

MIL-C-2440E (AR)
AMENDMENT 5
27 February 1989
SUPERSEDING
AMENDMENT 4
15 May 1984

MILITARY SPECIFICATION

CONTAINERS, METAL, FOR PROPELLING CHARGE

This Amendment forms a part of Military Specification MIL-C-2440E (AR), dated 29 October 1979, and is approved for use within the U.S. Army Armament Munitions and Chemical Command, and is available for use by all Departments and Agencies of the Department of Defense.

PAGE 2

Standards, Military: Delete "MIL-STD-1188 - Commercial Packaging of Supplies and Equipment".

PAGE 3

Other Publications, American Society for Testing Materials:

Add:

"ASTM-D412 - Tension Testing of Vulcanized Rubber, Standard Method of

ASTM-D3951-82 - Commercial Packing, Standard Practice for".

PAGE 5

4.3.2, line 1: After "see MIL-A-48078" and Table I specified herein."

Add the included Table I to the specification.

PAGE 9

Add the included Classification of Defects and Tests (4.4.2.5, 4.4.2.6, 4.4.2.7, 4.4.2.8 and 4.4.2.9) to the specification.

TABLE I. First article inspection.MIL-C-2440E (AR)
AMENDMENT 5**CLASSIFICATION OF DEFECTS & TESTS**

| PARAGRAPH | TITLE | EXAMINATION OR TEST | NO. OF SAMPLE UNITS | SHEET | | DRAWING NUMBER See Below NEXT HIGHER ASSEMBLY |
|-----------|--|---------------------|---------------------|-------------|----------------------------|---|
| | | | | 1 | 4 | |
| CATEGORY | | | | AQL OR 100% | REQUIREMENT PARAGRAPH | PARAGRAPH REFERENCE / INSPECTION METHOD |
| 4.3.2.1 | Containers, Metal, for Propelling Charges and Components | | 5 | - | 3.1 3.1 3.1 3.3.1 | Gage Gage Gage 4.5.1 |
| | Body (see dwg. 8880538) a. Examination for defects 1. Thickness 2. Length 3. Location of bead for rim b. Tensile strength | | 5 | - | 3.1 | Gage |
| | Bottom (see dwg. 8880539 or 8880540, as applicable) Examination for defects 1. Thickness | | 5 | - | 3.1 | 4.4.2.2 |
| | Plug (see dwg. 8880552) Examination for defects | | 5 | - | 3.1 | 4.4.2.4 |
| | Rim (see dwg. 8880541) Examination for defects | | 5 | - | 3.1 | Gage |
| | Ring (see dwg. 8880542) Examination for defects 1. Thickness | | 5 | - | 3.1 | Gage |

NOTE

TABLE I. First article inspection.MIL-C-2440E (AR)
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| PARAGRAPH | TITLE | EXAMINATION OR TEST | NO. OF SAMPLE UNITS | AQL OR 100% | SHEET | | DRAWING NUMBER | PARAGRAPH REFERENCE / INSPECTION METHOD |
|-----------|--|---|---------------------|-------------|--------------------------|---|-----------------------------------|---|
| | | | | | 2 of 4 | 4 | | |
| 4.3.2.1 | Containers, Metal, for Propelling Charges and Components | | | | | | See Below NEXT HIGHER ASSEMBLY | |
| CATEGORY | | | | | | | | |
| | Screw Assembly (see dwg. 8880544, 8880545) or 8880547 as applicable) | a. Examination for defects 1. Pitch diameter of thread 2. Major diameter of thread 3. Total length b. Crimp of handle to sleeve | 5 | - | 3.1 3.1 3.1 3.1 | | Gage Gage Gage 4.5.5 | |
| | Stud (see dwg. 8880549) | Examination for defects 1. Total length 2. Pitch diameter of thread 3. Minor diameter of thread 4. Small outside diameter | 5 | - | 3.1 3.1 3.1 3.1 | | Gage Gage Gage Gage | |
| | Cover (see dwg. 8880550) | Examination for defects 1. Overall height (1 9/16") 2. Width of gasket groove 3. Height of lip | 5 | - | 3.1 3.1 3.1 | | Gage Gage Gage | |
| | Nut (see dwg. 8880553, 9232378, 9282857, or 9311209 as applicable) | Examination for defects 1. Minor diameter of thread 2. Pitch diameter of thread | 5 | - | 3.1 3.1 | | Gage Gage | |

