INCH-POUND
MIL-DTL-32260A (AR)
17 April 2014
SUPERSEDING
MIL-DTL-32260 (AR)
23 October 2007
(See 6.8)

DETAIL SPECIFICATION

Primer, Percussion - M28A2, M28B2, XM133 and XM134 Assembly

Reactivated after 17 April 2014 and may be used for new and existing designs and acquisitions

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

1. SCOPE

1.1 Scope. This specification covers metal parts, loading, assembling and packing of the M28A2, M28B2, XM133, and XM134 percussion primers.

Comments, suggestions, or questions on this document should be addressed to the Commander, U.S. Army ARDEC, ATTN: RDAR-EIQ-SE, Picatinny Arsenal, NJ 07806-5000 or emailed to usarmy.picatinny.ardec.list.ardec-stdzn-branch@mail.mil. Since contact information can change, you may want to verify the currency of this address information using the ASSIST Online database at https://assist.dla.mil.

AMSC N/A FSC 1390

2. APPLICABLE DOCUMENTS.

2.1 General. The documents listed in this section are specified in sections 3 and 4 of this specification. This section does not include documents sited in other sections of this specification or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all requirements documents cited in sections 3 and 4 of this specification, whether or not they are listed.

2.2 Government documents.

2.2.1 Specifications, standards and handbooks. The following specifications, standards, and handbooks below form a part of this document to the extent specified herein.

DEPARTMENT OF DEFENSE SPECIFICATIONS

MIL-P-223 - Powder, Black
MIL-P-20449 - Primer, Percussion, M61 Loading, Assembling and Packing

DEPARTMENT OF DEFENSE STANDARDS

MIL-STD-286 - Propellants, Solid: Sampling Examination and Testing
MIL-STD-1168 - Ammunition Lot Numbering and Ammunition Data Cards
MIL-STD-1916 - DOD Preferred Method of Acceptance of Product

(Copies of these documents are available online at http://quicksearch.dla.milhor from the Standardization Documents Order desk, 700 Robbins Avenue, Bldg 4D. Philadelphia, PA 19111-5094.)

2.2.2 Other Government documents, drawings and publications. The following other Government documents, drawings and publications below form part of this document to the extent specified herein. Unless otherwise specified, the issues are those cited in the solicitation (see 6.2)

US ARMY ARMAMENT RESEARCH, DEVELOPMENT
AND ENGINEERING CENTER (ARDEC) DRAWINGS

8802117 - Testing Fixture, Primer Sensitivity Assembly
8838012 - Cup, Battery
8838015 - Plug, Firing
8838080 - Head
8838081 - Head
8838089 - Body
8838129 - Primer, Percussion M28A2 Assembly
8838130 - Primer, Percussion M28B2 Assembly
13026755 - Primer, Percussion XM133, XM134 Assembly

(Copies of these drawings maybe requested online at usarmy.picatinny.ardec.list.drawing-request-help-desk@mail.mil or from US Army ARDEC, ATTN: RDAR-EIS-PE, Picatinny Arsenal, NJ 07806-5000.)

2.3 Order of precedence. Unless otherwise noted herein or in the contract, in the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

3. REQUIREMENTS

3.1 Requirement inspections.

3.1.1 First article. When specified (see 6.2), a sample shall be subjected to first article inspection in accordance with 4.2.

3.1.2 Conformance. A sample shall be subject to conformance inspection in accordance with 4.3.

3.2 Materials, components and assemblies. The materials, components and assemblies shall be in accordance with all requirements specified on drawings 8838129, 8838130 or 13026755, as applicable.

3.3 Ammunition lot numbering. Ammunition lot numbers shall be assigned in accordance with MIL-STD-1168.

3.4 Moisture content.

3.4.1 Black powder. The moisture content of black powder at the time of loading shall not exceed 0.5 percent.

3.4.2 Benite Strands. The moisture content of the benite strands at the time of loading shall not exceed 1.0 percent (for XM133/XM134 only).

3.5 Head Assembly. No head assembly shall function after an applying impact energy less than or equal to 47.52 inch-ounces. All head assemblies shall function after applying energy greater than or equal to 159.20 inch-ounces.

