MIL-W-63468A (AR)
7 OCTOBER 1983
SUPERSEDING
MIL-W-63468 (AR)
2 August 1982

MILITARY SPECIFICATION

WARHEAD, 2.75 INCH ROCKET, H. E.: M261

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

1. SCOPE

1.1 This specification covers the quality assurance provisions and special requirements not covered by the drawings for parts and assembly of the M261 Multipurpose Submunition (MPSM) Warhead.

2. APPLICABLE DOCUMENTS

2.1 Government documents.

2.1.1 Specifications and standards. Unless otherwise specified (see 6.2), the following specifications and standards of the issue listed in that issue of the Department of Defense Index of Specifications and Standards (DoDISS) specified in the solicitation, form a part of this specification to the extent specified herein.

SPECIFICATIONS

MILITARY

MIL-A-48078	Ammunition, Standard Quality Assurance Provisions, General Specification for
MIL-F-48877	Fuze, Rocket, M439
MIL-G-63444	Grenade, General Purpose, H73
MIL-W-64044	Warhead, 2.75 Inch Rocket, M261 and M267, Parts for

FSC: 1340

STANDARDS

MILITARY

MIL-STD-105	Sampling Procedures and Tables for Inspection by Attributes
MIL-STD-331	Environmental Testing and Performance of Fuzes and Components
MIL-STD-810	Environmental Test Methods
MIL-STD-1167	Ammunition Data Cards

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.

MISSILE INTERIM SPECIFICATION

MIS-30862	Rocket, 2.75 Inch, Complete Round with MK66 Motor: Assembling, Packing, and Testing

(The Missile Interim Specification is available from the Missile Logistics Center, US Army Missile Command, Redstone Arsenal, Alabama 35898.)

DRAWINGS

US ARMY ARMAMENT RESEARCH AND DEVELOPMENT COMMAND (ARRADCOM)

PRODUCT DRAWINGS

9334097	Warhead, 2.75 Inch, H.E.: M261

(Copies of specifications, standards, handbooks, drawings, and publications required by manufacturers in connection with specific acquisition functions should be obtained from the contracting activity or as directed by the contracting officer.)

2.1.3 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 shall take precedence.

3. REQUIREMENTS

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

3.2 Components and assemblies. The components and assemblies shall comply with all requirements specified on Drawing 9334097 and associated drawings and with all requirements specified in applicable specifications and standards:

3.3 M73 general purpose HE grenade. The grenade shall comply with specification MIL-G-63444.

3.4 M439 fuze. The fuze shall comply with specification MIL-F-48877.

3.5 M261 Warhead metal parts. The metal parts shall comply with specification MIL-W-64044.

3.6 Expulsion charge. The expulsion charge shall be capable, when initiated by the M439 Fuze, of ejecting the cargo from the warhead in less than 100 msec under all delivery conditions.

3.7 Reliability. The reliability of the M261 Warhead will be based on reliability of payload ejection from the Warhead case. The minimum acceptable value (MAV) of payload ejection shall be 93% and the best operational capability (BOC) shall be 97% at 90% confidence.

3.8 Interfaces. The warhead should be compatible with the MK66 Mod 1 motor and have a fuze charging umbilical lead capable of interfacing with the fuze charge receptacles of the M260, M261, M227 and M158A1E1 Launchers. The main event fuze in the warhead shall be compatible with the electrical characteristics of the Rocket Management Subsystems on Army helicopters.

3.9 Fluoroscopic or radiographic inspection. The M261 Warhead shall be fluoroscopically or radiographically examined to verify to the extent possible the presence and positioning of all components as well as the absence of foreign material. Warheads selected for first article testing shall be radiographically examined with Government approved equipment prior to static or field firing. Radiographs shall be of a quality which will permit proper evaluation as determined by the responsible technical agency of the Government.

3.10 Warhead weight. The weight shall be 13.50 ± 0.25 pounds.

3.11 Rough handling. The warhead shall withstand rough handling when tested as specified in 4.5.2, and with the exception of the five foot drop test, shall comply with the ballistic test as specified in 4.5.8. The warhead shall be safe to handle and dispose of following the five foot drop test.

