

MIL-C-63092A(AR)
28 May 1991
SUPERSEDING
MIL-C-63092(PA)
26 July 1976

MILITARY SPECIFICATION
CARTRIDGES, 40MM, WHITE STAR, PARACHUTE, M583A1
GREEN STAR, PARACHUTE, M661
RED STAR, PARACHUTE, M662
METAL PARTS AND
LOADING, ASSEMBLING AND PACKING

This specification is approved for use by the U.S. Army Armament, Munitions and Chemical Command, and is available for use by all Departments and Agencies of the Department of Defense.

1. SCOPE

1.1 Scope. This specification covers the metal parts and loading, assembling and packing for three cartridges with different color stars designated as Cartridge, 40mm, White Star Parachute, M583A1, Green Star, Parachute, M661 and Red Star Parachute, M662.

2. APPLICABLE DOCUMENTS

2.1 Government documents.

2.1. Specifications, standards, and handbooks. The following specifications, standards and handbooks form a part of this specification to the extent specified herein. Unless otherwise specified, the issue of these documents shall be those listed in the issue of the Department of Defense Index of Specifications and Standards (DODISS) and supplement thereto, cited in the solicitation.

SPECIFICATIONS

MILITARY

MIL-P-223	-Black Powder
MIL-P-48240	-Pyrotechnic First Fire Compositions
MIL-C-5541	-Chemical Films and Chemical Film Materials for Aluminum and Aluminum Alloys

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

AMSC N/A

FSC 1310

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

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MIL-P-22264	-Powders, Ignition, Gasless
MIL-A-48078	-Ammunition, Standard Quality Assurance Provisions, General Specification for

STANDARDS

MILITARY

MIL-STD-105	-Sampling Procedures and Tables for Inspection by Attributes
MIL-STD-331	-Fuze and Fuze Component, Environmental and Performance Tests for
MIL-STD-1169	-Packaging, Packing and Marking for Shipment of Inert Ammunition Components
MIL-STD-1234	-Pyrotechnics Sampling, Inspection and Testing

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

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

DRAWINGS

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

PRODUCT AND PACKING DRAWINGS

9243881	-Cartridge, 40mm White Star Parachute, M583A1
9317509	-Cartridge, 40mm Green Star Parachute, M661
9255145	-Cartridge, 40mm Red Star Parachute, M662
9209204	-Box, Ammo, Metal for Cartridges, 40mm White Star Cluster or Smoke Canopy or Parachute
9209205	-Box, Wirebound, Packing, Ammunition for Cartridge, 40mm, White Star Cluster or Smoke Canopy or Parachute

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INSPECTION EQUIPMENT DRAWINGS

9202770	-Chamber Gage
9202783	-Alignment Check
8827895	-Light Check
9201136	-Tunnel for Light Intensity Measurement
9201268	-Procedures for Light Output Measurement
9201390	-Photocell Checkout Procedure
9200964	-Photometer Head with Cell
9200965	-Tube, Sight
9200966	-Cover
9200967	-Bracket, Tube
9200968	-Gasket, Rear
9200969	-Gasket
9200970	-Cabinet
9200971	-Hood
9200972	-Bracket
9200973	-Holder
9200974	-Spring
9201392	-Color Value
9247071	-Photocell

PUBLICATIONS

CODE OF FEDERAL REGULATIONS

Title 49 -Transportation, Parts 100-199

(The Code of Federal Regulations is available from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. Orders should specify "49 CFR 100-199 (latest revision)).

(Copies of Drawings and publications required by manufactures in connection with specific acquisition functions should be obtained from the contracting activity or as directed by the contracting officer.)

2.2 Non-Government publications. The following document(s) from a part of this specification to the extent specified herein. Unless otherwise specified, the issues of the documents which are DOD adopted shall be those listed in the issue of the DoDISS specified in the solicitation. (Unless otherwise specified, the issue of documents not listed in the DoDISS shall be the issue of the non-solicitation.)

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AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM B117-73 -Method of Test for Salt Spray (fog)
Testing

(Application for copies should be addressed to American
Society for Testing and Materials, 1916 Race Street,
Philadelphia, PA 19103)

2.3 Order of precedence. In the event of a conflict
between the text of this specification and the references cited
herein, the text of this specification, however, shall supersede
applicable laws and regulations unless a specific exemption has
been obtained.

3. REQUIREMENTS

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

3.2 Cartridge. The cartridge shall comply with all
requirements specified on the applicable drawing (dwg) 9243881,
9317509 or 9255145, all associated drawings and with all
requirements specified in applicable specifications.

3.3 Transportation vibration. The cartridge shall comply
with the following requirements:

3.3.1 TV test acceptance criteria. The cartridge shall be
safe to transport following this test (see 6.6).

3.3.2 TV test acceptance criteria. There shall be no
evidence of external damage to the cartridge that will affect the
intended function (see 6.7).

3.4 Functioning. The cartridge shall comply with the
following requirements:

3.4.1 Altitude. The projectile shall function at an average
altitude of 600 ± 100 feet.

3.4.2 Burning of illuminant assembly. The illuminant
assembly shall burn in the air for 30 seconds min. while suspended
from the parachute.

3.4.3 Parachute. The parachute shall not separate from the
illuminant assembly at ejection or delay opening from time of
ejection for more than 5 seconds.

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3.4.4 Firing. No projectile shall stick in the gun bore.

3.4.5 Hot temperature. (160°F ± 5°F) The cartridge shall comply with the requirements of 3.4.1, 3.4.3 and 3.4.4.

3.4.6 Ambient temperature. (70°F ± 5°F) The cartridge shall comply with the requirements of 3.4.1, 3.4.2, 3.4.3 and 3.4.4.

3.4.7 Cold temperature. (-65°F ± 5°F) The cartridge shall comply with the requirements of 3.4.1, 3.4.3 and 3.4.4.

3.5 Workmanship. All parts and assemblies shall be fabricated, loaded and assembled in a thorough, workmanlike manner. They shall be free of burrs, sharp edges, cracks, dirt, grease, rust and other foreign matter. The cleaning method used shall not be injurious to any parts, nor shall the parts be contaminated by the cleaning agents. Exterior surface coatings shall be continuous; however, a few light scratches not exposing base materials may be permitted. All required marking and stamping shall be neat and sharply defined.

