

DEPARTMENT OF THE ARMY SUPPLY BULLETIN

**Ammunition Surveillance Procedure for USAMICOM Materiel:
EXPLOSIVE CARTRIDGE 10173287
FOR
GUIDED MISSILE LAUNCHER HELICOPTER
ARMAMENT SUBSYSTEM M22**

Headquarters, Department of the Army, Washington, D.C.
26 July 1972

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**SECTION I.
INTRODUCTION**

1. Purpose. This bulletin provides criteria required by AR 740-1 and SB 742-1 for utilization in determining the serviceability of guided missile ammunition items.

2. Scope. The information contained herein applies to all Department of the Army activities within CONUS and overseas with a receipt, storage, maintenance and issue mission for Explosive Cartridges for the M22 Guided Missile.

3. Reporting of Equipment Publication Improvements. Reporting of errors, omissions, and recommendations for improving this publication should be submitted on DA Form 2028 (Recommended Changes to Publications) and forwarded direct to

Commanding General, U. S Army Missile Command, ATTN AMSMI-NPE, Redstone Arsenal, Ala 35809.

4. Item Description. *a Explosive Cartridge* The explosive cartridge is an explosive device used to hold the locking lever in place. The locking lever locks the missile on the missile launcher during flight. The explosive cartridge is shipped one each in the missile shipping container.

b Component Assemblies. The component assemblies of the explosive cartridge may be found in TM 9-1400-461-20.

c Container. For nomenclature, federal stock number, item drawing numbers, and marking numbers, refer to Appendix A.

***This bulletin supersedes SB 742-1337-92-003, 3 November 1970**

SECTION II.

STORAGE AND SURVEILLANCE

5. Storage. (Reference TM 9-1300-206, TM 9-1400-461-20 and TM 9-1400-461-35) Prior to storage, the explosive cartridge must be inspected for assurance that item is adequately painted, marked, preserved, color coded, packaged, and other suitable for storage in accordance with Instructions contained in above references and applicable drawings (Appendix A).

a. Approved Types.

- (1) Igloo (standard type).
- (2) Above Ground Magazine.
- (3) Open, Paulin-covered (emergency only)

b. Storage Temperature Limits. The explosive cartridge is shipped and stored in the missile container with limits of -22 F and 122 F

c. Class. The explosive cartridge is Quantity Distance Class 1 compatibility group B, E and N.

d. Age (Issue Control). The explosive cartridge is packaged with the missile and must be issued from storage in accordance with SB 9-219 (old stock first).

e. Shelf Life.

(1) The explosive cartridges are subject to deterioration during storage and are required to be inspected as directed In this publication.

(2) The tentative shelf life of the explosive cartridge is indefinite

6. Surveillance. *a. General.* The guidance furnished in TM 9-1300-206, TM 9-1400-461-20 and TM 9-1400-461-35 is to be used in storage quality control of the explosive cartridge These references prescribe standard methods for identification, examination, evaluation of test failures, and generally encountered defects of marking, deterioration damage and packaging.

b. Special Requirements.

(1) The explosive cartridge is packed to withstand all conditions ordinarily encountered in storage and transit Damage caused by dropping, or other mishandling could cause malfunction when the explosive cartridge is fired.

(2) Electrical continuity checks are required to be performed in accordance with instructions in TM 9-1400-461-35.

c. Sample Sizes and Frequency. Refer to table 1 for sample size and frequency of inspection

d. Inspection Methods. Inspect the explosive cartridge in accordance with TM 9-1400-461-35

e. Defect Classification.

- (1) Defect Acceptance Number (see table 2)
- (2) Inspection Criteria (see table 3)

7. Other Instructions. *a. Records and Reports.* Surveillance and storage records and reports reflecting condition of explosive cartridges will be prepared and kept current in accordance with TM 38-750 and TM 9-1400-461-35 (see App B for list of report forms).

b. Repackaging of Samples Inspected. Restore packaging of samples inspected and accepted to level of the lot from which the samples were taken.

8. Evaluation of Inspection Results. After evaluation of sample quality, materiel is to be classified to Identify the degree of serviceability, condition, and

completeness in terms of readiness for issue and use (reference AR 725-50) If the results of original sample examination are not conclusive, additional samples must be selected and the cumulative results used In making the final serviceability decision Report rejected lots on Ammunition Condition Report, DA Form 2415 (reference TM 38-750).

