

INCH-POUND

MIL-S-10057H (AR)

AMENDMENT 5

02 February 1996

SUPERSEDING

AMENDMENT 4

11 February 1993

MILITARY SPECIFICATION

SIMULATOR, HAND GRENADE, M116A1 PARTS FOR AND LOADING, ASSEMBLING AND PACKING

This Amendment forms a part of Military Specification MIL-S-10057H (AR), dated 6 January 1982; and is approved for use by the US Army Armament, Research, Development and Engineering Center, and is available for use by all Departments and Agencies of the Department of Defense.

PAGE 2

2.1.2: Add the following under "DRAWINGS":

"INSPECTION EQUIPMENT DRAWINGS:

9200454 - Launcher " .

* 3.3 : Delete "photoflash powder" and substitute "flash composition", twice.

3.4: Delete in its entirety and substitute the following:

"3.4 Jumble. The simulator shall comply with the following requirements when tested as specified in 4.5.3:

This test is performed on first article samples only.

- a. The simulator shall not function during test.
- b. There shall be no loose pyrotechnic powder on the simulator or in the test box after jumbling.

AMSC N/A

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FSC 1370

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c. The simulator components shall not separate during the test."

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3.5.2 Delay time. Delete "The delay time shall not be less than 6 seconds nor more than 11 seconds." and substitute "The delay time shall be not less than 6 seconds nor more than 12 seconds."

* Delete paragraph 4.4.3.4.1.1 First three lots.

PAGE 4

* Delete paragraph 4.4.3.4.2.1 First three lots.

* Re-number paragraph 4.4.3.4.1.2 Successive lot tests as 4.4.3.4.1.1.

* Re-number paragraph 4.4.3.4.2.2 Successive lot tests as 4.4.3.4.2.1.

PAGE 5

Table I - First Article Inspection: Add after Disc and Fuse Assembly:

"Support <u>Priming Paste</u> (Dwg. 12912921) Examination for defects	25	3.2	4.4.2.1.1"
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Table I - First article inspection Simulator Hand Grenade M116A1 Assembly (ALT). Delete in its entirety and substitute:

<u>"Simulator Hand Grenade M116A1 Assembly (ALT) (Dwg. 9256467)</u>			
Examination for Defects	50	3.2	4.4.2.7
Tests			
Jumble	10	3.4	4.5.3
Function @ Amb. Temp.	20 (a)	3.5	4.5.4.1
Function @ Cold Temp.	20 (b)	3.5	4.5.4.2

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NOTES: Delete in their entirety and substitute:

"(a) Ten assemblies functioned in static and 10 in non-static phase.

(b) All assemblies functioned in the non-static phase."

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- * 4.4.1: Inspection Lot Formation. Paragraph c, delete "photoflash powder" and substitute "flash composition".

PAGE 8

4.4.2.1 Disc. Delete major defect 202 in its entirety

PAGE 10

4 . 4 . 2 . 3 :

Delete Major defect 102 and substitute:

"Major 102 Wall thickness (Note 1) 0.40% 3.2 Gage".

Add under "Notes":

"1. Wall thickness shall be gaged in non-overlap regions only".

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4 . 4 . 2 . 4 Disc and Fuse Assembly:

Major 101; Change to read: "Length from disc to end of fuse, prior to assembly to Priming Paste Support" (min.)

Major 105; Change to read: "Priming paste or Ignition composition missing from Priming Paste Support"

Major 106; Change to read: "Hot Melt Glue fillet inadequate or less than 360°".

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4.4.2.5 Cover and Body Assembly: Major 104; Change to read: "Priming paste or Ignition composition missing from, or damaged in Priming Paste Support".

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4.4.2.6: Delete Minor 201 in its entirety.

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4.4.2.9 Add: "Major 103, Instruction sheet missing, 0.40%, 3.2, Visual".

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4.4.2.10:

Major 101: Correct spelling of "contentsd" to "contents".

Delete Major 102 and Minor 201 in its entirety.

Add major defect 103:

"Major 103 Strapping missing, broken or loose; 0.40%; 3.2; Visual/manual."

Add Minor defect 206:

"Minor 206 Hardware improperly engaged; 0.65%; 3.2; Visual."

Add Minor defect 207: "Strapping improperly assembled; 0.65%; 3.2; Visual."

PAGE 17a

Add new paragraph 4.4.2.11 included.

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- * 4.4.3.1: Table II. Delete "Photoflash powder" and substitute "flash composition"
- * 4.4.3.2: Delete "photoflash powder" and substitute "flash composition", twice.

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QUALITY CONFORMANCE INSPECTION

CLASSIFICATION OF CHARACTERISTICS

CLASSIFICATION	EXAMINATION OF TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	INSPECTION METHOD
<u>Critical</u>	None defined			
<u>Major</u>	None defined			
<u>Minor</u> 201	I.D. at chamfered end	0.65%	3.2	Gage
202	Workmanship	1.00%	3.8	Visual

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4.4.3.3 Delete in its entirety.