NOTE:

TABLE I. First article inspection.MIL-C-2440E (AR)
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| PARAGRAPH | TITLE | EXAMINATION OR TEST | NO. OF SAMPLE UNITS | AQL OR 100% | SHEET OF | 3 | 4 | DRAWING NUMBER | PARAGRAPH REFERENCE / INSPECTION METHOD |
|-----------|--|--|---------------------|-------------|----------|---|----------------------|----------------|---|
| | | | | | | | | | |
| 4.3.2.1 | Containers, Metal, for Propelling Charges and Components | | | | | | | | |
| | | <p><u>Spider</u> (see dwg. 8880555) Examination for defects</p> <ol style="list-style-type: none"> 1. Diameter of hole 2. Location from center of hole to edge of wing (Dimension A) 3. Thickness <p><u>Base</u> (see dwg. 8880556 or 8880557, as applicable) Examination for defects</p> <ol style="list-style-type: none"> 1. Height 2. Thickness 3. Diameter of hole <p><u>Gasket</u> (see dwg. 8880558) a. Examination for defects</p> <ol style="list-style-type: none"> 1. Angularity, maximum 2. Inside diameter 3. Height (11/16") 4. Large width (3/8") 5. Height from base to edge of large width (3/16") <p>b. Tensile strength (see note)</p> | 5 | - | 3 | 4 | Gage Gage Gage | | |
| | | | 5 | - | | | | | Gage Gage Gage |
| | | | 5 | - | | | | | Gage Gage Gage |
| | | | 3 of 5 | 5 | | | | | Gage 4.5.9/dwg. 8880558 |

NOTE: The gasket tensile stress test shall be performed after the other inspections have been performed on the applicable samples.

TABLE I. First article inspection.MIL-C-2440E (AR)
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CLASSIFICATION OF DEFECTS & TESTS

| PARAGRAPH | TITLE | EXAMINATION OR TEST | NO. OF SAMPLE UNITS | AQL OR 100% | SHEET | 4 of 4 | DRAWING NUMBER |
|-----------|--|---------------------|---------------------|-------------|-------|--------|-----------------------------------|
| | | | | | | | |
| 4.3.2.1 | Containers, Metal, for Propelling Charges and Components | | | | | | See Below NEXT HIGHER ASSEMBLY |
| | | | | | | | |
| | <u>Body Assembly, unpainted (see dwg. 8880537)</u> | | 5 | - | | | |
| | a. Examination for defects | | | | | 3.1 | 4.4.2.1 |
| | b. Weld of rim to body | | | | | 3.1 | 4.5.6 |
| | <u>Spider and Nut Assembly (see dwg. 8880554)</u> | | 2 | - | | | |
| | a. Crimp of nut to spider | | | | | 3.1 | 4.5.8 |
| | <u>Cover Assembly (see dwg. 8880543)</u> | | 5 | - | | | |
| | a. Weld of stud cover | | | | | 3.1 | 4.5.4 |
| | Assembly (see dwg. 9332423) | | 5 | - | | | |
| | a. Examination for defects | | | | | 3.1 | 4.4.2.3 |
| | b. Assembly of cover and body | | | | | 3.4 | 4.5.2 |
| | c. Air pressure test | | | | | 3.6 | 4.5.3 |

NOTE:

