to 2640	838		C13-12						
Ammunition: M193 ball, lot WCC-18302 (rounds 2701 to 2900).													
				2721 to 2740	857		C13-5						
				2821 to 2840	859		C13-10						
Ammunition: M193 ball, lot LC-12473 (rounds 2901 to 3000).													
				2921 to 2940	857		C13-3						
S	C	0.72	0.72	3000									
Ammunition: M193 ball, lot WCC-1-22 (rounds 3001 to 3100).													
				3021 to 3040	829		C13-8						
Ammunition: M193 ball, lot LC-12473 (rounds 3101 to 3500).													
				3121 to 3140	838		C13-1						
				3221 to 3240	842		C13-6						
				3321 to 3340	840		C13-11						
				3421 to 3440	849		C13-4						
U	O	0.09	0.09	3444		4	C13-5	Semi	FJ	I	Extractor spring	3444	
Ammunition: M193 ball, lot FC-31150 (rounds 3501 to 4000).													
				3521 to 3540	853		C13-9						

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Mag Code No.	Mode of Fire Type	Mode of Fire Class	Unserviceable Parts: Part Name	Unserviceable Parts: No. Rds on Part at Replacement	Remarks
				3621 to 3640	831		C13-2					
				3721 to 3740	840		C13-7					
				3821 to 3840	847		C13-12					
				3921 to 3940	844		C13-5					
S	C	0.70	0.70	4000								
Ammunition: M193 ball, lot WCC-6183 (rounds 4001 to 4200).												
				4021 to 4040	861		C13-10					
				4121 to 4140	842		C13-3					
Ammunition: M193 ball, various lots (rounds 4201 to 5000).												
				4221 to 4240	857		C13-8					
				4321 to 4340	838		C13-1					
				4421 to 4440	829		C13-6					
				4521 to 4540	831		C13-11					
				4621 to 4640	825		C13-4					
				4721 to 4740	822		C13-9					
				4821 to 4840	840		C13-2					
				4921 to 4940	840		C13-7					
S	C	0.67	0.67	5000								
Ammunition: M193 ball, various lots (rounds 5001 to 5200).												
				5021 to 5040	891		C13-12					
				5121 to 5140	904		C13-5					
Ammunition: M193 ball, lot TW-18266 (rounds 5201 to 5400).												
				5221 to 5240	908		C13-10					
				5321 to 5340	889		C13-3					

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Malfunctions: Mag Code No.	Malfunctions: Mode of Fire	Malfunctions: Type	Malfunctions: Class	Unserviceable Parts: Part Name	Unserviceable Parts: No. Rds on Part at Replacement	Remarks
Ammunition: M193 ball, lot TW-18184 (rounds 5401 to 5600).													
				5421 to 5440	865		C13-8						
				5521 to 5540	813		C13-1						
Ammunition: M193 ball, lot WCC-6079 (rounds 5601 to 6000).													
				5621 to 5640	813		C13-6						
				5721 to 5740	791		C13-11						
				5821 to 5840	798		C13-4						
				5921 to 5940	825		C13-9						
S	DS	1.22	1.22	6000							Extractor spring	2556	
Rifle: Serial No. 4384329 (Code C-14). Subtest: Initial inspection. Ammunition: M193 ball, lot FA-1-50.													
S	DS	0.98	0.98	0									
				21 to 40	853		C14-2						Total rounds fired, 40.
Subtest: Endurance (ball ammunition). Ammunition: M193 ball, lot IVI-6 (rounds 61 to 200).													
				121 to 140	792		C14-7						Ammunition lot FA-1-50 was fired in the rifle when cyclic rates were being recorded.
Ammunition: M193 ball, lot TW-18301 (rounds 201 to 700).													
				221 to 240	726		C14-12						
				321 to 340	743		C14-5						
				421 to 440	708		C14-10						