3.5.1 Non-functioning test. During testing the head assembly shall not function by an applied impact energy of 47.52 inch-ounces minimum.

3.5.2 Functioning test. During testing the head assembly shall function by applied impact energy of 159.20 inch-ounces maximum.

3.6 Primer assembly ballistic test.

3.6.1 Functioning. The primer assembly shall function without hang fire in excess of one second.

3.6.2 Chamber pressure resistance. The primer assembly shall withstand a pressure of 53,000 to 55,000 pounds per square inch (psi) without evidence of rupture, or any part of the primer becoming detached.

3.7 Check test for deterioration of Primer, Percussion (M61 Assembly). The M61 primer lot shall be subjected to and shall satisfactorily pass the check test for deterioration specified in MIL-P-20449 if the total elapsed time between original acceptance of the M61 primer lot and the assembly of that lot into the M28 series or XM133/XM134 series primer exceeds three years, or if the M61 primers have been subjected to adverse conditions for any period of time since the previous test.

3.8 Primer body defects. There shall be no cracks or splits detectable visually in the primer body.

3.9 Primer tubing hydrostatic test. The primer tubing, prior to machining, shall withstand the application of a minimum hydrostatic pressure of P=2*S*t/D, without rupture or indication of flaws, as evidenced by leaks, and without permanent deformation beyond drawing requirements. P = test pressure in Pounds per Square Inch (PSI), S = 14,000 PSI for Steel, S = 7,000 PSI for Brass, t = specified minimum wall thickness in inches, D = specified maximum outside diameter in inches. The test pressure shall be held for not less than five seconds.

3.10 Workmanship. Components shall be free of burrs, sharp edges, cracks, dirt, grease, corrosion, and other foreign matter. Cleaning methods used shall not be injurious to any parts, nor shall the cleaning agents contaminate the parts. All required marking and stamping shall be neat and sharply defined.

4. VERIFICATION

TABLE I. Requirement / verification cross-reference matrix.

Methods of Verification 1 – Analysis 2 – Demonstration 3 – Examination 4 - Test						Classes of Verification A- First Article B- Conformance		
Section 3 Requirements	Description	Verification Method				Verification Class		Section 4 Verification
		1	2	3	4	A	B	
3.1.1	First Article			X	X	X		4.2
3.1.2	Conformance			X	X		X	4.3
3.2	Materials, Components and assemblies			X	X	X	X	4.3.2.1-4.3.2.8
3.3	Ammunition lot numbering			X		X	X	4.3.1
3.4	Moisture content				X	X	X	4.4.4
3.5.1	Head Assembly Non-functioning				X	X	X	4.4.1
3.5.2	Head Assembly Functioning				X	X	X	4.4.2
3.6	Primer assembly ballistic test				X	X	X	4.4.3
3.7	Check test for deterioration of M61 primer assembly				X		X	4.4.5
3.8	Primer body defects			X		X	X	4.3.2.4
3.9	Primer tubing hydrostatic test				X	X	X	4.3.2.4
3.10	Workmanship			X		X	X	4.3.2.1-4.3.2.8

4.1 Classification of inspection. The following types of inspection shall be conducted on this item:

a. First article inspection (see 4.2).

b. Conformance inspection (see 4.3).

4.2 First article inspection. When specified, a sample shall be subjected to first article verification in accordance with Table II.

4.2.1 First article quantity. First article verification shall be performed on the quantity of items as indicated in table II.

4.2.2 First article inspections to be performed. The first article verification shall be performed in accordance with Table II.

4.2.3 First article rejection. If any assembly, component or test specimen fails to comply with any of the applicable requirements, the first article sample shall be rejected.

TABLE II. First article inspection.