3.6 First article inspection. This specification contains technical provisions for first article inspection. Requirements for the submission of first article samples by the contractor shall be as specified in the contract.

3.7 X-ray examination of ballistic samples. Prior to forwarding the sample cartridges for ballistic testing, they shall be x-rayed for critical and major defects. A critical defect is defined as no delay column or no delay carrier.

4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract or purchase order, the contractor is responsible for the performance of all inspection requirements (examinations and tests) as specified herein. Except as otherwise specified in the contract or purchase order, the contractor may use his own or any other facilities suitable for the performance of the inspection requirements specified herein, unless disapproved by the Government. The Government reserves the right to perform any of the inspections set forth in this specification where such inspections are deemed necessary to ensure supplies and services conform to prescribed requirements.

4.1.1 Responsibility for compliance. All items shall meet all requirements of sections 3 and 5. The inspection set forth in this specification shall become a part of the contractor's overall inspection system or quality program. The absence of any

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inspection requirements in the specification shall not relieve the contractor of the responsibility of ensuring that all products or supplies submitted to the Government for acceptance comply with all requirements of the contract. Sampling inspection, as part of manufacturing operations, an acceptable practice to ascertain conformance to requirements, however, this does not authorize submission of known defective material, either indicated or actual, nor does it commit the Government to accept defective material.

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

- a. First Article Inspection.
- b. Quality Conformance Inspection.

4.3 First article inspection.

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

<u>Part Description</u>	<u>Drawing</u>	<u>Quantity</u>
Body, prior to painting	9243900	10 (5 for salt Spray)
Body, after painting	9243900	5
Ogive	9243882	5 per mold cavity
	9317511	
	9251920	
Tube	9244311	10
Delay Carrier	9243886	10 (5 for salt Spray)
Plug Anchor	9243907	5 per mold cavity
Illuminant Loading	9244310	25
Assembly	9282351	
	9252412	
Cartridge	9243881	465 (440
	9317509	to a Government
	9255145	Proving Ground
		for Ballistic
		Testing)
Parachute Assembly	9243906	25

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4.3.2 Inspections to be performed. See MIL-A-48078 and Table I herein.

4.3.3 Rejection. See MIL-A-48078 and the following:

4.3.3.1 Proving ground test.

a. Any critical defect occurs in any phase (see Table III).

b. Average altitude of the total sample fails the applicable requirement (see Table III and 3.4.1).

c. A total of eight (8) or more in the hot phase fail any of the following:

- (1) Parachute failure (see 3.4.3).
- (2) Item fails to function (see Table III).
- (3) No illumination (see Table III).

Burning time of functioned items shall be recorded for informational purposes.

d. A total of twenty-two (22) or more in the ambient phase fail any of the following:

- (1) Burning time of functioned items incorrect (see 3.4.2).
- (2) Parachute failure (see 3.4.3).
- (3) Item fails to function (see Table III).
- (4) No illumination (see Table XII).

e. A total of eight (8) or more in the cold phase fail any of the following:

- (1) Parachute failure (see 3.4.3).
- (2) Item fails to function (see Table III).
- (3) No illumination (see Table III).

Burning time of functioned items shall be recorded for informational purposes.

f. Two (2) or more of the total sample are below an altitude of 350 ft (see Table III).

g. Burning time of two (2) or more of the total sample at ambient phase is less than 22 seconds.

TABLE I. First article inspection

CLASSIFICATION OF CHARACTERISTICS

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PARAGRAPH	TITLE	Cartridge and Components	SHEET 1 OF 2	DRAWING NUMBER See Below NEXT HIGHER ASSEMBLY
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	INSPECTION METHOD REFERENCE
	Body (Dwg. 9243900) <u>Prior to painting</u> Examination for defects Salt Spray	5 5	3.2 3.2	4.4.2.1 4.5.3
	<u>After painting</u> Examination for defects	5	3.2	4.4.2.2
	<u>Ogive (Dwg. 9243882/9317511/9251920)</u> Examination for defects	*5	3.2	4.4.2.3
	<u>Tube (Dwg. 9244311)</u> Examination for defects	10	3.2	4.4.2.4
	<u>Delay Carrier (Dwg. 9243886)</u> Examination for defects Salt Spray	5 5	3.2	4.4.2.5 4.5.3
	<u>Plug Anchor (Dwg. 9243907)</u> Examination for defects	*5	3.2	4.4.2.6
	<u>Illuminant Assembly (Dwg. 9244310/9282351/9252412)</u> Examination for defects Static Test	25 25	3.2 3.2	4.4.2.7 4.5.4
NOTES: * Per Mold Cavity				

AMSMC Form 1570b, 1 Jul 89

Replaces 1570, 1 Feb 85, which may not be used.

TABLE I. First article inspection

CLASSIFICATION OF CHARACTERISTICS

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PARAGRAPH	TITLE	Cartridge and Components	SHEET 2 OF 2		DRAWING NUMBER See Below NEXT HIGHER ASSEMBLY
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	INSPECTION METHOD REFERENCE	
	Parachute Assembly (Dwg. 9243906) Examination for defects	25	3.2	4.4.2.8	
	Cartridge (Dwg. 9243881/9371509/ 9255145) Examination for defects Pull test of projectile *Transportation vibration *Air pressure	25 25 440 440	3.2 3.2 3.2 3.2	4.4.2.12 4.5.5 4.5.6 4.5.7	
	Functioning Hot Ambient Cold	80 280 80	3.2 3.2 3.2 3.2	4.5.8.1 4.5.8.2 4.5.8.3 4.5.8.3	
NOTES: * Prior to submission of the 440 samples to a Government Proving Ground for functioning tests, samples shall be inspected at the contractor's plant for these tests.					

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4.4 Quality conformance inspection.