3.12 Temperature. The warhead shall withstand exposure to and function after storage temperatures of -50°F ± 5°F, 70°F ± 15°F, and 160°F ± 5°F.

3.13 Secured cargo vibration. The warhead shall withstand exposure to secured cargo vibration as specified in 4.5.3 and shall comply with the ballistic test as specified in 4.5.8.

3.14 Helicopter vibration. The warhead shall withstand exposure to helicopter vibration as specified in 4.5.4 and shall comply with the ballistic test as specified in 4.5.8.

3.15 Forty foot drop. The warhead assembled to the rocket motor and packaged for shipment shall withstand a 40 foot drop and be safe to dispose of.

3.16 Leakage. The warhead shall withstand exposure to the leakage test as specified in 4.5.6 and shall comply with the ballistic test as specified in 4.5.8. Failure criteria shall be water entry into the cargo compartment.

3.17 Charge circuit continuity (M439 fuze unarmed). The continuity of the charge circuit through the umbilical lead shall be acceptable as measured by the M433/M439 Fuze Continuity Test Set. The warhead must show proper fuze continuity before assembly into a complete rocket assembly.

3.18 Warhead performance. The completely assembled round in flight configuration shall be ballistically tested to comply with the requirements of this specification.

3.19 Data requirements. The Contractor shall generate data in accordance with the requirements of the data item descriptions cited in 4.5.9.

3.20 First article inspection. This specification makes provision for first article inspection. Requirements for submission of first article samples by the Contractor shall be as specified in the contract.

3.21 Workmanship.

3.21.1 Mechanical. Unless otherwise specified on the drawing, all parts and assemblies shall be free from burrs, chips, sharp edges, cracks, unblended radii, surface defects, dirt

grease, rust, porosity, warpage, burn marks, checks, blisters, excess flash, corrosion products and other foreign matter. The cleaning method used shall not be injurious to any part nor shall the parts be contaminated by the cleaning agents. Surface coating shall be continuous except for a few slight scratches not exposing base material. The loading and assembly operations shall be performed in a thorough, workmanlike manner consistent with the best practices of the industry. All required markings shall be neat and legible.

3.21.2 Electrical. Cable assemblies and wires shall be dressed in such manner as to prevent pinching or chafing of the wire insulation. Ends of wires shall be free from flux, chips, dirt, grease, rust or foreign material.

4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract, the Contractor is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified in the contract, 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 the specification where such inspections are deemed necessary to assure supplies and services conform to prescribed requirements. Unless otherwise specified herein or in the contract, the provisions of MIL-A-48078 shall apply and are made a part of this specification.

4.2 Classification of inspections. Unless otherwise specified herein, or in the contract, the following types of inspection shall be conducted on this item:

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 the provisions of 4.3.2. The first article sample shall consist of the following items in sample quantities as indicated:

Part Description	Drawing	Quantity
Charge, Explusion Assy	9334126	15
M261 Loaded Case Assy	9334122	25
Warhead, 2.75" HE: M261	9334097	102

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

4.3.3 Rejection. See MIL-A-48078 and Table I specified herein.

TABLE I. First Article Inspection.

CLASSIFICATION OF DEFECTS & TESTS MIL-W-63468A (AR)

PARAGRAPH	TITLE: Warhead, 2.75 Inch HE: M261		SHEET 1 OF 1		DRAWING NUMBER: See Below
					NEXT HIGHER ASSEMBLY
CATEGORY	EXAMINATION OR TEST	NO. OF SAMPLE UNITS	AQL OR 100%	REQUIREMENT PARAGRAPH	PARAGRAPH REFERENCE /INSPECTION METHOD
	Charge, Explusion Assy. (Dwg. 9334126)				
	Examination for defects	15		3.2	4.4.2.1
	M261 Loaded Case Assy. (Dwg. 9334122)				
	Examination for defects	25		3.2	4.4.2.2
	Warhead, 2.75Inch HE: M261 (Dwg. 9334097)				
	Examination for defects	102		3.2	4.4.2.3
	Radiographic	102		3.9	4.5.1
	Weight	102		3.10	Scale
	Rough Handling Test	36		3.11	4.5.2
	Secured Cargo Vibration	36		3.13	4.5.3
	Helicopter Vibration	19		3.14	4.5.4
	40 Ft. Drop Test	5		3.15	4.5.5
	Leakage Test	6		3.16	4.5.6
	Charge Circuit Continuity	102		3.17	4.5.7
	Ballistic Test (b)	91(a)		3.18	4.5.8
	(a) Sample is composed of items from rough handling (30), secured cargo (36), helicopter vibration (19) and leakage tests (6).				
	(b) The first article ballistic sample shall be rejected if two (2) or more payloads fail to eject.				