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Mag Code No.	Mode of Fire	Type	Class	Unserviceable Parts: Part Name	No. Rds on Part at Replacement	Remarks
				521 to 540	730		C14-3						
				621 to 640	628		C14-8						
Ammunition: M193 ball, lot IVI-44255 (rounds 701 to 900).													
				721 to 740	590		C14-1						
				821 to 840	718		C14-6						
Ammunition: M193 ball, lot TW-18302 (rounds 901 to 1000).													
				921 to 940	729		C14-11						
S	C	0.67	0.67	1000									Approximately 1/4 inch of the front bolt-ring was missing.
Ammunition: M193 ball, various lots (rounds 1001 to 1400).													
				1021 to 1040	906		C14-4						
				1121 to 1140	730		C14-9						
				1221 to 1240	704		C14-2						
				1321 to 1340	703		C14-7						
Ammunition: M193 ball, lot WCC-6089 (rounds 1401 to 1800).													
				1421 to 1440	733		C14-12						
				1521 to 1540	767		C14-5						
				1621 to 1640	762		C14-10						
				1721 to 1740	791		C14-3						
Ammunition: M193 ball, lot RA-5089 (rounds 1801 to 2000).													
				1821 to 1840	788		C14-8						
				1921 to 1940	796		C14-1						
S	DS	0.70	0.70	2000							Bolt ring	2000	A thin circular portion was remaining.

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Malfunctions: Mag Code No.	Malfunctions: Mode of Fire	Malfunctions: Type	Malfunctions: Class	Unserviceable Parts: Part Name	Unserviceable Parts: No. Rds on Part at Replacement	Remarks
Ammunition: M193 ball, various lots (rounds 2001 to 3000).													
				2021 to 2040	849		C14-6						
				2121 to 2140	831		C14-11						
				2221 to 2240	804		C14-4						
				2321 to 2340	822		C14-9						
				2421 to 2440	832		C14-2						
				2521 to 2540	859		C14-7						
				2580		20	C14-9	Burst	FBR	I			
				2600		20	C14-10	Semi	FBR	I			
				2621 to 2640	838		C14-12						
				2721 to 2740	849		C14-5						
				2800		20	C14-8	Semi	FBR	I			
				2821 to 2840	879		C14-10						
				2921 to 2940	875		C14-3						
				2965		5	C14-5	Burst	FF	I			BA.
S	C	0.73	0.73	3000									
Ammunition: M193 ball, lot WCC-1-22 (rounds 3001 to 3100).													
				3021 to 3040	908		C14-8						
				3040		20	C14-8	Auto	FBR	I			
Ammunition: M193 ball, lot LC-12473 (rounds 3101 to 3500).													
				3121 to 3140	873		C14-1						
				3221 to 3240	847		C14-6						
				3321 to 3340	844		C14-11						
				3421 to 3440	844		C14-4						
Ammunition: M193 ball, lot FC-31150 (rounds 3501 to 4000).													
				3521 to 3540	859		C14-9						
				3621 to 3640	847		C14-2						

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Mag Code No.	Mode of Fire	Type	Class	Unserviceable Parts: Part Name	No. Rds on Part at Replacement	Remarks
				3665		5	C14-4	Burst	BOB	I			BA/CH.
				3721 to 3740	840		C14-7						
				3821 to 3840	844		C14-12						
				3921 to 3940	823		C14-5						
				3960		20	C14-6	Semi	FBR	I			
S	C	0.73	0.73	4000									Approximately 1/4 inch of replaced bolt ring was missing.
Ammunition: M193 ball, lot RA-5356 (rounds 4001 to 4300).													
				4021 to 4040	881		C14-10						
				4121 to 4140	827		C14-3						
				4180		20	C14-5	Burst	FBR	I			
				4221 to 4240	836		C14-8						
Ammunition: M193 ball, lot FC-1-10 (rounds 4301 to 4400).													
				4321 to 4340	792		C14-1						
				4400		20	C14-4	Semi	FBR	I			
Ammunition: M193 ball, various lots (rounds 4401 to 4800).													
				4421 to 4440	804		C14-6						
				4521 to 4540	802		C14-11						
				4621 to 4640	804		C14-4						
				4721 to 4740	788		C14-9						
Ammunition: M193 ball, lot WCC-6089 (rounds 4801 to 5000).													
				4821 to 4840	845		C14-2						
				4921 to 4940	811		C14-7						
S	C	0.72	0.72	5000									