4.4.1 Inspection lot formation. Inspection lots shall comply with the lot formation provisions of MIL-A-48078. In addition, each inspection lot shall contain:

- a. Projectile metal parts from one interfix lot number from one manufacturer.
- b. Delay composition from not more than one lot number.
- c. Igniter composition from not more than one lot number.
- d. Black powder from not more than one lot number.
- e. Illuminant composition produced by one manufacturer. under one continuous set of operating conditions and which consist of one or more batches that have been subjected to the same unit chemical or physical mixing process intended to make the final product homogeneous.
- f. Cartridge case loaded assemblies from one interfix lot number from one manufacturer.
- g. Illuminant assemblies from one interfix lot number from one manufacturer.
- h. First fire composition from not more than one lot number .
- i. delay Assemblies from one interfix lot number from one manufacturer.

4.4.2 Examination. See MIL-A-48078

a. Sampling plans. Unless otherwise specified in the Classification of Defects and Test Tables, sampling plans for major and minor defects shall be in accordance with MIL-STD-105, Inspection Level II.

QUALITY CONFORMANCE INSPECTION

CLASSIFICATION OF CHARACTERISTICS

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PARAGRAPH	TITLE	SHEET 1 OF 2		DRAWING NUMBER
4.4.2.1	Body, prior to painting			9243900
				NEXT HIGHER ASSEMBLY 9243909/ 9317510/9252411
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	INSPECTION METHOD REFERENCE
<u>Critical</u>	None defined			
<u>Major</u>				
101.	Largest outside diameter	0.40%	3.2	Gage
102.	Concentricity of largest outside diameter with second largest outside diameter	0.40%	3.2	Gage
103.	Second largest outside diameter	0.40%	3.2	Gage
104.	Concentricity of second largest outside diameter with smallest inside diameter	0.40%	3.2	Gage
105.	Concentricity of largest outside diameter with smallest inside diameter	0.40%	3.2	Gage
106.	Salt Spray	0.40% *	3.2	Gage
107.	Pitch diameter of thread	0.40%	3.2	4.5.3
108.	Minor diameter of thread	0.40%	3.2	Gage
109.	Perpendicularity of open end with smallest inside diameter	0.40%	3.2	Gage
110.	Metal defective	0.40%	3.2 3.5 & 3.9	Visual
<u>Minor</u>				
201.	Smallest outside diameter	0.65%	3.2	Gage
202.	Groove diameter	0.65%	3.2	Gage
203.	Width of rotating bands	0.65%	3.2	Gage
NOTES: * Sampling and rejection shall be in accordance with MIL-C-5541.				

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Replaces 1570, 1 Feb 85, which may not be used.

QUALITY CONFORMANCE INSPECTION**CLASSIFICATION OF CHARACTERISTICS**

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PARAGRAPH	TITLE	SHEET 2 OF 2		DRAWING NUMBER
4.4.2.1	Body, prior to painting			9243900
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	INSPECTION METHOD REFERENCE
204. 205. 206. 207.	Total length Width of flange Distance to rotating band Poor workmanship	0.65% 0.65% 0.65% 0.65%	3.2 3.2 3.2 3.5	Gage Gage Gage Visual
NOTES:				

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Replaces AMSMC Form 1570a, 1 Apr 85, which may not be used.

QUALITY CONFORMANCE INSPECTION**CLASSIFICATION OF CHARACTERISTICS**

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PARAGRAPH	TITLE	SHEET 1 OF 1		DRAWING NUMBER
4.4.2.2	Body after painting			9243900
				NEXT HIGHER ASSEMBLY 9243909/9317510/ 9252411
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	INSPECTION METHOD REFERENCE
<u>Critical</u>	None defined			
<u>Major</u> 101.	Second largest outside diameter	0.40%	3.2	Gage
<u>Minor</u> 201.	Color, incorrect	0.65%	3.2	Visual
NOTES:				

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QUALITY CONFORMANCE INSPECTION

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PARAGRAPH	TITLE	SHEET 1 OF 1	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	INSPECTION METHOD REFERENCE
4.4.2.3	Ogive				DRAWING NUMBER 9243882/9317511/ 9251920 NEXT HIGHER ASSEMBLY 9243882/9317511/ 9251920
CLASSIFICATION	EXAMINATION OR TEST				
Critical 1.	Incorrect letter		100% (See 4.5.1)	3.2	Visual
Major 101.	Excessive flash below shoulder in groove		0.40%	3.2	Gage
102.	Second largest outside diameter		0.40%	3.2	Gage
Minor 201.	Length from shoulder to top of letter		0.65%	3.2	Gage
202.	Large outside diameter		0.65%	3.2	Gage
203.	Diameter of groove		0.65%	3.2	Gage
204.	Width of groove		0.65%	3.2	Gage
205.	Poor workmanship		0.65%	3.5	Visual
NOTES:					

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PARAGRAPH	TITLE	SHEET 1 OF 1		DRAWING NUMBER
4.4.2.4	Tube			9244311
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	NEXT HIGHER ASSEMBLY 9244310/9282351/ 9252412
<u>Critical</u>	None defined			INSPECTION METHOD REFERENCE
<u>Major</u> 101. 102.	Outside diameter Perpendicularity of ends	0.40% 0.40%	3.2 3.2	Gage Gage
<u>Minor</u> 201. 202. 203.	Total length Poor workmanship Wall thickness	0.65% 0.65% 0.65%	3.2 3.5 3.2	Gage Visual Gage
NOTES:				

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PARAGRAPH	TITLE	SHEET 1 OF 1		DRAWING NUMBER
4.4.2.5	Tube			9243886
				NEXT HIGHER ASSEMBLY
				9243885
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	INSPECTION METHOD REFERENCE
<u>Critical</u>	None defined			
<u>Major</u>				
101.	Salt Spray	*	3.2	4.5.3
102.	Pitch diameter of thread	0.40%	3.2	Gage
103.	Small inside diameter	0.40%	3.2	Gage
104.	Concentricity of small inside diameter with large inside diameter	0.40%	3.2	Gage
105.	Large inside diameter	0.40%	3.2	Gage
<u>Minor</u>				
201.	Length to flange	0.65%	3.2	Gage
202.	Concentricity of body diameter with large inside diameter	0.65%	3.2	Gage
203.	Diameter of thread undercut	0.65%	3.2	Gage
204.	Poor workmanship	0.65%	3.5	Visual
NOTES:				
* Sampling and rejection shall be in accordance with MIL-C-5541.				