	Number of FAT Samples	Requirement Paragraph	Inspection Method Reference
Cup, Battery, Dwg. 8838012			
Examination for Defects	25	3.2	4.3.2.1
Plug, Firing, Dwg. 8838015			
Examination for Defects	25	3.2	4.3.2.2
Head, Dwg. 8838080 or 8838081, as applicable			
Examination for Defects	25	3.2	4.3.2.3
Body, Dwg. 8838089			
Examination for Defects	25	3.2	4.3.2.4
Primer, Percussion M28A2, M28B2 or XM133/XM134 Assembly, see note 1			
Examination for Defects, see note 2	25	3.2	4.3.2.5–4.3.2.8
Proving Ground Tests	25	3.6	4.4.3
Non-Functioning	150	3.5	4.4.1
Functioning	250	3.5	4.4.2

Note 1. Drawings: 8838129, 8838130 or 13026755, as applicable.
Note 2. The examination for defects in paragraph 4.3.2 are for dimensional and visual inspections and in many cases must be verified during assembly.

4.3 Conformance inspection.

4.3.1 Lot formation. Lot formation shall be in accordance with lot formation requirement of MIL-STD-1916 paragraph 4.2, Acceptance by Tables. In addition, each lot of primers shall contain:

a. Black Powder or benite strands, as applicable, from not more than two lot interfix numbers from one manufacturer. A lot of black powder or benite strands shall be used to completion.

b. Bodies and components of one lot interfix number from one manufacturer.

c. Primer, Percussion M61 (herein after referred to as primer elements) of one lot interfix number from one manufacturer.

4.3.2 Classification of characteristics

a. Sampling requirements. Inspection sampling requirements for critical, major and minor characteristics are defined in MIL-STD-1916. Unless specified otherwise, Verification Level VII in addition to 100% inspection shall be used for all characteristics defined as Critical, Verification Level IV shall be used for all characteristics defined as Majors and Inspection Level II for all Minor characteristics.

b. Conformance inspection. Conformance inspection shall be performed in accordance with paragraph 4.3.2.1 through 4.3.2.8. For all conformance inspections the same sample specimen may be used for all non-destructive examinations or tests.

c. Alternative inspections. Alternative conformance inspections may be submitted and approved in accordance with MIL-STD-1916.

4.3.2.1	Cup, battery.			Drawing Number 8838012 Next Higher Assembly See note 1
Classification	Examination Or Test	Conformance Criteria	Requirement Paragraph	Inspection Method
Critical	None defined			
Major				
101	Outside diameter	Level IV	3.2	AIE
102	Thickness through bottom	Level IV	3.2	AIE
103	Length	Level IV	3.2	AIE
104	Diameter of hole	Level IV	3.2	AIE
105	Inside diameter	Level IV	3.2	AIE
Minor				
201	Flat missing from surface at open end	Level II	3.2	Visual
202	Evidence of poor workmanship	Level II	3.10	Visual
Note 1. Drawings: 8838129, 8838130 or 13026755, as applicable.				

4.3.2.2	Plug, firing.			Drawing Number 8838015 Next Higher Assembly See note 1
Classification	Examination Or Test	Conformance Criteria	Requirement Paragraph	Inspection Method
Critical	None defined			
Major				
101	Large diameter	Level IV	3.2	AIE
102	Total length	Level IV	3.2	AIE
103	Length of point	Level IV	3.2	AIE
104	Profile of point	Level IV	3.2	AIE
105	Length of pilot	Level IV	3.2	AIE
106	Diameter of pilot	Level IV	3.2	AIE
Minor				
201	Evidence of poor workmanship	Level II	3.10	Visual
Note 1. Drawings: 8838129, 8838130 or 13026755, as applicable.				

4.3.2.3	Head.			Drawing Number 8838080,8838081 Next Higher Assembly See note 1
Classification	Examination Or Test	Conformance Criteria	Requirement Paragraph	Inspection Method
Critical	None defined			
Major				
101	Pitch diameter of thread	Level IV	3.2	AIE
102	Major diameter of thread	Level IV	3.2	AIE
103	Diameter of body pilot	Level IV	3.2	AIE
104	Diameter of battery cup cavity	Level IV	3.2	AIE
105	Diameter of percussion element cavity	Level IV	3.2	AIE
106	Diameter of under flange	Level IV	3.2	AIE
107	Diameter of flange	Level IV	3.2	AIE
108	Thickness of flange	Level IV	3.2	AIE
109	Depth of percussion element cavity	Level IV	3.2	AIE
110	Depth of battery cup cavity	Level IV	3.2	AIE
111	Runout of flash hole with percussion element cavity	Level IV	3.2	AIE
112	Runout of percussion element cavity with diameter under flange	Level IV	3.2	AIE
113	Runout of flange with diameter under flange	Level IV	3.2	AIE
Note 1. Drawings: 8838129, 8838130 or 13026755, as applicable.				