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Malfunctions: Mag Code No.	Malfunctions: Mode of Fire	Malfunctions: Type	Malfunctions: Class	Unserviceable Parts: Part Name	Unserviceable Parts: No. Rds on Part at Replacement	Remarks
Ammunition: M193 ball, various lots (rounds 5001 to 5200).													
				5021 to 5040	842		C14-12						
				5121 to 5140	840		C14-5						
Ammunition: M193 ball, lot TW-18266 (rounds 5201 to 5400).													
				5221 to 5240	834		C14-10						
				5321 to 5340	844		C14-3						
Ammunition: M193 ball, lot TW-18184 (rounds 5401 to 5500).													
				5421 to 5440	889		C14-8						
Ammunition: M193 ball, lot WCC-6079 (rounds 5501 to 5700).													
				5521 to 5540	775		C14-1						
				5621 to 5640	827		C14-6						
				5605		5	C14-5	Burst	FBL	I			BA.
Ammunition: M193 ball, lot TW-18184 (rounds 5701 to 5800).													
				5721 to 5740	767		C14-11						
Ammunition: M193 ball, lot WCC-6079 (rounds 5801 to 5900).													
				5821 to 5840	758		C14-4						
Ammunition: M193 ball, lot TW-18206 (rounds 5901 to 6000).													
				5921 to 5940	791		C14-9						
S	O&DS	0.72	0.72	6000							Extractor spring	6000	A thin circular portion of the front bolt-ring remained.
											bolt ring	4000	

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Malfunctions: Mag Code No.	Malfunctions: Mode of Fire	Malfunctions: Type	Malfunctions: Class	Unserviceable Parts: Part Name	Unserviceable Parts: No. Rds on Part at Replacement	Remarks
Rifle: Serial No. 4384343 (Code C-15).													
Subtest: Initial inspection.													
Ammunition: M193 ball, lot FA-1-50 and M196 tracer, lot TW-18028 (4 to 1 mix).													
S	DS	1.37	1.37	0									
				21 to 40	811		C14-2						Total rounds fired, 40.
Subtest: Endurance (4 to 1 mix).													
Ammunition: M193 ball, lot IVI-1-6.													
M196 tracer, lot TW-18028 (continually throughout the test).													
				121 to 140	799		C15-2						Ammunition lots FA-1-50 (ball) and TW-18028 (tracer) were fired in the rifle when cyclic rates were being recorded.
Ammunition: M193 ball, lot TW-18301 (ball rounds 201 to 700).													
				221 to 240	823		C15-12						
				321 to 340	794		C15-5						
				421 to 440	792		C15-10						
				521 to 540	789		C15-3						
				621 to 640	744		C15-8						
Ammunition: M193 ball, lot IVI-44255 (ball rounds 701 to 900).													
				721 to 740	770		C15-13						
				821 to 840	773		C15-6						
Ammunition: M193 ball, lot TW-18302 (ball rounds 901 to 1000).													
				921 to 940	806		C15-11						
S	C	0.73	0.73	1000									

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Malfunctions: Mag Code No.	Malfunctions: Mode of Fire	Malfunctions: Type	Malfunctions: Class	Unserviceable Parts: Part Name	Unserviceable Parts: No. Rds on Part at Replacement	Remarks
Ammunition: M193 ball, various lots (rounds 1001 to 1400).													
				1021 to 1040	847		C15-4						
				1121 to 1140	788		C15-9						
				1221 to 1240	808		C15-2						
				1321 to 1340	796		C15-7						
Ammunition: M193 ball, lot WCC-6089 (rounds 1401 to 1700).													
				1421 to 1440	811		C15-12						
				1521 to 1540	804		C15-5						
				1621 to 1640	804		C15-10						
Ammunition: M193 ball, lot RA-5089 (rounds 1701 to 2000).													
				1721 to 1740	831		C15-3						
				1821 to 1840	845		C15-8						
				1921 to 1940	840		C15-1						
S	C	0.57	0.57	2000									
Ammunition: M193 ball, various lots (rounds 2001 to 3000).													
				2021 to 2040	845		C15-6						
				2121 to 2140	825		C15-11						
				2221 to 2240	831		C15-4						
				2321 to 2340	831		C15-9						
				2421 to 2440	845		C15-2						
				2521 to 2540	836		C15-7						
				2621 to 2640	834		C15-12						
				2721 to 2740	847		C15-5						
				2821 to 2840	853		C15-10						
				2921 to 2940	869		C15-3						