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QUALITY CONFORMANCE INSPECTION

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PARAGRAPH	TITLE
4.4.2.6	Plug Anchor
DRAWING NUMBER 9243907	
NEXT HIGHER ASSEMBLY 9244310/9282351/ 9252412	
CLASSIFICATION	INSPECTION METHOD REFERENCE
<u>Critical</u> <u>Major</u> 101. <u>Minor</u> 201. 202. 203. 204. 205. 206. 207.	SHEET 1 OF 1
EXAMINATION OR TEST	CONFORMANCE CRITERIA
None defined Largest outside diameter Total length Holes missing Poor workmanship Width of slot incorrect Depth of slot incorrect Flange thickness Second largest outside diameter	REQUIREMENT PARAGRAPH 3.2 3.2 3.2 3.5 3.2 3.2 3.2 3.2
	Gage Gage Visual Visual Gage Gage Gage Gage
NOTES:	

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PARAGRAPH	TITLE	SHEET 1 OF 1	DRAWING NUMBER 9244310/9282351/ 9252412	INSPECTION METHOD REFERENCE
4.4.2.7	Illuminant Loading Assembly			NEXT HIGHER ASSEMBLY 9243909/9317510/ 9252411
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	INSPECTION METHOD REFERENCE
<u>Critical</u>	None defined			
<u>Major</u> 101. 102. 103. 104. 105.	Length from shoulder to end Diameter, max. Anchor plug insecure Assembly damaged to extent that function may be impaired Static Test	0.40% 0.40% 0.40% 0.40%	3.2 3.2 3.2 3.2 3.2	Gage Gage Manual/Visual Visual 4.4.3.2, 4.4.3.3 & 4.5.4
<u>Minor</u> 201.	Evidence of poor workmanship	0.65	3.5	Visual
NOTES:				

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PARAGRAPH	TITLE	SHEET 1 OF 1		DRAWING NUMBER
4.4.2.8	Parachute Assembly			9243906
				NEXT WORKER ASSEMBLY 9243909/9317510/ 9252411
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	INSPECTION METHOD REFERENCE
<u>Critical</u>	None defined			
Major				
101.	Tears or holes in parachute	0.40%	3.2	Visual
102.	Shroud lines not attached to parachute	0.40%	3.2	Visual
103.	Shroud lines tangled	0.40%	3.2	Visual
104.	Coupling not secure to shroud lines	0.40%	3.2	Visual
NOTES:				

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PARAGRAPH	TITLE	SHEET 1 of 1	DRAWING NUMBER 9243909/9317510/ 9252411
4.4.2.9	Projectile Assembly, Prior to Assembling Illuminant Assembly		NEXT HIGHER ASSEMBLY 9243881/9317509/ 9255145
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH
<u>Critical</u>	None defined		
Major 101.	Coupling of illuminant assembly not secure to chain	0.40%	3.2
			Visual
NOTES:			

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PARAGRAPH	TITLE	SHEET 1 OF 1	DRAWING NUMBER 9243909/9317510/ 9252411	
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	INSPECTION METHOD REFERENCE
4.4.2.10	Projectile Assembly, Prior to Assembling Ogive			NEXT HIGHER ASSEMBLY 9243881/9317509/ 9255145
<u>Critical</u>	None defined			
Major				
101.	Parachute missing	0.40%	3.2	Visual
102.	O-ring missing	0.40%	3.2	Visual
103.	Spring pin missing	0.40%	3.2	Visual
NOTES:				

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PARAGRAPH	TITLE	SHEET 1 OF 1	DRAWING NUMBER 9243909/9317510/ 9252411	INSPECTION METHOD REFERENCE
4.4.2.11	Projectile Assembly		NEXT HIGHER ASSEMBLY 9243881/9317509/ 9255145	
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	INSPECTION METHOD REFERENCE
<u>Critical</u>	None defined			
<u>Major</u> 101.	Gap present between delay assembly and body	0.40%	3.2	Visual
102.	Color incorrect	0.40%	3.2	Visual
<u>Minor</u> 201.	Evidence of poor workmanship	0.65%	3.5	Visual
NOTES:				

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PARAGRAPH	TITLE	SHEET 1 OF 1		DRAWING NUMBER 9243881/9317509/ 9255145 NEXT HIGHER ASSEMBLY	
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	INSPECTION METHOD REFERENCE	
<u>Critical</u>					
1.	Chamber gage failure	100%	3.2	9202770 9202783 8827895	
2.	Incorrect ogive	100%	3.2	Visual	
3.	Marking incorrect	100%	3.2	Visual	
4.	X-ray examination of ballistic samples		3.7	4.4.3.11	
<u>Major</u>					
101.	Marking unidentifiable	0.40% 4/hr. *	3.2	Visual	
102.	Pull test		3.2	4.5.5	
103.	Transportation-vibration		3.3	4.4.3.5, 4.4.3.8 & 4.5.6	
104.	Air pressure		3.2	4.4.3.4, 4.4.3.6, 4.4.3.9 & 4.5.7	
105.	Functioning		3.4	4.4.3.7, 4.4.3.10 and 4.5.8	
<u>Minor</u>					
201.	Total length	0.65%	3.2	Gage	
NOTES: * If any sample fails to comply with the drawing requirement, the hour's production represented by the sample shall be rejected.					

AMSMC Form 1570b, 1 Jul 89

Replaces 1570, 1 Feb 85, which may not be used.