NOTES:

DRDAR-QA Form 160 Jul 77

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, inspection lots of M261 Warheads shall contain:

a. Grenades from no more than two lots bearing the same inter fix number from one manufacturer .

b. M439 Fuzes bearing the same metal parts lot interfix number from one metal parts manufacturer.

c. Expulsion charges from lots bearing the same lot inter fix number from one manufacturer.

d. Metal parts from no more than two lots bearing the same interfix number from one manufacturer.

The quantity of warheads in each production lot shall not exceed 4,000.

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.

CLASSIFICATION OF DEFECTS & TESTS

PARAGRAPH	TITLE		SHEET 1 OF 1		DRAWING NUMBER 9334126
4.4.2.1	Charge, expulsion assy.				NEXT HIGHER ASSEMBLY 9334122
CATEGORY	EXAMINATION OR TEST	NO. OF SAMPLE UNITS	AQL OR 100%	REQUIREMENT PARAGRAPH	PARAGRAPH REFERENCE /INSPECTION METHOD
CRITICAL	None defined				
MAJOR					
101	Black powder weight		0.40%	3.2	Scale
102	M-10 Weight		0.40%	3.2	Scale
MINOR					
201	Expulsion charge cover not adhering properly to fuze support		0.65%	3.2	Visual
202	Evidence of poor workmanship		0.65%	3.21	Visual

NOTES:

CLASSIFICATION OF DEFECTS & TESTS

MIL-W-63468A (AR)

PARAGRAPH	TITLE		SHEET 1 OF 1		DRAWING NUMBER
4.4.2.2	M261 Loaded Case Assy.				9334122
					NEXT HIGHER ASSEMBLY 9334097
CATEGORY	EXAMINATION OR TEST	NO. OF SAMPLE UNITS	AQL OR 100%	REQUIREMENT PARAGRAPH	PARAGRAPH REFERENCE /INSPECTION METHOD
CRITICAL	None defined				
MAJOR					
101	Charge circuit continuity		100%	3.2	Ohmmeter
102	Charge circuit resistance to case		100%	3.2	Megohmmeter
103	Ground circuit continuity		100%	3.2	Ohmmeter
104	Pins missing or loose or above flush		0.40%	3.2	Visual
MINOR					
201	Evidence of poor workmanship		0.65%	3.21	Visual

NOTES:

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CLASSIFICATION OF DEFECTS & TESTS

MIL-W-63468A (AR)

PARAGRAPH	TITLE		SHEET 1 OF 1		DRAWING NUMBER
4.4.2.3	Warhead, 2.75 Inch HE: M261				9334097
					NEXT HIGHER ASSEMBLY N/A
CATEGORY	EXAMINATION OR TEST	NO. OF SAMPLE UNITS	AQL OR 100%	REQUIREMENT PARAGRAPH	PARAGRAPH REFERENCE /INSPECTION METHOD
CRITICAL					
1	Color or marking incorrect		100%	3.2	Visual
MAJOR					
101	Nose cone not properly seated		0.40%	3.2	Visual
102	Length, max.		0.40%	3.2	Gage
103	Umbilical lead, min.		0.40%	3.2	Gage
104	Plug protrudes beyond case base		0.40%	3.2	Visual
105	Base O-ring missing or improperly installed		0.40%	3.2	Visual
106	Pins missing, loose, or above flush		0.40%	3.2	Visual
107	Fluoroscope		100%	3.9	4.5.1
108	Charge circuit continuity		100%	3.17	4.5.7
109	Ballistic test	36		3.18	4.5.8
MINOR					
201	Evidence of poor workmanship		0.65%	3.21	Visual

NOTES:

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4.4.3 Testing. Testing is described in the Quality Conformance Inspection tables.