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Malfunctions: Mag Code No.	Malfunctions: Mode of Fire	Malfunctions: Type	Malfunctions: Class	Unserviceable Parts: Part Name	Unserviceable Parts: No. Rds on Part at Replacement	Remarks
S	C	0.62	0.62	3000									
Ammunition: M193 ball, lot WCC-1-22 (rounds 3001 to 3100).													
				3021 to 3040	865					C15-8			
Ammunition: M193 ball, lot LC-12473 (rounds 3101 to 3500).													
				3121 to 3140	831					C15-1			
				3221 to 3240	818					C15-6			
				3321 to 3340	781					C15-11			
				3421 to 3440	825					C15-4			
Ammunition: M193 ball, lot FC-31150 (rounds 3501 to 4000).													
				3521 to 3540	832					C15-9			
				3621 to 3640	831					C15-2			
				3721 to 3740	838					C15-7			
				3821 to 3840	842					C15-12			
				3921 to 3940	847					C15-5			
S	C	0.73	0.73	4000									
Ammunition: M193 ball, lot RA-5356 (rounds 4001 to 4300).													
				4021 to 4040	853					C15-10			
				4121 to 4140	840					C15-3			
				4221 to 4240	863					C15-8			
Ammunition: M193 ball, various lots (rounds 4301 to 4800).													
				4321 to 4340	847					C15-1			
				4421 to 4440	840					C15-6			
				4521 to 4540	838					C15-11			
				4621 to 4640	838					C15-4			
				4721 to 4740	816					C15-9			

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Mag Code No.	Mode of Fire	Type	Class	Unserviceable Parts: Part Name	No. Rds on Part at Replacement	Remarks
Ammunition: M193 ball, lot WCC-6089 (rounds 4801 to 5000).													
				4821 to 4840	831		C15-2						
				4921 to 4940	844		C15-7						
S	C	0.67	0.67	5000									
Ammunition: M193 ball, various lots (rounds 5001 to 5200).													
				5021 to 5040	875		C15-12						
				5121 to 5140	873		C15-5						
Ammunition: M193 ball, lot TW-18266 (rounds 5201 to 5400).													
				5221 to 5240	879		C15-10						
				5321 to 5340	877		C15-3						
Ammunition: M193 ball, lot WCC-6079 (rounds 5401 to 5600).													
				5421 to 5440	851		C15-8						
				5521 to 5540	827		C15-1						
Ammunition: M193 ball, various lots (rounds 5601 to 6000).													
				5621 to 5640	813		C15-6						
				5721 to 5740	849		C15-11						
U	O	0.08	0.08	5775		15	C15-1	Burst	FJ	I	Extractor spring	5775	
				5821 to 5840	815		C15-4						
				5921 to 5940	853		C15-9						
S	O&DS	1.15	1.15	6000									

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Malfunctions: Mag Code No.	Malfunctions: Mode of Fire	Malfunctions: Type	Malfunctions: Class	Unserviceable Parts: Part Name	Unserviceable Parts: No. Rds on Part at Replacement	Remarks
S	C	0.62	0.62	3000									
Ammunition: M193 ball, lot WCC-1-22 (rounds 3001 to 3100).													
				3021 to 3040	865		C15-8						
Ammunition: M193 ball, lot LC-12473 (rounds 3101 to 3500).													
				3121 to 3140	831		C15-1						
				3221 to 3240	818		C15-6						
				3321 to 3340	781		C15-11						
				3421 to 3440	825		C15-4						
Ammunition: M193 ball, lot FC-31150 (rounds 3501 to 4000).													
				3521 to 3540	832		C15-9						
				3621 to 3640	831		C15-2						
				3721 to 3740	838		C15-7						
				3821 to 3840	842		C15-12						
				3921 to 3940	847		C15-5						
S	C	0.73	0.73	4000									
Ammunition: M193 ball, lot RA-5356 (rounds 4001 to 4300).													
				4021 to 4040	853		C15-10						
				4121 to 4140	840		C15-3						
				4221 to 4240	863		C15-8						
Ammunition: M193 ball, various lots (rounds 4301 to 4800).													
				4321 to 4340	847		C15-1						
				4421 to 4440	840		C15-6						
				4521 to 4540	838		C15-11						
				4621 to 4640	838		C15-4						
				4721 to 4740	816		C15-9						