4.3.2.3 Continued	Head.			Drawing Number 8838080,8838081 Next Higher Assembly See note 1
Classification	Examination Or Test	Conformance Criteria	Requirement Paragraph	Inspection Method
Major				
114	Diameter of chamfer at mouth of percussion element cavity	Level IV	3.2	AIE
115	Diameter of flash hole	Level IV	3.2	AIE
116	Length to shoulder above thread	Level IV	3.2	AIE
117	Length to thread undercut	Level IV	3.2	AIE
118	Length of thread including thread undercut	Level IV Level IV	3.2 3.2	AIE AIE
119	Total length	Level IV	3.2	AIE
120	Depth of flash cavity	Level IV	3.2	AIE
121	Profile of flash cavity	Level IV	3.2	AIE
122	Head cracked or split	Level IV	3.8	Visual
123	Flash hole missing	Level IV	3.2	Visual
Minor				
201	Evidence of poor workmanship	Level II	3.10	Visual
Note 1. Drawings: 8838129, 8838130 or 13026755, as applicable.				

4.3.2.4	Body.			Drawing Number 8838089 Next Higher Assembly See note 1
Classification	Examination Or Test	Conformance Criteria	Requirement Paragraph	Inspection Method
Critical				
1	Flash hole missing (see 6.6.1)	100%+Level VII	3.2	AAIE
2	Tube Cracked or split (see 6.6.2)	100%+Level VII	3.8	Visual
3	Hydrostatic test (see 6.6.3)	100%	3.9	AIE
Major				
101	Pitch diameter of thread	Level IV	3.2	AIE
102	Minor diameter of thread	Level IV	3.2	AIE
103	Length of thread	Level IV	3.2	AIE
104	Wall thickness	Level IV	3.2	AIE
105	Profile of holes	Level IV	3.2	AIE
106	Inside diameter	Level IV	3.2	AIE
107	Depth of counterbore	Level IV	3.2	AIE
108	Diameter of counterbore	Level IV	3.2	AIE
109	Total length	Level IV	3.2	AIE
110	Runout of inside diameter to pitch diameter of thread	Level IV	3.2	AIE
Note 1. Drawings: 8838129, 8838130 or 13026755, as applicable.				

4.3.2.4 Continued	Body.			Drawing Number See note 1 Next Higher Assembly -
Classification	Examination Or Test	Conformance Criteria	Requirement Paragraph	Inspection Method
Minor 201 202 203	 Protective coating damaged Outside diameter, max Evidence of poor workmanship	 Level II Level II Level II	 3.2 3.2 3.10	 Visual Visual Visual
Note 1. Drawings: 8838129, 8838130 or 13026755, as applicable.				

4.3.2.5	Primer, percussion assembly (Head, prior to assembling battery cup and firing plug).			Drawing Number See note 1 Next Higher Assembly -
Classification	Examination Or Test	Conformance Criteria	Requirement Paragraph	Inspection Method
Critical	None defined			
Major				
101	Percussion element missing, cocked or inverted	Level IV	3.2	AIE
102	Check test of M61 primer	Level IV	3.7	4.4.5
Minor				
201	Seal between percussion element and head missing or incomplete	Level II	3.2	Visual
202	Evidence of poor workmanship	Level II	3.10	Visual
Note 1. Drawings: 8838129, 8838130 or 13026755, as applicable.				