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 paragraph 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. The Contractor shall submit all inspection equipment designs to the Government for evaluation and approval prior to fabrication of such equipment.

4.5 Test methods and procedures.

PRECAUTION: This specification covers sampling and testing of chemical, toxic or explosive materials which are potentially hazardous to personnel. Accordingly, it is emphasized that all applicable safety rules, regulations and procedures must be followed in handling and processing these materials.

4.5.1 Radiographic. X-ray or fluoroscopically view each round in two planes, 900 oppposed. Verify that all major components, assemblies, and sub-assemblies are present and properly placed, that all grenades are safe, and no foreign material is present. Any warhead that fails the requirements shall be removed from the lot.

4. 5.2 Rough handling test. The rough handling test shall be performed as follows on each of thirty-six (36) warheads for first article testing only.

Each warhead shall be packed and packaged in accordance with MIS-30862 except that dummy 2.75 Inch MK66 Rocket Motors shall be substituted. The test warheads are to be positioned in the box with the warhead nose in one direction and a dummy load utilized in the remaining fiber container. The dummy load shall be located in the upper right position as viewed from the nose end. The warheads shall be equally divided and temperature conditioned to -50°F ± 5°F, 70°F ± 15°F, and 160°F ± 5°F. The conditioning time shall be 8 hours minimum and 24 hours maximum.

Each box shall be dropped seven feet onto a steel plate which is solidly supported by concrete. The orientations of the boxes on striking are:

a. Eighteen (18) warheads (6 boxes--2 from each temperature condition) warhead nose down (longitudinal axis 45° from vertical).

b. Eighteen (18) warheads (6 boxes--2 from each temperature condition) warhead base down (longitudinal axis 45° from vertical).

No individual box shall be subjected to more than one drop. The drop equipment and stand shall be capable of providing an unimpeded free fall prior to striking the plate and permit rebounding. Prior to performing this drop test, the following is necessary.

a. Serialize each warhead.

b. X-ray or fluoroscope each round in two planes, 900 opposed. Verify all components are secure and no armed grenades are evident.

c. Before dropping, each packaged warhead and box shall be visually examined for evidence of incorrect packaging.

After performing the drop test on all warheads, each round shall be x-rayed or fluoroscope. A visual examination shall be performed. The first article shall be rejected if one or more warheads are found to be not safe as a result of the effects of the seven-foot drop test.

If no safety hazard is noted, the warheads will be removed from the boxes and placed on an approved package tester in their fiber containers for the loose cargo test. The warheads shall not be tied down in any manner inside the tester. The warheads shall be equally divided and temperature conditioned to -50°F ± 5°F, 70°F ± 15°F, and 160°F ± 5°F. The conditioning time shall be 8 hours minimum and 24 hours maximum. The tester shall then be vibrated for 30 minutes at a frequency of 5.0 hertz at 1.3 g's.

Following the loose cargo test, the warheads shall be subjected to visual and x-ray or fluoroscopic examination. The first article shall be rejected if one or more warheads are found to be not safe as a result of the effects of the loose cargo test.

If no safety hazard is noted, thirty (30) warheads shall be ballistically tested in accordance with 4.5.8 for information only. The remaining six (6) warheads (two conditioned to each specified temperature) shall be subjected to an unpackaged 5-foot drop test onto a steel plate which is solidly supported by concrete. The drop orientations of the warheads (at each specified temperature) on striking will be:

a. One warhead nose down with longitudinal axis 45 degrees from vertical.

b. One warhead nose down with longitudinal axis vertical.