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Mag Code No.	Mode of Fire	Type	Class	Unserviceable Parts: Part Name	No. Rds on Part at Replacement	Remarks
Ammunition: M193 ball, lot WCC-6089 (rounds 4801 to 5000).													
				4821 to 4840	831		C15-2						
				4921 to 4940	844		C15-7						
S	C	0.67	0.67	5000									
Ammunition: M193 ball, various lots (rounds 5001 to 5200).													
				5021 to 5040	875		C15-12						
				5121 to 5140	873		C15-5						
Ammunition: M193 ball, lot TW-18266 (rounds 5201 to 5400).													
				5221 to 5240	879		C15-10						
				5321 to 5340	877		C15-3						
Ammunition: M193 ball, lot WCC-6079 (rounds 5401 to 5600).													
				5421 to 5440	851		C15-8						
				5521 to 5540	827		C15-1						
Ammunition: M193 ball, various lots (rounds 5601 to 6000).													
				5621 to 5640	813		C15-6						
				5721 to 5740	849		C15-11						
U	O	0.08	0.08	5775		15	C15-1	Burst	FJ	I	Extractor spring	5775	
				5821 to 5840	815		C15-4						
				5921 to 5940	853		C15-9						
S	O&DS	1.15	1.15	6000									

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Malfunctions: Mag Code No.	Malfunctions: Mode of Fire	Malfunctions: Type	Malfunctions: Class	Unserviceable Parts: Part Name	Unserviceable Parts: No. Rds on Part at Replacement	Remarks
Rifle: Serial No. 4384391 (Code C-16).													
Subtest: Initial inspection.													
Ammunition: M193 ball, lot FA-1-50 and M196 tracer, lot TW-18028 (4 to 1 mix).													
S	DS	0.98	0.98	0 21 to 40	822		C16-2						Total rounds fired, 40.
Subtest: Endurance (4 to 1 mix).													
Ammunition: M193 ball, lot IVI-1-6. M196 tracer, lot TW-18028 (continually throughout the test).													
				121 to 140	768		C16-7						Ammunition lots FA-1-50 (ball) and TW-18028 (tracer) were fired in the rifle when cyclic rates were being recorded.
Ammunition: M193 ball, lot TW-18301 (ball rounds 201 to 700).													
				221 to 240	775		C16-12						
				321 to 340	737		C16-5						
				421 to 440	730		C16-10						
				521 to 540	714		C16-3						
				621 to 640	718		C16-8						
Ammunition: M193 ball, lot TW-44255 (ball rounds 701 to 900).													
				721 to 740	737		C16-1						
				821 to 840	746		C16-6						
Ammunition: M193 ball, lot TW-18302 (ball rounds 901 to 1000).													
				921 to 940	758		C16-11						
S	C	0.57	0.57	1000									

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Mag Code No.	Mode of Fire	Type	Class	Unserviceable Parts: Part Name	No. Rds on Part at Replacement	Remarks
Ammunition: M193 ball, various lots (rounds 1001 to 1300).													
				1021 to 1040	926		C16-4						
				1121 to 1140	799		C16-9						
				1160		20	C16-10	Semi	FF	I			Round loose on top of the magazine, bolt catch holding the carrier.
Ammunition: M193 ball, lot WCC-6089 (rounds 1301 to 1700).													
				1221 to 1240	897		C16-2						
				1220		20	C16-6	Burst	FF	I			Round loose on top of the magazine, bolt catch holding the carrier.
				1321 to 1340	788		C16-7						
				1421 to 1440	796		C16-12						
				1521 to 1540	806		C16-5						
				1560		20	C16-6	Semi	FF	I	Magazine	140	Round loose on top of magazine, bolt catch holding the carrier. Replaced the magazine.
				1621 to 1640	827		C16-10						
Ammunition: M193 ball, lot RA-5089 (rounds 1701 to 2000).													
				1721 to 1740	844		C16-3						
				1821 to 1840	851		C16-8						
				1921 to 1940	857		C16-1						
S	C	0.63	0.63	2000									
Ammunition: M193 ball, various lots (rounds 2001 to 3000).													
				2021 to 2040	857		C16-6						
				2121 to 2140	806		C16-11						
				2221 to 2240	809		C16-4						
				2321 to 2340	820		C16-9						