Table 1. Sample Sizes and Frequency for Inspection (Inspect Annually)

| Lot Size | 1st Sample | 2nd Sample | Accumulative | Sample Size |
|----------|------------|----------------|--------------|-------------|
| 0-8 | 3 | Balance of lot | | 8 |
| 9-15 | 3 | Balance of lot | | 15 |
| 16-25 | 5 | Balance of lot | | 25 |
| 26-40 | 5 | 10 | | 15 |
| 41-65 | 7 | 14 | | 21 |
| 66-110 | 10 | 20 | | 30 |
| 111-180 | 15 | 20 | | 30 |
| 181-300 | 25 | 50 | | 75 |
| 301-500 | 35 | 70 | | 105 |
| 501-800 | 50 | 100 | | 150 |
| 801-1300 | 75 | 150 | | 225 |

Note The sample sizes should be used in all Inspections The size of sample may be Increased by inspecting authority, provided that inspection is not conclusive Materiel received from the user may have been subject to severe conditions and should be inspected 100 percent as required to assure a conclusive inspection.

Table 2 Inspection Acceptability Criteria Defective Acceptance Number

| Sample size | Defective acceptance no. | | | |
|-------------|--------------------------|---------|---------|-------|
| | Critical | Major A | Major B | Minor |
| 1-5 | 0 | 0 | 0 | 0 |
| 6-10 | 0 | 0 | 1 | 1 |
| 11-20 | 0 | 0 | 2 | 2 |
| 21-40 | 0 | 0 | 3 | 4 |
| 41-60 | 0 | 0 | 3 | 5 |

Notes

- 1 Critical defective acceptance number is the maximum number of hazardous-type defects permitted in the sample.
- 2 Major A defective acceptance number is the sample s maximum number of mechanical or electrical Inspection failures permitted which will cause item failure.
- 3 Major B defective acceptance number Is the sample's maximum number of visual inspection defectives permitted which would cause failure of materially reduce the usability of product
- 4 Minor defective acceptance number Is the samples maximum number of visual inspection defectives permitted In the sample not materially reducing the usability of product.
- 5 Defects discovered In a sample for a lot with acceptance based on inspection criteria will he corrected prior to placing samples with the balance of the lot

Table 3. Defect Classification of Explosive Cartridge

| <i>Critical Defects</i> | <i>Major A Defects</i> | <i>Major B Defects</i> | <i>Minor Defects</i> |
|-------------------------|-----------------------------|-------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| None | Failure of continuity check | Cracked or damaged housing Evidence of rust or corrosion | Proper identification Damaged or Improper packaging Missing or damaged shorting plug |

**APPENDIX A.
NOMENCLATURE, STOCK NUMBERS AND DRAWING NUMBERS
FOR EXPLOSIVE CARTRIDGE**

| <i>Nomenclature</i> | <i>FSN</i> | <i>Drawing No.</i> | <i>Marking Dwg No.</i> |
|---------------------------------------------|---------------|--------------------|------------------------|
| Explosive Cartridge | 1337-956-2732 | 10173287 | N/A |
| Container, Shipping and Storage M22 Ms 1 | 8140-999-9578 | 10173311 | 8034927 |

**APPENDIX B.
REPORT FORMS AND REFERENCES**

| <i>Form Number</i> | <i>Nomenclature</i> | <i>Reference</i> |
|----------------------------------------------------------------------|------------------------------------------------|---------------------|
| Transceiver EAM Cards (as prescribed in pending Rev to AR 742-10) | Ammunition Inspection and Lot Number Report | AR-742-10 |
| DA Form 2407 | Equipment Improvement Recommendations | TM 38-750 Chapter 5 |
| DA Form 2415 | Ammunition Condition Report | TM 38-750 Chapter 5 |
| DD Form 6 | Damaged or Improper Shipment Report | AR 700-58 |

By Order of the Secretary of the Army

BRUCE PALMER, JR
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Chief of Staff

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The Adjutant General

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RECOMMENDED CHANGES TO EQUIPMENT TECHNICAL PUBLICATIONS

| | | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--------------------------------------------|-------------------|
|  <p style="font-size: small; margin: 0;"><i>THEN...JOT DOWN THE DOPE ABOUT IT ON THIS FORM. CAREFULLY TEAR IT OUT, FOLD IT AND DROP IT IN THE MAIL.</i></p> | | SOMETHING WRONG WITH PUBLICATION | |
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| PAGE NO. | PARA-GRAPH | FIGURE NO. | TABLE NO. |
| | | | |
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The Metric System and Equivalents