Following the five-foot drop test, the warheads shall be safe to handle or dispose of (no grenades ejected and the nose cone base intact and securely in place). The first article shall be rejected if one or more warheads are found to be not safe as a result of the effects of the five-foot drop test. Warheads subjected to the five-foot drop test shall not be ballistically tested.

4.5.3 Secured cargo vibration test. The secured cargo vibration test shall be performed as follows on each of thirty-six (36) warheads for first article testing only.

The sample warheads shall be packed and packaged in accordance with MIS-30862 except that dummy 2.75 Inch Rocket Motors shall be substituted. The warheads shall be equally divided and temperature conditioned to -50°F ± 5°F, 70°F ± 15°F, and 160°F ± 5°F. The conditioning time shall be 8 hours minimum and 24 hours maximum.

The packed shipping boxes shall be subjected to the vibration test in accordance with Method 514.2, Equipment Category g, Procedure x, Table 514.2-VII, and Figure 514.2-7 Curve AW of MIL-STD-810C. Resonance testing does not apply.

Prior to performing this test the following is necessary:

a. Serialize each round.

b. X-ray or fluoroscope each round in two planes 90° apart. Verify all components are secure and no armed grenades are evident.

Following the vibration test, each round shall be x-rayed or fluoroscope. A visual examination shall be performed. The first article shall be rejected if one or more warheads are found to be not safe as a result of the effects of the secured cargo vibration test.

If no safety hazard is noted, the warheads shall be ballistically tested in accordance with 4.5.8.

4.5.4 Helicopter vibration test. The helicopter vibration test shall be performed as follows on each of nineteen (19) warheads for first article testing only.

a. Sweep Test. Warheads with inert MK66 motors shall be loaded into a light weight launcher and subjected to a low level sweep test. The loaded launchers will be tested in each of three orthogonal axes. The sweep level will be 1/2G or lower as necessary to limit the maximum response of the launchers to the Table II levels. This test will define the dynamic resonances of the system as mounted on a vibration shaker.

b. Dwell Test. Following the sweep tests, warheads with inert MK66 motors loaded in a launcher shall be subjected to vibration excitation in each of the three orthogonal axes. The test shall be conducted at each of four principal frequencies 11, 22, 33 and 44 Hz. The input levels at each frequency will be such as to provide the launcher response levels as specified in Table III for the time durations indicated. The test method to be used is the random noise method limited to the frequency range of interest.

c. Prior to performing the helicopter vibration test, x-ray or fluoroscope each round in two planes, 90° opposed, to verify that all components are secure and no armed grenades are evident. After performing the test on all warheads, each round shall be x-rayed or fluoroscope. A visual examination shall be performed. The first article shall be rejected if one or more warheads are found to be not safe as a result of the effects of the helicopter vibration test. If no safety hazard is noted, the warheads shall be ballistically tested in accordance with 4.5.8.

TABLE II. Sweep test.

LAUNCHER CONDITION	DIRECTION OF EXCITATION		
	TRANSVERSE (G)	VERTICAL (G)	AXIAL (G)
FULL	4.3	5.8	3.1

NOTE: The sweep time shall be 1 octave per minute 5 to 100 to 5 Hz.

4.5.5 Forty foot drop test. Five warheads shall be subjected to the forty foot drop test as specified in MIL-STD-331, Test 103.1, Procedure 1 (Substitute warhead for fuze) for first article testing only. The warheads shall be assembled to MK66 Mod 1 inert-loaded motors and packed in accordance with MIS-30862. One test round shall be packaged with three dummy rounds in each box.

4.5.6 Leakage test. Six warheads shall be subjected to the leakage test per MIL-STD-810 Method 512.1 Procedure I for first article testing only. The criteria for failure shall be water entry into the cargo compartment of the warhead.