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Mag Code No.	Mode of Fire	Type	Class	Unserviceable Parts: Part Name	No. Rds on Part at Replacement	Remarks
				2421 to 2440	822		C16-2						
				2521 to 2540	844		C16-7						
				2562		2	C16-9	Burst	BOB	I			BA/CH.
				2621 to 2640	822		C16-12						
				2721 to 2740	808		C16-5						
				2821 to 2840	840		C16-10						
				2921 to 2940	836		C16-3						
S	O	0.77	0.77	3000							Extractor spring	3000	
Ammunition: M193 ball, lot WCC-1-22 (rounds 3001 to 3100).													
				3021 to 3040	877		C16-8						
Ammunition: M193 ball, lot LC-12473 (rounds 3101 to 3500).													
				3121 to 3140	844		C16-1						
				3221 to 3240	813		C16-6						
				3321 to 3340	806		C16-11						
				3383		3	C16-2	Semi	BOB	I			BA/CH.
				3421 to 3440	829		C16-4						
Ammunition: M193 ball, lot FC-31150 (rounds 3501 to 4000).													
				3521 to 3540	832		C16-9						
				3621 to 3640	809		C16-2						
				3721 to 3740	820		C16-7						
				3821 to 3840	823		C16-12						
				3863		3	C16-2	Burst	BOB	I			BA/CH.
				3921 to 3940	829		C16-5						
S	C	0.72	0.72	4000									

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Mag Code No.	Mode of Fire	Type	Class	Unserviceable Parts: Part Name	No. Rds on Part at Replacement	Remarks
Ammunition: M193 ball, lot WCC-6183 (rounds 4001 to 4200).													
				4021 to 4040	879		C16-10						
				4121 to 4140	847		C16-3						
Ammunition: M193 ball, various lots (rounds 4201 to 4800).													
				4221 to 4240	831		C16-8						
				4321 to 4340	829		C16-1						
				4421 to 4440	832		C16-6						
				4521 to 4540	813		C16-11						
U	O	0.09	0.09	4533		13	C16-11	Auto.	FJ	I	Extractor spring	1533	
				4621 to 4640	849		C16-4						
				4721 to 4740	820		C16-9						
Ammunition: M193 ball, lot WCC-6089 (rounds 4801 to 5000).													
				4821 to 4840	820		C16-2						
				4921 to 4940	831		C16-7						
S	C	0.70	0.70	5000		20	C16-10	Semi	FBR	I			
Ammunition: M193 ball, various lots (rounds 5001 to 5200).													
				5021 to 5040	883		C16-12						
				5121 to 5140	863		C16-5						
Ammunition: M193 ball, lot TW-18184 (rounds 5201 to 5600).													
				5221 to 5240	847		C16-10						
				5321 to 5340	853		C16-3						
				5421 to 5440	799		C16-8						
				5521 to 5540	820		C16-1						
U	O	0.08	0.08	5585		5	C16-4	Semi	FJ	I	Extractor spring	1052	

Table I-III (Cont'd)

Maint Type	Maint Level	Maint Man-Hrs	Active Maint Time, hrs	Rifle Rd No.	Cyclic Rate, spm	Malfunctions: Mag Rd No.	Mag Code No.	Mode of Fire	Malfunctions: Type	Malfunctions: Class	Unserviceable Parts: Part Name	Unserviceable Parts: No. Rds on Part at Replacement	Remarks
Ammunition: M193 ball, lot WCC-6079 (rounds 5601 to 5900)													
				5621 to 5640	831		C16-6						
				5721 to 5740	832		C16-11						
				5821 to 5840	746		C16-4						
Ammunition: M193 ball, lot TW-18206 (rounds 5901 to 6000).													
S	O&DS	1.00	1.00	5921 to 5940 6000	816		C16-9						

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APPENDIX II - DEFICIENCIES AND SHORTCOMINGS

1. Deficiencies

Deficiency	Suggested Corrective Action	Remarks
1.1 The reliability of the M16A1 rifle degraded with continued exposure to a low-temperature environment (-65°F) while attempting to fire 1000 rounds in 100-round cycles, with cold conditioning between cycles without maintenance. Freezing of fouling and combustion residue in and around the bolt and firing pin seriously impaired the rifle's operational capability which at times temporarily put the weapon out of operation. This is an uncorrected deficiency, having been previously reported in Reference 6.	Perform maintenance on bolt-carrier group after firing to preclude freezing of the fouling in and around the bolt.	Exposure to low-temperature conditions alone does not degrade initial (clean) weapon performance because when the rifle is not fouled by previous firings the M16A1 rifle will function reliably at low temperatures.