4.3.2.6	Primer, percussion assembly (Head, prior to assembling to body).			Drawing Number See note 1 Next Higher Assembly -
Classification	Examination Or Test	Conformance Criteria	Requirement Paragraph	Inspection Method
Critical				
1	Firing plug or battery cup above flush with surface of head (see 6.6.4)	100%+Level VII	3.2	AIE
2	Head assembly non functioning (see 6.6.5)	4.4.1	3.5.1	4.4.1
Major				
101	Firing plug missing or inverted	Level IV	3.2	Visual
102	Flash hole in head completely obstructed	Level IV	3.2	Visual
103	Battery cup loose or missing	Level IV	3.2	Visual and Manual
104	Head assembly functioning	4.4.2	3.5.2	4.4.2
105	Pressure tape not properly applied (only applies to XM133/XM134)	Level IV	3.2	Visual and Manual
106	Incorrect mass of black powder in flash cavity (only applies to XM133/XM134)	Level IV	3.2	AIE
Minor				
201	Evidence of poor workmanship	Level II	3.10	Visual
Note 1. Drawings: 8838129, 8838130 or 13026755, as applicable.				

4.3.2.7	Primer, percussion assembly (Body, prior to assembling head assembly).			Drawing Number See note 1 Next Higher Assembly -
Classification	Examination Or Test	Conformance Criteria	Requirement Paragraph	Inspection Method
Critical	None defined			
Major				
101	Weight of charge or number of benite strands, as applicable	Level IV	3.2	AIE
102	Liner fails to cover all holes	Level IV	3.2	Visual
103	Foreign matter in charge	Level IV	3.2	Visual
104	Moisture content of black powder or benite strands, as applicable	4.4.4.1	3.4	4.4.4
Minor				
201	Evidence of poor workmanship	Level II	3.10	Visual
Note 1. Drawings: 8838129, 8838130 or 13026755, as applicable.				

4.3.2.8	Primer, percussion assembly, M28A2, M28B2, XM133, XM134.			Drawing Number See note 1 Next Higher Assembly -
Classification	Examination Or Test	Conformance Criteria	Requirement Paragraph	Inspection Method
Critical				
1	Primer assembly ballistic test (see 6.6.6)	4.4.3	3.6	4.4.3
Major				
101	Flash holes not completely sealed	Level IV	3.2	Visual/Note 2
102	Total length maximum	Level IV	3.2	AIE
103	Diameter at flange maximum	Level IV	3.2	AIE
104	Diameter at front end maximum	Level IV	3.2	AIE
105	Head assembly loose on body	Level IV	3.2	Manual
Minor				
201	Marking missing, misleading, or unidentifiable	Level II	3.2	Visual
202	Crimp of body to head is missing or incomplete	Level II	3.2	Visual
203	Evidence of poor workmanship	Level II	3.10	Visual

Note 1. Drawings: 8838129, 8838130 or 13026755, as applicable.
Note 2. Sketches 1, 2 and 3 on Figure 1 indicate acceptable primers. Furthermore, a primer with holes displaying the conditions shown in sketches 4, 5 or 6 may be classed acceptable if the exposed portion of the liner is thoroughly impregnated lacquer and not more than 20 percent of the holes on an individual primer have this condition.