Linear Measure

1 centimeter = 10 millimeters = .39 inch
 1 decimeter = 10 centimeters = 3.94 inches
 1 meter = 10 decimeters = 39.37 inches
 1 dekameter = 10 meters = 32.8 feet
 1 hectometer = 10 dekameters = 328.08 feet
 1 kilometer = 10 hectometers = 3,280.8 feet

Weights

1 centigram = 10 milligrams = .15 grain
 1 decigram = 10 centigrams = 1.54 grains
 1 gram = 10 decigram = .035 ounce
 1 decagram = 10 grams = .35 ounce
 acres
 1 hectogram = 10 decagrams = 3.52 ounces
 1 kilogram = 10 hectograms = 2.2 pounds
 1 quintal = 100 kilograms = 220.46 pounds
 1 metric ton = 10 quintals = 1.1 short tons

Liquid Measure

1 centiliter = 10 milliliters = .34 fl. ounce
 1 deciliter = 10 centiliters = 3.38 fl. ounces
 1 liter = 10 deciliters = 33.81 fl. ounces
 1 dekaliter = 10 liters = 2.64 gallons
 1 hectoliter = 10 dekaliters = 26.42 gallons
 1 kiloliter = 10 hectoliters = 264.18 gallons

Square Measure

1 sq. centimeter = 100 sq. millimeters = .155 sq. inch
 1 sq. decimeter = 100 sq. centimeters = 15.5 sq. inches
 1 sq. meter (centare) = 100 sq. decimeters = 10.76 sq. feet
 1 sq. dekameter (are) = 100 sq. meters = 1,076.4 sq. feet
 1 sq. hectometer (hectare) = 100 sq. dekameters = 2.47
 1 sq. kilometer = 100 sq. hectometers = .386 sq. mile

Cubic Measure

1 cu. centimeter = 1000 cu. millimeters = .06 cu. inch
 1 cu. decimeter = 1000 cu. centimeters = 61.02 cu. inches
 1 cu. meter = 1000 cu. decimeters = 35.31 cu. feet

Approximate Conversion Factors

| <i>To change</i> | <i>To</i> | <i>Multiply by</i> | <i>To change</i> | <i>To</i> | <i>Multiply by</i> |
|------------------|--------------------|--------------------|--------------------|---------------|--------------------|
| inches | centimeters | 2.540 | ounce-inches | Newton-meters | .007062 |
| feet | meters | .305 | centimeters | inches | .394 |
| yards | meters | .914 | meters | feet | 3.280 |
| miles | kilometers | 1.609 | meters | yards | 1.094 |
| square inches | square centimeters | 6.451 | kilometers | miles | .621 |
| square feet | square meters | .093 | square centimeters | square inches | .155 |
| square yards | square meters | .836 | square meters | square feet | 10.764 |
| square miles | square kilometers | 2.590 | square meters | square yards | 1.196 |
| acres | square hectometers | .405 | square kilometers | square miles | .386 |
| cubic feet | cubic meters | .028 | square hectometers | acres | 2.471 |
| cubic yards | cubic meters | .765 | cubic meters | cubic feet | 35.315 |
| fluid ounces | milliliters | 29,573 | cubic meters | cubic yards | 1.308 |
| pints | liters | .473 | milliliters | fluid ounces | .034 |
| quarts | liters | .946 | liters | pints | 2.113 |
| gallons | liters | 3.785 | liters | quarts | 1.057 |
| ounces | grams | 28.349 | liters | gallons | .264 |
| pounds | kilograms | .454 | grams | ounces | .035 |
| short tons | metric tons | .907 | kilograms | pounds | 2.205 |
| pound-feet | Newton-meters | 1.356 | metric tons | short tons | 1.102 |
| pound-inches | Newton-meters | .11296 | | | |

Temperature (Exact)

| | | | | |
|----|---------------------------|-------------------------------|------------------------|----|
| °F | Fahrenheit temperature | 5/9 (after subtracting 32) | Celsius temperature | °C |
|----|---------------------------|-------------------------------|------------------------|----|

PIN: 011796-000