4.5.7 Charge circuit continuity. The warhead shall be subjected to a charge circuit continuity test. Any warhead which is identified as defective shall be removed from the lot or sample and held for failure analysis or rework. An open circuit continuity failure may indicate that the safety and arming device is armed; any warhead with this type of defect should be handled with appropriate safety precautions. The test shall be conducted using Government approved equipment and procedures

4.5.8 Ballistic test. The tactical requirement for the warhead is to provide proper delivery of M73 grenades into target areas from 1000 to 6000 meters from the launching helicopter. Performance shall be evaluated by ground launching a sample of 36 M261 warheads, assembled with MK66 Mod 1 motors, from any of the compatible launchers into a permanently contaminated field. Twelve warheads shall be conditioned at -50°F ± 5°F, 12 warheads at +70°F ± 15°F and 12 warheads at +160°F ± 5°F for a minimum of 8 hours. Firing and fuze charging shall be accomplished by a Government approved Ballistic Firing Test set using fuze time settings of 2.0 seconds to achieve an airburst range of about 1000 meters. Warhead samples shall contain a dye

marker to provide a high visibility indication of cargo ejection. Time from launch to cargo ejection and grenade function shall be detected and recorded. If three or more payloads fail to eject, the lot shall be rejected. Grenade function is recorded for information only.

4.5.9 Data requirements. The Contractor shall submit a quality inspection test demonstration and evaluation report in accordance with Data Item Descriptions DI-R-1721 and DI-R-1724 giving the detailed test results.

TABLE III. Dwell Test.

2.75 INCH ROCKET VIBRATION TEST LEVELS (MINIMUM)

CONDITION	TIME PER AXIS (HOURS)	LOC	VERTICAL AXIS					TRANSVERSE AXIS					LONGITUDINAL AXIS					
			11 HZ G^2/HZ	22 HZ G^2/HZ	33 HZ G^2/HZ	44 HZ G^2/HZ	TOT GRMS	11 HZ G^2/HZ	22 HZ G^2/HZ	33 HZ G^2/HZ	44 HZ G^2/HZ	TOT GRMS	11 HZ G^2/HZ	22 HZ G^2/HZ	33 HZ G^2/HZ	44 HZ G^2/HZ	TOT GRMS
M261 19 TUBE LOADED	.8*	FWD	.017	.05	.03	.004	.38	.015	.01	.026	.0015	.29	.03	.005	.005	.005	.3
		AFT	.05	.02	.016	.05	.6	.2	.015	.008	.004	.58	.025	.002	.0003	.002	.22
M261 19 TUBE 7 ROCKET LOAD	.63	FWD	.009	.07	.02	.715	.43	.021	.022	.007	.007	.28	.002	.01	.007	.003	.2
		AFT	.03	.10	.016	.055	.49	.008	.02	.0045	.002	.22	.006	.02	.0004	.001	.2
M261 7 TUBE LOADED	.8*	FWD	.018	.07	.02	.045	.54	.008	.21	.01	.025	.63	.007	.06	.014	.016	.35
		AFT	.08	.7	.0037	.08	1.3	.0025	1.2	.015	.06	1.45	.028	.15	.008	.017	.55
M261 7 TUBE 3 ROCKET LOAD	.63	FWD	.03	.19	.2	.05	.8	.0025	.02	.29	.03	.8	.003	.014	.01	.015	.23
		AFT	.07	.18	.13	.03	.9	.0015	.42	.1	.055	.76	.018	.008	.01	.04	.3

*For the loaded condition only, 4 minutes of the .8 hours per axis shall be at a level of 2 X the total GRMS.

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5. PACKAGING

5.1 Packaging and marking. Not applicable.

5.2 Ammunition data cards. Data card information shall be as specified in MIL-STD-1167.

6. NOTES

6.1 Intended use. The warheads covered by this specification are intended for use as part of the 2.75 Inch Folding Fin Aerial Rocket System.

6.2 Ordering data. See MIL-A-48078.

6.3 Submission of inspection equipment for design approvals. See 6.2 of MIL-A-48078. Submit designs as required to Commander, US Army Armament Research and Development Command, ATTN: DRDAR-QAF-I, Dover, NJ 07801.

6.4 Data requirements. When this specification is used in an acquisition which incorporates a DD Form 1423, Contract Data Requirements List (CDRL), the data requirements identified below shall be developed as specified by an approved Data Item Description (DD Form 1664) and delivered in accordance with the approved CDRL incorporated into the contract. When the provisions of DAR 7-104.9 (n) (2) are invoked and the DD Form 1423 is not used, the data specified below shall be delivered by the contractor in accordance with the contract or purchase order requirements. Deliverable data required by this specification is cited in the following paragraphs.