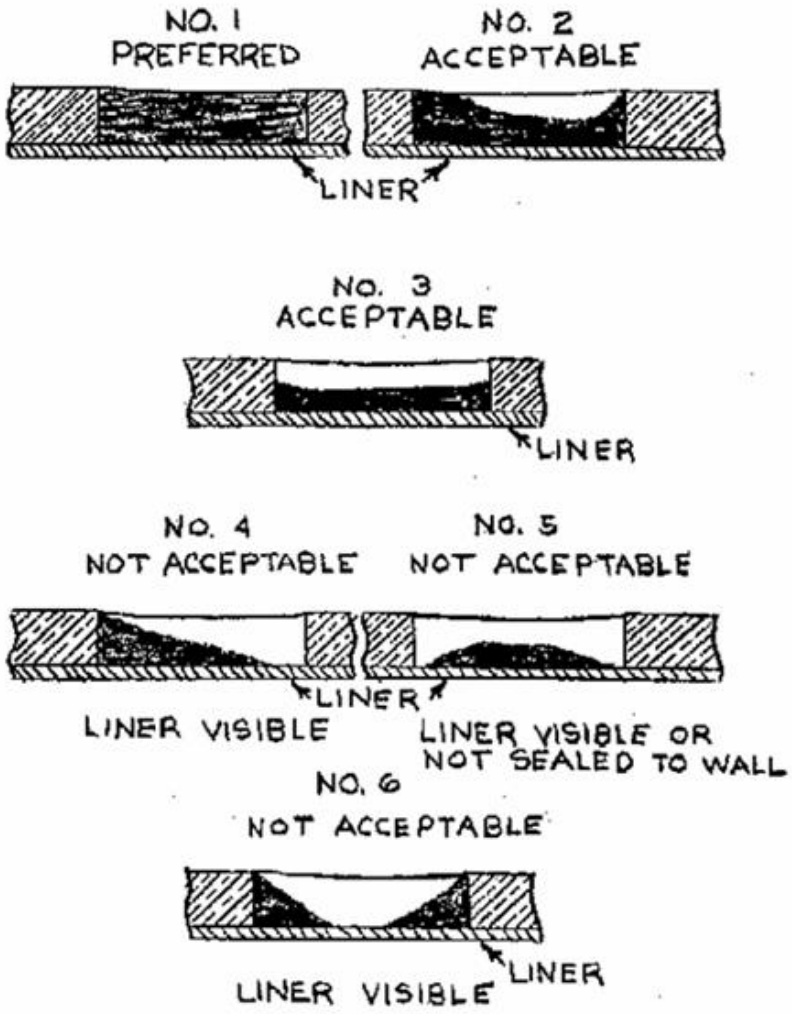

FIGURE 1. Artillery primer standard for lacquer conditions in flash holes.

4.4 Methods of inspection.

4.4.1 Head assembly non-functioning. This test shall be conducted in a test fixture per drawing 8802117. The loaded head, prior to assembling to the body, shall be assembled into the test fixture. A steel ball weighing a min. of 7.92 ounces shall be dropped from a height to give the required impact energy (approximately 6 inches). When testing the XM133/XM134 this test shall be conducted prior to assembling the black powder flash charge.

4.4.1.1 Non-functioning (full sample size). Beginning with the first lot produced, and continuing until three consecutive lots have complied with the acceptance criteria specified, a sample of 150 head assemblies shall be randomly selected from each lot for the test. If any sample fails to comply with the requirement, the lot shall be rejected. Primers subjected to this test shall be destroyed.

4.4.2 Head assembly functioning. The test shall be performed as specified in 4.4.1 except that the weight of the ball shall be 7.96 ounces maximum, and the height shall be adjusted to give the required impact energy (approximately 20 inches). When testing the XM133/XM134 this test shall be conducted prior to assembling the black powder flash charge.

4.4.2.1 Functioning (full sample size). Beginning with the first lot produced and continuing until three consecutive lots have complied with the applicable requirements specified, two hundred and fifty samples shall be randomly selected from each lot for this test. If three or more primers fail to comply with the applicable requirements, the lot shall be rejected. If one or two defects are found, a second sample of five hundred primers shall be tested. If the combined number of defective in both the first and second sample is three or more, the lot shall be rejected.

4.4.2.2 Functioning (reduced sample size). After three consecutive lots have met the criteria of 4.4.2.1, a sample of 125 primers shall be randomly selected from each lot for this test. If two or more primers fail to comply with the applicable requirements, the lot shall be rejected. If only one defect is found, a second sample of 250 primers shall be tested. If the combined number of defectives in both the first and second sample is two or more, the lot shall be rejected. If a lot is rejected the inspection criteria reverts to that of paragraph 4.4.2.1.

4.4.3 Primer assembly ballistic test. The sample primers shall be sent to a proving ground for testing. The primers shall be assembled to the appropriate cartridge case with M1 projectiles and fired from an M20 cannon using a propelling charge adequate to obtain the required pressure. The rounds shall be fired in an acceptable gun, based upon current gun tube condemnation criteria. The test rounds (charges, primer, and cartridge case) shall be uniformly temperature conditioned at the desired temperature for a minimum of 24 hours prior to testing. The M1 projectile metal parts assembly shall be inert loaded and dummy fuzed to an as fired weight of 33.0 ± 0.2 pounds.

4.4.3.1 Primer assembly functioning and pressure resistance. A sample of 25 primers shall be randomly selected from each lot for this test. If any primer fails to comply with the requirements of 3.6, the lot shall be rejected.