2. Shortcomings

Shortcoming	Suggested Corrective Action	Remarks
2.1 Three of the seven code B rifles fired 6000 rounds for reliability failed to meet the malfunction requirements of the purchase description (Reference 4) because of an excessive number of failures to feed from the magazine.	None.	None.
2.2 Four of the seven code C rifles fired 6000 rounds for reliability failed to meet the allowable broken parts	Employ better quality-control procedures.	None.

Shortcoming	Suggested Corrective Action	Remarks
requirement of the purchase description (Reference 4) because of an excessive number of broken extractor springs and two broken bolt rings.		
2.3 Four of the twelve broken code C extractor springs failed prior to the required 2000-round minimum life.	Unknown.	The four springs failed after 1052, 1326, 1533, and 1735 rounds of firing.
2.4 Two code C bolt rings failed prior to the required 6000-round minimum life.	Unknown.	The two bolt rings failed after 2000 and 4000 rounds of firing.

3. Corrected Deficiencies and Shortcomings

None.

APPENDIX III - ABBREVIATIONS AND DEFINITIONS

1. Malfunction Abbreviations and Definitions. These include:

   a. FFM. A feeding malfunction which occurs during firing with the rifle bolt positioned behind the base of the cartridge and the round has not been stripped from the magazine. The abbreviation may be followed with a number which indicates the round in the magazine (i.e., FFM-1 is a failure to feed of the first round from the magazine).

   b. FF/BOB. A feeding malfunction which occurs during firing when the bolt has overridden the base of the cartridge in the magazine and fails to strip the round from the magazine.

   c. FFB. Same as FFM except the round has been stripped from the magazine and the brass is still visible.

   d. FBL. Same as FFB except the bolt is not in the locked position.

   e. COEC. A feeding type malfunction in which the bolt has closed on an empty chamber. Normally, this malfunction is caused by short recoil of the bolt carrier assembly.

   f. FBR. Failure of the bolt to be engaged and held open in a rearward position by the bolt catch after the last round in the magazine is fired.

   g. FFR. Failure to fire. While this failure usually appears to have occurred after a successful feeding cycle, it is often due to a final failure of the carrier to completely close. In such instances, the hammer strikes the carrier, completing closure, but only lightly indenting the cartridge primer. This malfunction also occurs when fouling buildup interferes with firing-pin travel, and occasionally, but rarely, may be due to an ammunition deficiency.

   h. FJ. Failure of a fired case to be completely ejected from the rifle. Usually, this malfunction is indicative of a broken extractor spring.

2. Malfunction Clearing Actions. In most instances in the recording of firing-performance data in the various subtests as well as Appendix I, the clearing action that was required to overcome malfunctions was recorded. The abbreviations which were used to identify the action are as follows:

   a. BA. The use of the bolt assist device cleared the stoppage.

   b. CH. Only the charging handle was used to clear the stoppage.

c. M. It was necessary to remove the magazine in order to clear the stoppage; the abbreviation CH/M is listed, indicating that the charging handle had to be held to the rear with one hand while the magazine was removed with the other.

3. Malfunction Classifications. These include:

a. Class I. Immediately clearable (clearable by gunner through operation of charging handle, removal of magazine or manually removing round without aid of tools or equipment).

b. Class II. Clearable by gunner with available equipment (basic issue items).

c. Class III. Not clearable by gunner.

4. Maintenance Designations. These include:

a. Type:

1) P, preventative.

2) S, scheduled.

3) U, unscheduled.

b. Level Performing Action:

1) C, operator or crew.

2) O, organizational maintenance.

3) DS, direct support.