Paragraph No.	Data Requirement Title	Applicable DID No.
4.5.9	Quality Inspection Defect Report	DI-R-1721
4.5.9	Quality Inspection Test Demonstration and Evaluation Report	DI-R-1724

(Data item descriptions related to this specification, and identified in section 6 will be approved and listed as such in DoD 5000.19L, Vol. II, AMSDL. Copies of data item descriptions required by the contractors in connection with specific acquisition functions should be obtained from the Naval Publications and Forms Center or as directed by the contracting officer.)

6.5 First article. When a first article is required for inspection and approval, see 3.20 and 4.3.

6.6 Government furnished parts and support. The Procuring Agency will provide support components and facilities for ballistic testing.

6.7 Source control and specification control drawings. Certificates of conformance from the supplier certifying that the item complies with the drawing requirements shall be provided to the Government representative.

6.8 Changes from previous issue. The margins of this specification are marked with asterisks or vertical lines to indicate where changes (additions, modifications, corrections, deletions) from the previous issue 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 issue.

Custodian:
Army-AR

Preparing activity:
Army-AR

(Project 1340-A648)

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NOTE: This form may not be used to request copies of documents, nor to request waivers, deviations, or clarification of specification 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.

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STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

(See Instructions – Reverse Side)

1. DOCUMENT NUMBER	2. DOCUMENT TITLE
MIL-W-63468A	WARHEAD, 2.75 INCH ROCKET, H.E.: M261

3a. NAME OF SUBMITTING ORGANIZATION	4. TYPE OF ORGANIZATION *(Mark one)*
	☐ VENDOR
b. ADDRESS *(Street, City, State, ZIP Code)*	☐ USER
	☐ MANUFACTURER
	☐ OTHER *(Specify)*: _____

5. PROBLEM AREAS

a. Paragraph Number and Wording:

b. Recommended Wording:

c. Reason/Rationale for Recommendation:

6. REMARKS

7a. NAME OF SUBMITTER *(Last, First, MI)* – Optional	b. WORK TELEPHONE NUMBER *(Include Area Code)* – Optional
c. MAILING ADDRESS *(Street, City, State, ZIP Code)* – Optional	8. DATE OF SUBMISSION *(YYMMDD)*

DD FORM 82 MAR 1426 PREVIOUS EDITION IS OBSOLETE.

INCH-POUND

MIL-W-63468A (AR)
AMENDMENT 5
24 February 1995
SUPERSEDING
AMENDMENT 4
08 June 1994

MILITARY SPECIFICATION

WARHEAD, 2.75 INCH ROCKET, H.E.: M261

This amendment forms a part of MIL-W-63468A (AR), dated 07 October 1983, and is approved for use by the Armament Research, Development and Engineering Center, US Army Tank-Automotive and Armaments Command, and is available for use by all Departments and Agencies of the Department of Defense.

PAGE 1

* 2.1.1, under Specifications/Military:

Add "MIL-R-71163 - Rocket, 2.75 Inch/HYDRA 70: Assembly, Packing and Testing"

PAGE 2

* 2.1.2, under Missile Interim Specification:

Delete "Missile Interim Specification

MIS-30862 - Rocket, 2.75 Inch, Complete Round With MK66 Motor: Assembling, Packing, and Testing

(The Missile Interim Specification is available from the Missile Logistics Center, U.S. Army Missile Command, Redstone Arsenal, Alabama 35896.)"

PAGE 3

3.7: Delete in its entirety.

3.9: Delete “components” and substitute “major components, assemblies, and subassemblies such as: pusher plate, M73 Grenade, flat flex lead, lead tape, auto jettison retaining rings, etc.”

PAGE 7

Table I, First Article Inspection: Delete Note (b) in its entirety and substitute “The first article ballistic sample with units from secured cargo (36), helicopter vibration (19), and leakage test (6) shall be rejected if two (2) or more payloads fail to eject, or thirty-four (34) more grenades fail to function.”