QUALITY CONFORMANCE INSPECTION

CLASSIFICATION OF CHARACTERISTICS

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PARAGRAPH	TITLE	SHEET 1 OF 1		DRAWING NUMBER 9209204	INSPECTION METHOD REFERENCE
4.4.2.13	Unsealed Metal Box				NEXT HIGHER ASSEMBLY
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH		
<u>Critical</u>	None defined				
<u>Major</u> 101. 102. 103.	Incorrect number of cartridges Desiccant bags missing Rubber gasket damaged or improperly assembled	0.40% 0.40% 0.40% 0.40%	3.2 3.2 3.2 3.2	Visual Visual Visual Visual	
<u>Minor</u> 201. 202.	Fillers missing Tube missing	0.65% 0.65%	3.2 3.2	Visual Visual	
NOTES:					

AMSMC Form 1570a, 1 Jul 89

Replaces AMSMC Form 1570a, 1 Apr 85, which may not be used.

QUALITY CONFORMANCE SPECIFICATION

CLASSIFICATION OF CHARACTERISTICS

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PARAGRAPH	TITLE	SHEET 1 OF 1	DRAWING NUMBER 9209204
4.4.2.14	Sealed Metal Box		NEXT HIGHER ASSEMBLY
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	INSPECTION METHOD REFERENCE
<u>Critical</u>	None defined		
<u>Major</u> 101.	Air pressure	*	4.5.9
<u>Minor</u> 201. 202.	Marking misleading or unidentifiable Contents loose	0.65% 0.65%	Visual Manual
NOTES: * One (1) packed, sealed box shall be selected from each twenty (20) boxes packed. If one (1) box fails, the quantity represented by the sample shall be rejected.			

AMSMC Form 1570a, 1 Jul 89

Replaces AMSMC Form 1570a, 1 Apr 85, which may not be used.

QUALITY CONFORMANCE INSPECTION

CLASSIFICATION OF CHARACTERISTICS

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PARAGRAPH	TITLE	SHEET 1 OF 1	DRAWING NUMBER 9209205
4.4.2.15	Sealed Wooden Packing Box		NEXT HIGHER ASSEMBLY
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	INSPECTION METHOD REFERENCE
<u>Critical</u>	None defined		
<u>Minor</u>			
201.	Marking misleading or unidentifiable	0.65%	Visual
202.	Contents loose	0.65%	Visual
203.	ICC nomenclature missing	0.65%	Visual
NOTES:			

AMSMC Form 1570a, 1 Jul 89

Replaces ANSMC Form 1570a, 1 Apr 85, which may not be used.

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4.4.3 Testing -4.4.3.1 Moisture content (See Table I), Major-

TABLE I

Material Verification

<u>Material</u>	<u>Drawing</u>
Delay Composition	9243885
Igniter Composition	9243885
First Fire Composition	9244310/9282351/9252412
Black Powder	9244310/9282351/9252412
Illuminant Composition	9244310/9282351/9252412

The contractor shall provide adequate controls to insure compliance with the requirements and shall test for verification at least one (1) sample of each material from each eight hour's production of cartridges. Composite samples shall not be used. If the moisture content of a sample exceeds the requirement and loading has not begun, that quantity of material represented by the sample shall be rejected. If assemblies have been loaded with material containing excessive moisture, the remaining material that is represented by the sample together with all cartridges loaded with the non-conforming material shall be rejected.

4.4.3.2 Static test of illuminant assembly - Beginning with the first lot produced and continuing until three (3) acceptable lots (lots not accepted by disposition) have been accepted, eighty (80) assemblies shall be selected from each lot for this test. If three (3) or more assemblies fail to comply with the requirement specified on the applicable drawing, the lot shall be rejected.

4.4.3.3 Static test of illuminant assembly, regular production - After three (3) acceptable lots have met the criteria of 4.4.3.2, the Government Inspector shall select thirty-two (32) assemblies from each lot for this test. If two (2) or more assemblies fail to comply with the requirement specified on the applicable drawing, the lot shall be rejected. At the start of production, or when there has been a lapse of 90 days, or when a major design change occurs as determined by the Government Inspector, the criteria of 4.4.3.2 shall apply.

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4.4.3.4 Air pressure - This test shall be conducted 100 percent. Any cartridge which fails to comply with the requirement specified on the applicable drawing shall be classified defective and removed from the lot.

4.4.3.5 Transportation-vibration - After completion of the 100 percent air pressure test and beginning with the first lot produced and continuing until three (3) acceptable lots (lots not accepted by disposition) have complied with the acceptance criteria specified in TABLE II, two-hundred and sixty-four (264) cartridges shall be selected from each lot, packed in their regular shipping containers and subjected to this test. The cartridges shall be observed and examined visually without disassembly for any evidence of failure to comply with the requirements of TABLE II.

TABLE II

Transportation-Vibration Defect Classification

<u>Defect</u>	<u>Drawing</u>
Cartridge not safe to transport following test	Critical
Cartridge damaged after test	Major

The lot shall be rejected if any defect as classified in TABLE II occurs.

4.4.3.6 Air pressure - After completion of the transportation-vibration test, the two-hundred and sixty-four (264) samples from each lot shall be subjected to this test. If nine (9) or more cartridges fail to comply with the requirements specified on the applicable drawing, the lot shall be rejected. Cartridges which fail this test shall be discarded and replaced with units which have been successfully subjected to transportation-vibration test prior to subsequent testing.

4.4.3.7 Functioning - After completion of the air pressure test and beginning with the first lot produced and continuing until three (3) acceptable lots (lots not accepted by disposition) have complied with the criteria of TABLE III, the two-hundred and sixty-four (264) samples from each lot shall be packed and shipped to a Government proving ground and tested as follows:

4.4.3.7.1 Hot - Forty-four (44) samples shall be subjected to this test.

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4.4.3.7.2 Ambient - One-hundred and seventy-six (176) samples shall be subjected to this test.

4.4.3.7.3 Cold - Forty-four (44) samples shall be subjected to this test.

4.4.3.7.4 Rejection - The lot shall be rejected if:

- a. Any critical defects occur in any phase (see Table III).
- b. Average altitude of the total sample fails the applicable requirement (see Table III).
- c. A total of six (6) or more in the hot phase fail any of the following:

- (1) Parachute failure (see 3.4.3)
- (2) Item fails to function (see Table III)
- (3) No illumination (see Table III)

Burning time of functioned items shall be recorded for informational purposes.