5. Definitions. These include:

a. Active Maintenance Time. This is the increment of the time during which the maintenance action is actually being performed (i.e., excluding all inactive downtime such as supply, administrative, and stand-by). This is stated in multiples of calendar hours or the elapsed maintenance times, i.e., not to be confused with maintenance man-hours.

b. Maintenance Man-Hours. Maintenance man-hours include that amount of time accumulated by all personnel performing the maintenance task. Two men work on an item simultaneously for 2 hours, one stops at this point and the second continues on the item for an additional 3 hours. This indicates that the active maintenance time is 5 hours and the maintenance man-hours are 7.

c. Malfunction. A malfunction is a faulty action of the ammunition, weapon, or support equipment. Malfunctions are of two types; those that cause unintended interruptions of firing and those that do not.

d. Shortcoming. An imperfection or malfunction occurring during the life cycle of equipment, which should be reported and which must be corrected to increase efficiency and to render the equipment completely serviceable. It will not cause an immediate breakdown, jeopardize safe operation, or materially reduce the usability of the materiel or end product. If occurring during test phases, the shortcoming should be corrected if it can be done without unduly complicating the item or inducing another undesirable characteristic such as increased cost, weight, etc.

e. Deficiency. A defect or malfunction discovered during the life cycle of an equipment that constitutes a safety hazard to personnel; will result in serious damage to the equipment if operation is continued; indicates improper design or other cause of an item or part, which seriously impairs the equipment's operational capability. A deficiency normally disables or immobilizes the equipment; and if occurring during test phases, will serve as a bar to type classification action.

6. General Abbreviations:

a. APG, Aberdeen Proving Ground.

b. Auto, the rifle was fired a 20-round burst.

c. Avg, average.

d. Burst, the rifle was fired in 3- to 5-round bursts.

e. CI, center of impact.

f. Ex Var, extreme variation.

g. Max, maximum.

h. Min, minimum.

i. Semi, the rifle was fired semiautomatically.

j. Spm, shots per minute.

k. USATECOM, US Army Test and Evaluation Command.

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APPENDIX IV - REFERENCES

1. Test Directive, USATECOM, Quality Assurance Comparison Test of M16A1 Rifle, 14 January 1971.

2. TM 9-1005-249-12, Operator and Organizational Manual for the M16 and M16A1 Rifles, August 1968.

3. TM 9-1005-249-34, Direct and General Support Maintenance Manual for the M16 and M16A1 Rifles, August 1968.

4. Small Arms Purchase Description for Rifle, 5.56-MM, M16 and M16A1, No. SAPD-253F, 22 November 1968.

5. Test Plan, Comparison for Rifle, 5.56-MM, M16A1, US Army Weapons Command, AMSWE-QAT, 11 December 1970.

6. Wilson, Allan, Final Report on Combined Initial Production and Inspection Comparison Test of M16A1 Rifles. USATECOM Project No. 8-9-0200-25 and 8-9-0200-27. Aberdeen Proving Ground. Report No. APG-MT-3247, June 1969. (Distribution Controlled by Project Manager, Rifles, ATTN: AMCPM-RS. AD 854 076L.)

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APPENDIX V - DISTRIBUTION LIST

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13. ABSTRACT

The purpose of this test was to evaluate the performance of M16A1 rifles to detect any deterioration of product quality during production. Testing was conducted at Aberdeen Proving Ground by the Materiel Testing Directorate from 25 February to 7 June 1971. Sixteen rifles from each of two producers were inspected for compliance with the purchase description, were fired for accuracy and reliability, and were subjected to low-temperature tests. Three of the seven code B rifles, fired 6000 rounds for reliability, failed to meet requirements of the purchase description becasue of excessive failures to feed from the magazine. Similarly, four of the seven code C rifles failed to meet the endurance requirements because of broken extractor springs and broken bolt rings. Both the occurrence of excessive malfunctions and broken parts were classified as shortcomings. The reliability level of the M16A1 rifle was substantially degraded with continued usage in a low-temperature environment (-65°F) and was classified as a deficiency. This is an uncorrected deficiency and has been reported previously (Reference 6). Seventy-five per cent of the malfunctions occurred within the first three rounds of the first magazine after conditioning periods; this was attributed to the freezing of fouling and combustion residue in and around the bolt and firing pin, which seriously impaired the operational capability of the rifle. Recommendations were made to perform low-temperature firing with various maintenance procedures to determine optimum maintenance schedules for reduction and/or elimination of first-magazine malfunctions.

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Endurance, M16A1 rifle						

USATECOM PROJECT NO. 8-WE-600-016-012

FINAL REPORT ON COMPARISON TEST OF

RIFLE, 5.56-MM, M16A1

Report No. APG-MT-3883

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