4.4.4 Determination of moisture content of black powder or benite strands. The moisture content of black powder shall be determined in accordance with the procedure specified in

Specification MIL-P-223. The moisture content of benite strands shall be determined in accordance with test method 102.1.3 of MIL-STD-286.

4.4.4.1 Moisture content sampling. A sample of one primer body, prior to assembly to the head, shall be randomly selected from each shifts production. Failure to comply with the applicable requirement shall be cause for rejection of the quantity of production represented by the sample.

4.4.5 Check test for deterioration of primer, percussion (M61 assembly). The check test of the M61 primer lots shall be performed as specified in MIL-P-20449 immediately before the M61 primer lot is assembled into the M28 series or XM133/XM134 series primer.

5. PACKAGING

5.1 Packaging. For acquisition purposes, the contract or order shall specify packaging requirements (see 6.2 and 6.3). When DOD personnel perform material packaging, those personnel need to contact the responsible packaging activity to ascertain requisite packaging requirements. The Inventory Control Point packaging activity within the Military Department of Defense Agency, or within the Military Department's System Command, maintains packaging requirements. Packaging data retrieval is available from the managing Military Department's or Defense Agency's automated packaging files, CD-ROM products, or by contacting the responsible packaging activity.

6. NOTES

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

6.1 Intended use. The components and assemblies covered by this specification are intended for use on all M28 series or XM133/XM134 series percussion primers.

6.2 Acquisition requirements. Acquisition documents must specify the following:

a. Title, number and date of this specification.

b. Packaging requirements (see 5 and 6.3).

c. Requirements for submission of first article sample.

d. Requirement for submission of acceptance inspection equipment

e. Certificate of Conformance for each lot or shipment of product

e. Applicable stock number.

f. Sampling requirements for check test for deterioration of primer, percussion M61 assembly (see 6.5).

6.3 Packaging drawings. Drawings listed in this section are for reference only. The government's current packaging for the M28 series and XM133/XM134 Percussion Primers as defined by Technical Data Package (TDP) 8858935 and 8858940, is included for reference. The contractor may use the information contained in the TDP as guidance for its own design. If the contractor chooses to build to the current approved TDP (8858935 and 8858940) the Government will waive the testing required to meet the First Article performance test requirements of the packaging specification, except for Performance Oriented Packaging (POP) testing which is still required to transport hazardous materials in accordance with Code of Federal Regulations (CFR), Title 49. Unless otherwise noted, the custodian of the following drawings is the U.S. Army Armament Research, Development and Engineering Center, Picatinny Arsenal, NJ 07806-5000;

a. 8858935 Box, Packing, Ammunition, for Primers M28A2, M28B2 or M60A1

b. 8858940 Box, Set-up, Packing, Ammunition for primers

6.4 Visual standards. Visual standards for evaluation of defects will be established for each contract after the first month's production. However, establishment of visual standards will not waive the requirements for compliance with the requirements of the applicable drawing.

6.5 Check test for possible deterioration of M28 series or XM133/XM134 series artillery primers. The following tests are designed to prevent the loading of deteriorated artillery primers into a major ammunition item. The test should be performed on artillery primers from each lot which has been stored under normal conditions for more than three years or under adverse conditions for any period of time. If the specification for the ammunition item into which the artillery primers are loaded does not require that a check test be performed, the contracting officer should insert a provision for the performance of the check tests in the contract.

6.5.1 Head assembly.

6.5.1.1 Head assembly non-functioning. The flash tube and the head assembly should be separated in a manner that will not damage the head assembly to the extent that the validity of the test results would be questionable. When testing the XM133/XM134 primer, the black powder in the flash cavity should be removed prior to conducting this test. The separated primer heads should be assembled into the test fixture (dwg. 8802117). A steel ball not weighing less than 7.92 ounces should be dropped from a height to give the required impact force (approximately 6 inches). All head assemblies so tested should be scrapped.

6.5.1.2 Head assembly functioning. This test should be performed as specified in 6.5.1.1 except that the weight of the ball should not be greater than 7.96 ounces, and the height should be adjusted to give the required impact force (approximately 20 inches).