QUALITY CONFORMANCE INSPECTION

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CLASSIFICATION OF DEFECTS & TESTS

| PARAGRAPH | TITLE | SHEET 1 of 1 | | NO. OF SAMPLE UNITS | EXAMINATION OR TEST | AQL OR 100% | REQUIREMENT PARAGRAPH | DRAWING NUMBER | PARAGRAPH REFERENCE / INSPECTION METHOD |
|-----------------|------------------------------|--------------|--|---------------------|---------------------|-------------|-----------------------|---------------------------------|---|
| | | | | | | | | | |
| 4.4.2.5 | Body | | | | | | | 8880538 NEXT HIGHER ASSEMBLY | |
| <u>Critical</u> | None defined | | | | | | | 8880537 | |
| <u>Major</u> | Thickness | | | | | 0.40% | 3.1 | Gage | |
| 101 | Length | | | | | 0.40% | 3.1 | Gage | |
| 102 | Location of bead for rim | | | | | 0.40% | 3.1 | Gage | |
| 103 | | | | | | | | | |
| <u>Minor</u> | Evidence of poor workmanship | | | | | 0.65% | 3.8 | Visual | |
| 201 | | | | | | | | | |
| NOTE: | | | | | | | | | |

QUALITY CONFORMANCE INSPECTION

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CLASSIFICATION OF DEFECTS & TESTS

| PARAGRAPH | TITLE | SHEET 1 of 1 | | NO. OF SAMPLE UNITS | EXAMINATION OR TEST | AQL OR 100% | REQUIREMENT PARAGRAPH | DRAWING NUMBER | PARAGRAPH REFERENCE / INSPECTION METHOD |
|-----------------|------------------------------|--------------|--|---------------------|---------------------|-------------|-----------------------|--|---|
| | | | | | | | | | |
| 4.4.2.6 | Cover | | | | | | | 8880550 NEXT HIGHEN ASSEMBLY 8881028 | |
| CATEGORY | | | | | | | | | |
| <u>Critical</u> | None defined | | | | | | | | |
| <u>Major</u> | Overall height (1 9/16") | | | | | 0.40% | 3.1 | | Gage |
| | Width of gasket groove | | | | | 0.40% | 3.1 | | Gage |
| | Height of lip | | | | | 0.40% | 3.1 | | Gage |
| <u>Minor</u> | Evidence of poor workmanship | | | | | 0.65% | 3.8 | | Visual |
| 201 | | | | | | | | | |
| NOTE: | | | | | | | | | |

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CLASSIFICATION OF DEFECTS & TESTS

| PARAGRAPH | TITLE | EXAMINATION OR TEST | NO. OF SAMPLE UNITS | SHEET | | DRAWING NUMBER |
|-----------------|------------------------------|---------------------|---------------------|-------------|-----------------------|---|
| | | | | 1 | 1 | |
| CATEGORY | | | | AQL OR 100% | REQUIREMENT PARAGRAPH | PARAGRAPH REFERENCE / INSPECTION METHOD |
| 4.4.2.7 | Screw assembly | | | | | 8880544 as applicable NEXT HIGHEN ASSEMBLY |
| <u>Critical</u> | None defined | | | | | 8880543 |
| <u>Major</u> | | | | | | |
| 101 | Pitch diameter of thread | | | 0.40% | 3.1 | Gage |
| 102 | Major diameter of thread | | | 0.40% | 3.1 | Gage |
| 103 | Total length | | | 0.40% | 3.1 | Gage |
| <u>Minor</u> | | | | | | |
| 201 | Evidence of poor workmanship | | | 0.65% | 3.8 | Visual |
| NOTE: | | | | | | |

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| PARAGRAPH | TITLE | EXAMINATION OR TEST | NO. OF SAMPLE UNITS | SHEET | | DRAWING NUMBER |
|-----------------|------------------------------|---------------------|---------------------|-------------|-----------------------|---|
| | | | | 1 | of | |
| CATEGORY | | | | ACL OR 100% | REQUIREMENT PARAGRAPH | PARAGRAPH REFERENCE / INSPECTION METHOD |
| 4.4.2.8 | Stud | | | | | 8880549 NEXT HIGHEN ASSEMBLY |
| <u>Critical</u> | None defined | | | | | 8880543 |
| <u>Major</u> | Total length | | | 0.40% | 3.1 | Gage |
| 101 | Pitch diameter of thread | | | 0.40% | 3.1 | Gage |
| 103 | Minor diameter of thread | | | 0.40% | 3.1 | Gage |
| 104 | Small outside diameter | | | 0.40% | 3.1 | Gage |
| <u>Minor</u> | Evidence of poor workmanship | | | 0.65% | 3.8 | Visual |
| 201 | | | | | | |