- d. A total of fifteen (15) or more in the ambient phase fail any of the following:

- (1) Parachute failure (see 3.4.3)
- (2) Item fails to function (see Table III)
- (3) No illumination (see Table III)
- (4) Burning time of functioned items incorrect (see 3.4.2)

- e. A total of six (6) or more in the cold phase fail any of the following:

- (1) Parachute failure (see 3.4.3)
- (2) Item fails to function (see Table III)
- (3) No illumination (see Table III)

Burning time of functioned items shall be recorded for informational purposes.

- f. Two (2) or more of the total samples have an altitude less than 350 ft. (see Table III).

- g. Burning time of two (2) or more of the total sample at ambient is less than 22 seconds.

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TABLE III

Defect Classification

<u>Defect</u>	<u>Classification</u>
Incorrect color	Critical
Burst or ejects illuminant within 50 feet of the launcher	Critical
Any projectile assembly sticks in the gun bore	Critical
Burning time incorrect (see 3.4.2)	Major
The first emission of light shall be at an average altitude of 600 \pm 100 ft	Major
Parachute failure (see 3.4.3)	Major
Altitude less than 350 ft	Major
Item fails to function	Major

4.4.3.8 Transportation-vibration, regular production - After three (3) acceptable lots have complied with 4.4.3.5 and 4.4.3.7, one-hundred and thirty-two (132) of the samples subjected to the 100% air pressure test shall be selected from each lot, packed in their regular shipping containers and subjected to this test. The lot shall be rejected if any defect as classified in TABLE II occurs.

4.4.3.9 Air pressure, regular production - After completion of the transportation-vibration test, the one-hundred and thirty two (132) samples shall be removed from their shipping containers and subjected to this test. If eight (8) or more samples fail to comply with the requirement specified on the applicable drawing, the lot shall be rejected. Cartridges which fail this test shall be discarded and replaced with units which have been successfully subjected to transportation-vibration test prior to subsequent testing.

4.4.3.10 Functioning, regular production - After three (3) acceptable lots have complied with 4.4.3.7, the one-hundred and thirty-two (132) samples-subjected to the air pressure test shall be packed and shipped to a Government proving ground and tested as follows:

4.4.3.10.1 Hot - Twenty-six (26) samples shall be subjected to this test.

4.4.3.10.2 Ambient - Eighty (80) samples shall be subjected to this test.

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4.4.3.10.3 Cold - Twenty-six (26) samples shall be subjected to this test.

4.4.3.10.4 Rejection - The lot shall be rejected if:

a. Any critical defect occurs in any phase (see Table III).

b. Average altitude of the total sample fails the applicable requirement (see Table III).

c. A total of four (4) or more in the hot phase fail any of the following:

- (1) Parachute failure (see 3.4.3)
- (2) Item fails to function (see Table III)
- (3) No illumination (see Table III)

Burning time of functioned items shall be recorded for informational purposes.

d. A total of eight (8) or more in the ambient phase fail any of the following:

- (1) parachute failure (see 3.4.3)
- (2) Item fails to function (see Table III)
- (3) No illumination (see Table III)
- (4) Burning time of functioned items incorrect (see 3.4.2)

e. A total of four (4) or more in the cold phase fail any of the following:

- (1) Parachute failure (see 3.4.3)
- (2) Item fails to function (see Table III)
- (3) No illumination (see Table III)

Burning time of functioned items shall be recorded for informational purposes.

f. Two (2) or more of the total samples have an altitude less than 350 ft. (see Table III).

g. Burning time of two (2) or more of the total samples at ambient is less than 22 seconds.

If any lot fails, the consecutive lots thereafter shall revert to the criteria of 4.4.3.5.

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4.4.3.11 X-Ray examination of ballistic samples - prior to forwarding the sample cartridges for ballistic testing, they shall be x-rayed for critical and major defects. If any critical defect is found the sample shall be removed and the lot rejected including the ballistic sample and 100% x-ray examination of the lot shall be performed prior to submitting a new ballistic sample. If any major defect is found it shall be noted and the sample forwarded for testing.

4.4.4 Inspection Equipment - The inspection equipment required to perform the examinations and tests prescribed herein is described in the Paragraph Reference/Inspection Method column in the tables starting with 4.4.2.1. The contractor shall submit for approval inspection equipment designs in accordance with the terms of the contract. See Section 6 of MIL-A-48078 and 6.3 herein.

4.5 Methods of inspection.

4.5.1 Dimensional control of molded and plastic parts - In place of the normal sampling and inspections associated with the Classification of Defects, and after a curing time (3) parts (as molded) from each cavity shall be fully inspected dimensionally to qualify a new or reworked cavity for use in production. The molded parts shall carry the individual cavity identification. As a control of each cavity during production, the above quantity of parts from each cavity shall be inspected for at least the defects listed in 4.4.2.3 and 4.4.2.6 after continuous production of each 5,000 parts or at the end of the week, whichever occurs first. Of the three (3) samples, one (1) sample shall be the last part produced. If any defective parts are found during qualification of the cavity, the cavity producing the defective part will not be used in production. If any defective parts are found when inspection is performed for the control of the cavity, the cavity producing the defective part shall be removed from production. Further, that portion of production since the last control check shall be returned to the contractor for inspection for each separate type of defect according to MIL-STD-105, using an AQL of 0.40 percent for each major defect and an AQL of 0.65 percent for each minor defect. All cavities removed from production because of some fault may, after reworking, be returned to production providing they pass the qualification test above. The contractor may request a change of inspection frequency providing he presents objective evidence to the Contracting officer to substantiate the request. Contractor designs of gages and test equipment required to perform the inspections listed herein shall be forwarded for approval prior to manufacture of equipment. The noted sub-paragraphs identify those items and minimum inspection subject to the requirements of this paragraph.

