

INCH-POUND

MIL-F-63107C (AR)
 AMENDMENT 3
 11 March 1996

 SUPERSEDING
 AMENDMENT 2
 29 March 1991

MILITARY SPECIFICATION

FLARE, AIRCRAFT, COUNTERMEASURE: M206

This Amendment forms a part of Military Specification MIL-F-63107C(AR), dated 6 January 1986, and is approved for use within the U.S. Army Armament Research, Development and Engineering Center, and is available for use by all Department and Agencies of the Department of Defense.

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2.1.2, Under Inspection Equipment Drawings: Change drawing number "9389372" to "9280372".

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3.3.3 Aircraft Vibration. Line 3, delete "Procedure IIC" and substitute "Procedure IIC and Procedure IA".

3.3.4 Temperature-altitude. Line 3, delete "Method 504.1-II, Category 6" and substitute "Method 504.1, Procedure I, Table 504.1-11, Category 6".

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3.3.6 Moisture absorption. Delete in its entirety.

3.5.3 Static output. Change drawing number "9380372" to read "9280372".

3.5.3.2 High intensity time. Change dwg. number "9380372" to "9280372".

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3.5.3.3 Intensity at .25 seconds. Change dwg. number from "9380372" to read "9280372".

3.8 Foreign Matter. Delete in its entirety.

AMSC N/A

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3.9 Stress. Delete in its entirety.

3.10 Burst. Delete in its entirety.

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Table I. Delete Cap, End, Plastic Case (dwg. 9362854) in the entirety. Under Cap, End (ALT) (dwg. 9362906) delete "3.13, 4.5.12" and substitute "3.11, 4.5.11".

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Table I. Delete Cases, Cartridge (dwg. 9362853 - ALT) in its entirety.

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- * 4.4.2.1 Cap, End. Fox Minor 202, delete "3.9" and substitute "3.13". Delete note in its entirety and substitute "1. See para. 4.5.6 for inspection of molded/ plastic parts. Contractor shall inform the Government which type of inspection will be used."

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4.4.2.2 Cap, End, Plastic Case. Delete in its entirety.

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- * 4.4.2.3 Cap, End (ALT). Major 106: Delete "3.13" and substitute "3.11". For Major 101, delete "pins" and substitute "pin". For Minor 201, delete "3.9" and substitute "3.13". Delete notes in their entirety and substitute "1. See para. 4.5.6 for inspection of molded/ plastic parts. Contractor shall inform the Government which type of inspection will be used."

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- * 4.4.2.4 Cap, End Assembly. Delete dwg. number "/9362904". Add Major "103 Grease in shear pin holes (Dwg. 9344023) .40% 3.2 Visual". For Minor 201, delete "3.9" and substitute "3.13".

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- * 4.4.2.5 Piston, Cushion Assembly. Delete in its entirety and substitute the attached Quality Conformance Inspection sheet.

QUALITY CONFORMANCE INSPECTION

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CLASSIFICATION OF DEFECTS & TESTS

PARAGRAPH	TITLE	SHEET 1 of 1		DRAWING NUMBER 93424952 NEXT HIGHER ASSEMBLY 9311623
CATEGORY	EXAMINATION OR TEST	NO. OF SAMPLE UNITS	AQL OR 100%	REQUIREMENT PARAGRAPH PARAGRAPH REFERENCE/INSPECTION METHOD
<p><u>Critical</u></p> <p><u>Major</u> 101</p> <p>102</p> <p><u>Minor</u> 201</p>	<p>None defined</p> <p>Cushion missing, misaligned or improperly assembled</p> <p>Piston hole blocked (ignition/vent hole)</p> <p>Poor workmanship</p>		<p>.40%</p> <p>.40%</p> <p>1.00%</p>	<p>3.2</p> <p>3.2</p> <p>3.13</p>
<p>NOTES: .</p>				

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- * 4.4.2.6 Case, Cartridge. For Major 101-107, delete "Note 1" and substitute ".40%". For Minor 201, delete "Note 1" and "3.9" and substitute "1.00%" and "3.13". Delete Note 1 in Its entirety and substitute "1. See para. 4.5.5 for inspection of extruded parts. Contractor shall inform the Government which type of inspection will be used."