NOTE:

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CLASSIFICATION OF DEFECTS & TESTS

| PARAGRAPH | TITLE | SHEET | | NO. OF SAMPLE UNITS | EXAMINATION OR TEST | AQL OR 100% | REQUIREMENT PARAGRAPH | DRAWING NUMBER | NEXT HIGHER ASSEMBLY | PARAGRAPH REFERENCE /INSPECTION METHOD |
|-----------------|---|-------|----|---------------------|---------------------|-------------|-----------------------|----------------|----------------------|--|
| | | 1 | of | | | | | | | |
| 4.4.2.9 | Gasket | | | | | | | 8880558 | 8880543 | |
| <u>Critical</u> | | | | | | | | | | |
| Major | None defined | | | | | | | | | |
| 101 | Angularity, max. | | | | | 0.40% | 3.1 | | | Gage |
| 102 | Inside diameter | | | | | 0.40% | 3.1 | | | Gage |
| 103 | Height (11/16") | | | | | 0.40% | 3.1 | | | Gage |
| 104 | Large width (3/8") | | | | | 0.40% | 3.1 | | | Gage |
| 105 | Height from base to edge of large width | | | | | 0.40% | 3.1 | | | Gage |
| Minor | Evidence of poor workmanship | | | | | 0.65% | 3.8 | | | Visual |
| 201 | | | | | | | | | | |
| NOTE: | | | | | | | | | | |

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4.4.3.7 Weld of nut to spider. (see dwg. 8880554) : Delete in its entirety.

PAGE 11

4.4.3.9 Add new paragraph as follows:

"4.4.3.9 Tensile stress of gasket (see dwg. 880558), Major Defect. Five (5) gaskets shall be randomly selected from each lot for this test. If any gasket fails to meet the requirement, the lot shall be rejected."

PAGE 12

4.5.7 Weld of nut to spider. Delete in its entirety.

4.5.9 Add new paragraph as follows:

"4.5.9 Tensile strength of gasket. The tensile stress shall be determined in accordance with ASTM-D412."

5. Delete in its entirety and substitute the following:

"5. PACKAGING

5.1 Unit packing. None required.

5.2 Packing. Packing shall be commercial. Propelling charge containers shall be prepared in accordance with ASTM D3951-82 (Standard Practice for Commercial Packing).

5.3 Marking. Shipping marking shall comply with ASTM D3951-82 and the following additional instructions. No shipping marking shall be placed directly on the containers. Commercial shipping tags attached with wire shall be used unless otherwise specified. The following information shall be shown: item name and model number, part number and revision, contract number, lot number and date, name and address of manufacturer. If containers are bundled, boxed or palletized, the gross weight and quantity shall be included. The above information may be placed on pallets or boxes by labeling or stenciling."

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PAGE 14

Add new paragraph as follows:

"6.5 Superseded container designs. Containers and their components, whose designs have been superseded, are not acceptable for renovation (see Appendix) without prior approval of the procuring activity."

PAGE 15

- * 30.4 Change title to "Air pressure of body and cover".

PAGE 16

- * 40.1.2 Inspection No. 3, Air Pressure: Change "(see 30.4)" to "(see Note 1 below and 30.4)".

- * 40.1.4 Cover after painting:

Inspection No. 3, Change to "Cover gasket missing or improper".

"4. Plugwasher missing or improper Visual

5. Air pressure (see Note 1 below and 30.4)
Test, 100 percent".

- * Bottom of page Add note as follows:

"1. The air pressure test may be conducted 100 percent on the assembled container (cover and body), after painting, in lieu of the individual body or cover."

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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 marginal notations and relationship to the last previous amendment.

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