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NOTE 1: In establishing a cure time, dimensionally check ten (10) parts from each cavity at periodic intervals (e.g. every 30, 60, etc. reins) until dimensional stability is attained. The curing time will be from the time the part comes out of the mold until dimensional stability is attained. If there is a change in material, or in the cycle time, or if a cavity is reworded, or a new cavity is used a new curing time shall be established and approved.

4.5.2 Moisture content -

4.5.2.1 Delay composition - The moisture content of the delay composition at the time and place of loading shall be determined in accordance with Method 102.1 of MIL-STD-1234.

4.5.2.2 Black powder - The moisture content of the black powder at the time and place of loading shall be determined in accordance with 4.4.3 of MIL-P-223.

4.5.2.3 First fire composition - The moisture content of the fire composition at the time and place of loading shall be determined in accordance with paragraph 4.5 of MIL-P-48240.

4.5.2.4 Illuminant composition - The Karl Fisher method as stated in MIL-STD-1234, Method 101.2 up to paragraph 5.3 shall be used. A fifty-gram sample plus or minus 0.1 gram shall be added to a 500 milliliter (ml) volumetric flask containing approximately 300 to 400 ml methanol and 25 grams of dry sodium nitrate. The flask shall be stoppered and the contents swirled cautiously for several minutes until the material is thoroughly dispersed. The sample shall be allowed to remain in contact with the methanol for approximately two hours. Then the 500 ml volumetric flask shall be filled up to the 500 ml mark with methanol and swirled again. A blank without the sample shall be put through the same procedure. After the sample has settled, a 50 ml aliquot of the clear supernatant liquid shall be withdrawn and immediately transferred to the standard titration vessel containing approximately 100 ml. of methanol which has just been titrated to the preliminary end point as described in MIL-STD-1234, Method 101.2, paragraph 5.1. The final end point shall be reached in 3.5 minutes in the manner described in MIL-STD-1234, Method 101.2, paragraph 5.4. A 50 ml aliquot of the blank shall be titrated in the same manner. The water content shall be calculated as follows:

$$\% \text{ Water} = \frac{100F \{ (VR-S) - (V'R-S') \}}{W}$$

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Where:

F = grams of water per ml of standard water in methanol solution

V = ml of Karl Fisher reagent added to the sample

V' = ml of Karl Fisher reagent added to the blank

R = ml of standard water in methanol solution per ml of Karl Fisher reagent

S = ml of standard water in methanol solution for titration of sample

S' = ml of standard water in methanol solution with back titration of blank

W = weight of sample in grams

4.5.2.5 Igniter composition - The moisture content of the igniter composition at the time and place of loading shall be determined in accordance with 4.6.4 of MIL-P-22264.

4.5.3 Salt spray - This test shall be conducted in accordance with ASTM B 117-73.

4.5.4 Static test of illuminant assembly - This test shall be conducted in accordance with equipment drawings 9201136, 9201268, 9201390, 9200965, 9200966, 9200967, 9200968, 9200969, 9200970, 9200971, 9200972, 9200973, 9200974, 9201392, and 9247071. Observation shall be made for the static characteristics of the applicable drawing.

4.5.5 Pull test of cartridge - The cartridge shall be placed in an approved fixture and the axial force specified on the applicable drawing shall be applied. Cartridge shall be pulled until total separation occurs and data shall be recorded. The projectile assembly so tested shall be visually inspected for damage that would impair proper functioning of the round. Projectile assemblies not exhibiting such damage may be returned to the lot. Projectile assemblies exhibiting such damage and the cartridge case loading assembly shall be rejected.

4.5.6 Transportation vibration - The cartridges shall be packaged and packed in accordance with dwgs. 9209204 and 9209205 and tested in accordance with Test No. 104 of MIL-STD-331, except that each box shall be vibrated at the specified amplitudes for four (4) hours in each of three (3) different positions (i.e., box positioned so that the cartridges are vertical with case end down, box positioned so that the cartridges are horizontal, and box positioned so that the cartridges are vertical with case end up. After the test, the box packing and the cartridges shall be examined to determine compliance with the requirements. Cartridges shall be used for subsequent tests.

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4.5.7 Air pressure -The cartridge shall be placed in an approved fixture and a measured quantity of air shall be applied to produce the required air pressure. Cartridges shall be used for subsequent testing.

4.5.8 Functioning - The following tests shall be performed at a Government-owned proving ground.

4.5.8.1 Hot temperature (160 degrees F. plus or minus 5 degrees F.) - The cartridges shall be packed in their regular shipping containers and conditioned for a minimum of 16 hours at a temperature of 160 degrees F. plus or minus 5 degrees F. The cartridge shall be taken from the conditioning chamber, removed from the packing container, and fired from an approved launcher placed on an approved mount at 90 degrees quadrant within approximately 2 minutes. Observation shall be made for proper functioning and the requirements of 3.4.5.

4.5.8.2 Ambient temperature (70 degrees F. plus or minus 5 degrees F.) - The cartridges shall be packed in their regular shipping containers and conditioned for a minimum of 16 hours at a temperature of 70 degrees F. plus or minus 5 degrees F. The cartridge shall be taken from the conditioning chamber, removed from the packing container, and fired from an approved launcher placed on an approved mount at 90 degrees quadrant within approximately 2 minutes. Observation shall be made for proper functioning with the requirements of 3.4.6.

4.5.8.3 Cold temperature (-65 degrees F. plus or minus 5 degrees F.) - The cartridges shall be packed in their regular shipping containers and conditioned for a minimum of 16 hours at a temperature of -65 degrees F. plus or minus 5 degrees F. The cartridge shall be taken from the conditioning chamber, removed from the packing container, and fired from an approved launcher placed on an approved mount at 90 degrees quadrant within approximately 2 minutes. Observation shall be made for proper functioning and the requirements of 3.4.7.

4.5.9 Air pressure of packed sealed metal box - The sealed metal box shall be placed in an approved fixture and a measured quantity of air shall be applied to produce the required air pressure. Observation shall be made for leakage. This test is a non-destructive test. Boxes so tested may be returned to the lot.

4.5.10 X-ray examination of ballistic samples - The sample cartridges, prior to forwarding for ballistic testing shall be subjected to x-ray examination using approved x-ray equipment.