6.5.1.3 Sample size. The Sampling plan for the functioning test should be in accordance with Table III. The non-functioning test should be conducted with 150 primers; with acceptance occurring only with zero failures. Any lot of primer heads which fail to meet the requirement should not be considered for use.

TABLE III. Functioning Test Samples

Sample	Sample size	Combined Sample Size	Acceptance Number	Rejection Number
First	20	20	*	2
Second	20	40	*	2
Third	20	60	0	2
Fourth	20	80	1	3
Fifth	20	100	1	3
Sixth	20	120	1	3
Seventh	20	140	2	3

* No acceptance on this sample

6.5.2 Moisture content of black powder. A sample of 25 primers should be selected for this test. The black powder should be removed from the flash tube by any suitable means. The moisture content of the powder should be determined in accordance with the method specified in Specification MIL-P-223. If the moisture content of any of the powder tested exceeds 0.7 percent, the lot of primers should be rejected. Since black powder is hygroscopic, it is advisable to place the powder in a dry, airtight container immediately upon removal, and to run the determination as soon as possible thereafter.

6.5.3 Moisture content of benite strands. A sample of 25 primers should be selected for this test. The black powder should be removed from the body by any suitable means. The moisture content of the benite should be determined in accordance with the method specified in MIL-STD-286. If the moisture content of any of the benite tested exceeds 1.0% percent, the lot of primers should be rejected.

6.5.4 Cost of check test. The contracting officer will arrange for the contractor to be reimbursed for the expense incurred in the performance of the check test. The test should be conducted at Government expense without cost to the contractor who loaded the M61 primer or the contractor loading and assembling the M28 series or XM133/XM134 series primer. The check test should not constitute a basis for rejection against either contractor, except where deterioration has occurred as a direct result of carelessness in handling, storage, etc., while the primers were under the jurisdiction of either contractor.

6.6 Critical classification notes.

6.6.1 Flash holes missing. Flash holes missing from a primer may cause improper functioning of the primer. The primer may become detached from the cartridge case or detonate, leaving material debris in the gun tube. This is likely to cause injury or death to troops firing the howitzer.

6.6.2 Tube cracked or split. A cracked or split tube may cause improper functioning of the primer. The primer may become detached from the cartridge case, leaving material debris in the gun tube. This is likely to cause injury or death to troops firing the howitzer.

6.6.3 Hydrostatic test. A primer that does not pass the hydrostatic test may rupture or split upon firing resulting in the primer becoming detached from the cartridge case, leaving

material debris in the gun tube. This is likely to cause injury or death to troops firing the howitzer or cause a short round, which may result in danger to ground troops.

6.6.4 Firing plug or battery cup above flush. A firing plug or battery cup above flush may result in unintended initiation of the cartridge resulting in injury or death to troops firing the howitzer, or to personnel handling the cartridge case or cartridge.

6.6.5 Head assembly non-functioning. A primer lot non-functioning failure may result in over-sensitive primers, which may result in unintended initiation of the cartridge resulting in injury or death to troops firing the howitzer.

6.6.6 Primer assembly ballistic test.

a. A ruptured of detached primer may result in material debris in the gun tube. This is likely to cause injury or death to troops firing the howitzer.

b. A hang fire will result in a late recoiling breech which may strike Soldiers operating the howitzer resulting in death or serious injury. The requirement of one second for hang fire was base on judgment, as there was not sufficient data available to determine a requirement through engineering analysis.

6.7 Definitions.

Acceptance Inspection Equipment (AIE). Any measuring device that is traceable to the national or international standard used to assure conformance of material to the contract requirements.

Automated Acceptance Inspection Equipment (AAIE). Equipment for which no, or minimal, human involvement is required in the acceptance determination. This includes equipment employing probes/sensors/transducers that are automatically manipulated to perform measuring and detection functions.

6.8 Supersession data. MIL-DTL-32260A supersedes the following specifications: DTL8838130 and MIL-DTL-32260.

6.9 Changes from previous issue. Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extent of the changes.

6.10 Subject term (key word) listing.

Artillery
Cartridge
Check Test

Custodian
Army-AR

Preparing activity
Army-AR
(Project 1390-2014-002)

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at https://assist.dla.mil.