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4.4.3.4.1.1: Delete paragraph in its entirety and substitute the following:

"4.4.3.4.1.1 First three lots. Beginning with the first lot produced and continuing until three (3) consecutive lots have complied with the requirements, 125 simulators shall be selected for this test. 75 simulator assemblies shall be functioned in the static phase and 50 simulators shall be functioned in the non-static phase. The lot shall be rejected if during the test, any of the following are exhibited in the combined 2 phases when tested as specified in 4.5.4"

- a. One or more critical defects.
- b. Six or more assemblies having major defects listed in Table V.
- c. Average of all delay times for the combined phases of 4.4.3.4.1.1 and 4.4.3.4.2.1 is less than 8.5 seconds."

4.4.3.4.1.2: Delete in its entirety and substitute the following:

"4.4.3.4.1.2 Successive lot test. After three consecutive lots have complied with criteria of 4.4.3.4.1.1, 50 simulators shall be selected from each lot for this test. 25 simulators shall be functioned in the static phase and 25 simulators in the non-static phase (see 4.5.4). The lot shall be rejected if during the test, any of the following are exhibited when tested as specified in 4.5.4:

- a. one or more critical defects.
- b. Three or more assemblies having major defects listed in Table V.
- c. Average of all delay times for the combined phases of 4.4.3.4.1.2 and 4.4.3.4.2.2 is less than 8.5 seconds".

4.4.3.4.2.1: Delete in its entirety and substitute the following:

"4.4.3.4.2.1 First three lots. Beginning with the first lot produced and continuing until 3 consecutive lots have complied with the acceptance criteria, 80 simulators shall be selected from each lot for test. All assemblies shall be functioned in the non-static phase. The lot shall be rejected if, during the test, any of the following is exhibited when tested as

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specified in 4.5.4:

- a. one or more critical defects.
- b. Four or more assemblies having major defects listed in Table V.
- c. The average of all delay times for the combined phases of 4.4.3.4.1.2 and 4.4.3.4.2.2 is less than 8.5 seconds".

4.4.3.4.2.2: Delete in its entirety and substitute the following:

"4.4.3.4.2.2 Successive lot tests. After three consecutive lots have complied with the criteria of 4.4.3.4.2.1, 50 simulators shall be selected from each lot for test. All assemblies shall be functioned in the non-static phase. The lot shall be rejected if, during the test, any of the following is exhibited as specified in 4.5.4:

- a. One or more critical defects.
- b. Three or more assemblies having major defects listed in Table V.
- c. The average of all delay times for the combined phases of 4.4.3.4.1.2 and 4.4.3.4.2.2 is less than 8.5 seconds."

PAGE 21

- * 4.5.1.1: Delete "Photoflash powder" and substitute "Flash composition", twice.
- * 4.5.1.3: Delete "MIL-STD-386" and substitute "MIL-STD-286".
- * 4.5.1.3 and 4.5.2: Delete "Photoflash powder" and substitute "Flash composition".
- * 4.5.2.1:

Delete "This test ... 9257901." and substitute "The particle size shall be determined in accordance with Method 100 of MIL-STD-1233."

Delete from note "photoflash powder" and substitute "flash"

4.5.3 Jumble.

Add: "This test performed on first article samples only."

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4.5.4: Delete in its entirety and substitute the following:

"4.5.4 Functioning.

4.5.4.1 Ambient temperatures (70 + 5°F). The simulator assemblies shall be conditioned for 24 hours at the specified ambient temperatures. At the end of the conditioning period, the assemblies shall be tested in the following manner within 30 minutes after removal from the conditioning chamber.

4.5.4.1.1 Static. The assemblies, conditioned at ambient temperature, shall be mounted horizontally on a rigid horizontal support and fired by means of a lanyard attached to the fuse igniter cord. The assembly shall not be shaken or agitated in any manner other than normal handling within two (2) hours prior to test. Measuring of sound level intensity shall be accomplished with impact (sound) Analyzers, microphone Systems and Sound Level Meters and the pick-up of the sound level shall be located 75 plus or minus 0.5 feet from the simulator test fixture.

4.5.4.1.2 Non-static. The assemblies, conditioned at ambient temperature, shall be fired by placing the assembly in an ejection machine (See Dwg. 9200454). The fuse igniter cord shall be held in a fixed position. There shall be no slack evident in the igniter cord prior to initiation. Upon ejection of the assembly, the simulator shall be initiated. The throwing range of the ejection machine shall not be less than 45 feet and the ground shall be free of large rocks. The assembly shall be observed for compliance with the requirement specified. Sound level intensity need not be measured during this test.

4.5.4.2 Cold temperature (minus 65 + 5°F). The simulator assemblies shall be conditioned for 16 hours at the required cold temperature and fired within 5 minutes after removal from the conditioning chamber by the same method specified in 4.5.4.1.2 (non-static). The functioning shall be observed for compliance with the requirements."

PAGE 23

6.5: Delete in its entirety.

The margins of this amendment are marked with an asterisk or vertical line to indicate where changes (additions, modifications, corrections, deletions) from the previous amendment were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the

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marginal notations and relationship to the last previous amendment.

**Custodian:
Army-AR**

**Preparing activity:
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