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5. PACKAGING5.1 Preservation and packing -

5.1.1 Level A - The cartridges shall be preserved and packaged in accordance with dwg. 9209204.

5.1.2 Level C - The metal parts shall be preserved and packaged in accordance with MIL-STD-1169.

5.2 Packing -

5.2.1 Level A - The cartridges, preserved and packaged as specified in 5.1.1, shall be packed for shipment in accordance with MIL-STD-1169.

5.2.2 Level C - The metal parts, preserved and packaged as specified in 5.1.1, shall be packed for shipment in accordance with MIL-STD-1169.

5.3 Marking - Marking shall be in accordance with Dwgs. 9209204, 9209205, MIL-STD-1169 and Code of Federal Regulations, Title 49, Parts 100-199.

5.4 Shipping - When shipments from more than one lot are shipped as a carload, each lot shall be kept separate and the division between lots clearly indicated to prevent mixing of the lots in transit.

6. NOTES

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

6.1 Intended use - This specification covers the metal parts and loading, assembling and packing for Cartridge, 40MM, White Star Parachute, M583A1, Green Star, Parachute, M661, Red Star, Parachute, M662.

6.2 Acquisition requirements. Acquisition documents must specify the following:

- a. Title, number, and date of the specification.
- b. Issue of DODISS to be cited in the solicitation, and if required, the specific issue of individual documents referenced (see 2.2).

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6.3 Submission of inspection equipment designs for approval
 - See MIL-A-48078. Submit equipment designs as required to Commander, US Army Research, Development and Engineering Center, ATTN: AMSMC-QAF-I (D), Picatinny Arsenal, New Jersey 07806-5000. This address will be specified on the Contract Data Requirements List (DD Form 1423) in the contract.

6.4 Submission of results of contractor-conducted examinations and tests - Data shall be submitted in accordance with data item DI-R-1721 on the DD Form 1423 for the contract.

6.5 Submission of test data - In addition to the normal distribution of records, when the cartridge is procured by the US Army Armament Command, one (1) copy of all ballistic data and ammunition data cards shall be forwarded to: Commander, US Army Research, Development and Engineering Center, ATTN: AMSMC-QAF-S (D), Picatinny Arsenal, New Jersey 07806-5000.

6.6 Transportation Vibration. The cartridges will be considered safe to transport providing no evidence exists of loose powder or composition in the box.

6.7 Transportation Vibration. The cartridges will be considered free of damage that will affect the intended function provided the top seal has not been broken by movement or displacement of the top, or the case side has not been distorted sufficiently to prevent ejection of the illuminant assembly.

6.8 Proving ground test. Initial production testing shall be conducted in accordance with US Army Test and Evaluation Command Initial Production Test Plan No. CART-40GL-VAR.

6.9 Metal defective - Nick, crack, dent or sharp edge which might interfere with the proper assembly or end item performance of the item.

6.10 Proving ground test summary:

<u>TEST</u>	<u>SAMPLE SIZE</u>	<u>REQUIREMENTS</u>
Functioning		
(1) First Article		
a. Hot	80	See 3.4.5 & 4.3.3.1
b. Ambient	280	See 3.4.6 & 4.3.3.1
c. Cold	80	See 3.4.7 & 4.3.3.1

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(2) First 3 lots		
a. Hot	44	See 3.4.5 & 4.4.3.7
b. Ambient	176	See 3.4.6 & 4.4.3.7
c. Cold	44	See 3.4.7 & 4.4.3.7
(3) Regular Production		
a. Hot	26	See 3.4.5 & 4.4.3.10
b. Ambient	80	See 3.4.6 & 4.4.3.10
c. Cold	26	See 3.4.7 & 4.4.3.10

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

6.12 Subject term (keyword) listing.

Grenade Launcher, M79
Grenade Launcher, M203

6.13 Changes from previous issue.

Asterisks (or vertical lines) are not used in this revision to identify changes with respect to the previous issue due to the extensiveness of the changes.

Custodian:
Army-AR

Preparing activity:
Army-AR

(Project 1310-A480)

STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

INSTRUCTIONS

1. The preparing activity must complete blocks 1, 2, 3, and 8. In block 1, both the document number and revision letter should be given.
 2. The submitter of this form must complete blocks 4, 5, 6, and 7.
 3. The preparing activity must provide a reply within 30 days from receipt of the form.
- NOTE:** This form may not be used to request copies of documents, nor to request waivers, or clarification of requirements on current contracts. Comments submitted on this form do not constitute or imply authorization to waive any portion of the referenced document(s) or to amend contractual requirements.

RECOMMEND A CHANGE		1. DOCUMENT NUMBER MIL-C-63092A (AR)	2. DOCUMENT DATE (YYMMDD) 28 May 1991
3. DOCUMENT TITLE CARTRIDGES, 40MM, WHITE STAR, PARACHUTE, M583A1 GREEN STAR, PARACHUTE M661			
4. NATURE OF CHANGE (Identify paragraph number and include proposed rewrite, if possible. Attach extra sheets if needed.)			
5. REASON FOR RECOMMENDATION			
6. SUBMITTER			
a. NAME (Last, First, Middle Initial)		b. ORGANIZATION	
c. ADDRESS (Include Zip Code)		d. TELEPHONE (Include Area Code) (1) Commercial (2) AUTOVON (If applicable)	7. DATE SUBMITTED (YYMMDD)
8. PREPARING ACTIVITY			
a. NAME US ARMY ARDEC STANDARDIZATION OFFICE		b. TELEPHONE (Include Area Code) (1) Commercial (201) 724-6675 (2) AUTOVON 880-6675	
ADDRESS (Include Zip Code) ATTN: SMCAR-BAC-S PICATINNY ARSENAL, NJ 07806-5000		IF YOU DO NOT RECEIVE A REPLY WITHIN 45 DAYS, CONTACT: Defense Quality and Standardization Office 5203 Leesburg Pike, Suite 1403, Falls Church, VA 22041-3466 Telephone (703) 756-2340 AUTOVON 289-2340	