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- 4.4.2.7 Cartridge case. Delete in its entirety.

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- * 4.4.2.8 Pellet, Flare (EXTR). For Minor 201, delete "100%" and "3.9" and substitute "1.00%" and "3.13".

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- * 4.4.2.9 Pellet, Flare (EXTR). For Majors 101-104, delete 'Note 1" and substitute ".40%". For Minor 201, delete "3.2" and substitute "3.13".

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- * 4.4.2.10 Pellet Assembly (Pressed). Delete Major 102 in its entirety. Delete Major 105 in its entirety. For Major 106, delete ".40%" from AQL column. For Minor 201, delete "3.9" and substitute "3.13". Delete note "* Obturator felts are not required when those pellet assemblies are used in the plastic cartridge case - 9362853".

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- * 4.4.2.11 Pellet Assembly (EXTR). For Minor 201, delete "3.9" and substitute "3.13".

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- * 4.2.12 Flare, aircraft, countermeasure: M206. Major 103, change to read: "103 Piston inserted backward or damaged". Delete Major 110 in its entirety. Add "Major 111, End cap properly seated, 100%, 3.2, Visual/Manual". For Major 109, delete "at ambient temperature". Delete "4.5.4.1" and substitute "4.5.4.1.2". For Major 105, delete "(felt missing)" and substitute "(insufficient amount of felts)". Delete "Visual" and substitute "Visual/Manual". For Minor 202, delete "3.9" and substitute "3.13".

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- * 4.4.2.13 Packing and Marking for Container. For Minor 202, delete "3.9" and substitute "3.13".

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- * Add new Quality Conformance Inspection sheet 4.4.2.15, attached.

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- 4.5.1.3 Shock. Line 2, delete "Test 516.3, Procedure I, Figure 516.3-2" and substitute "Test 516.2, Procedure I, Figure 516.2-2".
- 4.5.1.4 Humidity. Line 2, delete "Test Method 507.2, Procedure II" and substitute "Test Method 507.1, Procedure I".
- 4.5.1.5 Transportation vibration. Line 2, delete "Test Method 514.3, Procedure II, Category 3, Test Condition I-3.2.3" and substitute "Test Method 514.2, Procedure X, Curve AW".
- 4.5.1.6 Temperature-altitude. Line 2, delete "Test Method 520.0, Procedure II" and substitute "Test Method 504.1, Procedure I, Table 504.1-II, Category 6".

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- * 4.5.4.1 Delete in its entirety and substitute:

"4.5.4.1 Ignition and velocity test.

4.5.4.1.1 First Article First Article samples shall be conditioned for four hours minimum at -65 to -75 degrees Fahrenheit, 60 to 80 degrees Fahrenheit and 130 to 140 degrees Fahrenheit as required in Table I. Each M206 Flare Cartridge to be temperature conditioned shall be fitted with an inert (i.e. previously fired) M796 Impulse Cartridge prior to temperature conditioning. After temperature conditioning, the inert M796 Impulse Cartridge shall be removed and a functional M796 Impulse Cartridge inserted. The functional M796 Cartridges shall have been temperature conditioned for four hours minimum at 60 to 80 degrees Fahrenheit. The M206 Flare Cartridge and the M796 Impulse Cartridge assembly shall be loaded into a Payload Module Assembly, Dwg. 9311451. All items shall be functioned within 15 minutes of removal from the conditioning chamber.

CLASSIFICATION OF DEFECTS & TESTS

PARAGRAPH	TITLE	SHEET 1 OF 1	DRAWING NUMBER 9311628 NEXT BIGGER ASSEMBLY 9342952	PARAGRAPH REFERENCE / INSPECTION METHOD
CATEGORY	EXAMINATION OR TEST	NO. OF SAMPLE UNITS	AQL OR 100%	REQUIREMENT PARAGRAPH
<p><u>Critical</u></p> <p>Major</p> <p>101 102 103 104 105</p> <p>Minor</p> <p>201 202</p>	<p>None defined</p> <p>Squareness dimensions, min Corner radius Hole diameter (ignition vent hole) Total height (4 places) Distance from outer edge to center of vent ole</p> <p>Position of legs (4) Poor workmanship</p>		<p>.40%</p> <p>.40%</p> <p>.40%</p> <p>.40%</p> <p>.40%</p> <p>.65%</p> <p>1.00%</p>	<p>3.2</p> <p>3.2</p> <p>3.2</p> <p>3.2</p> <p>3.2</p> <p>3.2</p> <p>3.13</p> <p>Gage</p> <p>Gage</p> <p>Gage</p> <p>Gage</p> <p>Gage</p> <p>Gage</p> <p>Visual</p>
<p>NOTES: 1. See para. 4.5.6 for inspection of molded/plastic parts.</p>				