4.4.1, last line: Delete “4,000.” and substitute "5,000."

PAGE 10

4.4.2.2:

Delete “None defined” under Critical and substitute:

"1	Pulled arming pin (b)	100%	3.2	Gage”.

Add Major 105:

“Presence of correct auto jettison retaining rings	100%	3.2	Visual (c)”.

Add Notes (b) and (c):

“(b) To be performed just prior to grenade stacking.

(c) No. 9 retaining ring is different from No. 1 - No. 8 retaining rings and is color-coded. Inspection of the retaining rings shall be performed after stacking, but before insertion of grenades into the warhead case. Part count of both types of auto jettison retaining rings shall be made at the end of each shift.”

PAGE 11

4.4.2.3:

Major 109: Delete and substitute:

“109	Leakage test	6	--	3.16	4.5.6
110	Ballistic test	36(a)	--	3.18	4.5.8”.

Add Note (a) : " (a) Sample includes 6 items from leakage test. “

Add 4.4.2.4, included as Page 11a.

4.5.1, second sentence: Delete and substitute:

“Verify that all major components, assemblies, and subassemblies, such as pusher plate, M73 Grenade, flat flex lead, lead tape, auto jettison retaining rings, etc., are present and properly placed; that all grenades are safe; and that no foreign material is present.”

4.5.2, second sentence: Delete “2.75 Inch Rocket Motors” and substitute “2.75 inch MK66 rocket motors”.

PAGE 12

* 4.5.2: Delete "MIS-30862" and substitute "MIL-R-71163".

PAGE 14

4.5.2, last paragraph, line 3: Delete “intact and securely in place).” and substitute “intact and not manually removable).”

* 4.5.3: Delete “MIS-30862” and substitute “MIL-R-71163”.

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4.5.5: Delete "MIS-30862" and substitute "MIL-R-71163".

4.5.6, second line: Delete “for first article testing only.”.

End of paragraph, Add: “To inspect the cargo compartment, unthread the plug in the rear of the warhead. If one or more warheads fail to meet the requirements, the lot shall be rejected.”

QUALITY CONFORMANCE INSPECTION

CLASSIFICATION OF CHARACTERISTICS

PARAGRAPH	TITLE	SHEET	DRAWING NUMBER
4.4.2.4	Grenade, General Purpose, High Explosive: M73	1 OF 1	9334143
			NEXT HIGHER ASSEMBLY: 9334122

CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	INSPECTION METHOD REFERENCE
Critical	None defined.			
Major				
101	Correct position of auto jettison retaining rings	100%	3.2	Visual
Minor				
201	Evidence of poor workmanship	0.65%	3.2	Visual

NOTES

4.5.8: Delete and substitute:

"4.5.8 Ballistic test. The tactical requirement for the warhead is to provide proper delivery of M73 grenades into target areas from 1000 to 6000 meters from the launching helicopter. performance shall be evaluated by ground launching a sample of 36 M261 warheads, assembled with M66 Mod 1 or Mod 2 motors, from any of the compatible launchers into a permanently contaminated field. Twelve warheads shall be conditioned at -50° + 5°F, 12 warheads at +70° ± 15°F, and 12 warheads at +150° - 5°F for a minimum period of 8 hours. Firing and fuze charging shall be accomplished by means of a Government-approved ballistic firing test set using appropriate fuze time settings to achieve airburst range of 1000, 3000, and 6000 meters. Time from launch to cargo ejection, and number of grenade function, shall be detected and recorded. If three or more payloads fail to eject, or 22 or more grenades fail to function, the lot shall be rejected."

* 6.3: Delete “US Army Armament Research and Development Command, Attn: DRDAR-QAF-I" and substitute “Armament Research, Development and Engineering Center, US Army Tank-Automotive and Armaments Command, Attn: AMSTA-AR-QAC-S, Picatinny Arsenal, NJ 07806-5000”.

The margins of this amendment are marked with an asterisk or vertical lines 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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