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4.5.4.1.2 Lot Acceptance Lot Acceptance Tests shall be conducted on samples conditioned at -45 to -65 degrees Fahrenheit until five (5) consecutive lots have been accepted. Upon acceptance of the fifth consecutive cold conditioned lot, the test shall be conducted at 60 to 80 degrees Fahrenheit. Each M206 Flare Cartridge to be temperature conditioned shall be fitted with an inert (i.e. previously fired) M796 Impulse Cartridge prior to temperature conditioning. After conditioning, the inert M796 Cartridge shall be removed and a functional M796 Cartridge inserted. The functional M796 Cartridges shall have been temperature conditioned for four hours minimum at 60 to 80 degrees Fahrenheit. The M206 Flare Cartridge and the M796 Impulse Cartridge Assembly shall be loaded into a Payload Module Assembly, Dwg. 9311451. All items shall be functioned within 15 minutes of removal from the conditioning chamber.

4.5.4.1.3 Test Equipment and Data The Payload Module Assembly, Dwg. 9311451, shall be mounted to a dispenser Assembly, Dwg. 9311434, oriented to fired vertically upward (90+/-2 degrees elevation). Instrumentation capable of sensing a burning flare shall be located at 4 feet and 12 feet above the Dispenser Assembly. The average velocity of the flare traveling the 8 feet +/- 1/2 inch between the sensors shall be calculated. Small chips breaking off the flare during test firing shall not in itself be cause for rejection; however, if any flare breaks up into two or more pieces or fails to ignite, the lot shall be rejected. If a flare fails to ignite and the ignition failure is determined to be attributed to improper M796 Impulse Cartridge function, the sample shall be consider a "No-test" and shall be replaced with an additional flare assembly conditioned to the proper temperature."

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- * 4.5.4.2 Static Output Test After second paragraph, add:
"Alternate method for mounting the pellet on test stand (for pressed flares only) - The non-ignition end of the pellet shall be prepared for mounting by drilling a 5/32" diameter by 5/8" deep hole. A 16D nail coated with 2 part quick curing epoxy shall be inserted into the hole."

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- * First para., delete "AMSMC-QAT-M(D)" and substitute "AMSTA-AR-QAT-P".

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* 4.5.6 Dimensional control of molded or plastic parts. Line 10, delete "4. 4.2.4 and 4.4.2.8" and substitute "and 4.4.2.15". Note 1: Delete "ARDC... AMSMC-QAT-M(D)" and substitute "ARDEC, Picatinny Arsenal, NJ 07806-5000, Attn: AMSTA-AR-QAT-P".

4.5.7 Moisture absorption test. Delete in its entirety.

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4.5.8 Foreign matter test. Delete in its entirety.

4.5.9 Stress matter test. Delete in its entirety.

4.5.10 Burst test. Delete in its entirety.

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4.5.11 Delete in its entirety and substitute:

"4.5.11 Distortion test. (Alt end Cap dwg. 9362906). The Alternate End Cap shall be assembled to M206 Flares in the aluminum case configuration. All rounds will be leak tested as described in paragraph 4.5.4.3. After passing the leak test, the rounds shall be conditioned at $200 \pm 5^{\circ}\text{F}$ ($93 \pm 3^{\circ}\text{C}$) for 16 hours and the leak test repeated. Observations shall be made to comply with applicable requirements."

* 6.3 and 6.4 Delete "Research.. . 5001" and substitute "Research, Development and Engineering Center, Attn: AMSTA-AR-QAT-P, Picatinny Arsenal, NJ 07806-5000."

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