

MIL-F-50522 (MU)
27 March 1970

MILITARY SPECIFICATION
FUZE, PD, M536; SEPARATION CHARGE ASSEMBLY for
METAL PARTS for

1. SCOPE

1.1 This specification covers the metal parts for one type of separation charge assembly designated as Fuze, PD, M536; Separation Charge Assembly for.

2. APPLICABLE DOCUMENTS

2.1 The following documents of the issue in effect on date of invitation for bids or request for proposal, form a part of this specification to the extent specified herein:

SPECIFICATIONS

MILITARY

- MIL-A-2550 - Ammunition and Special Weapons, General Specification for
- MIL-I-45607 - Inspection Equipment, Supply and Maintenance of

STANDARDS

FEDERAL

- FED-STD-151 - Metals; Test Methods

MILITARY

- MIL-STD-105 - Sampling Procedures and Tables for Inspection by Attributes (ABC-STD-105)

FSC: 1390

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- MIL-STD-109 - Quality Assurance Terms and Definitions
- MIL-STD-1168 - Lot Numbering of Ammunition
- MIL-STD-1169 - Packaging, Packing and Marking for Shipment of Inert Ammunition Components
- MIL-STD-1235 - Single and Multilevel Continuous Sampling Procedures and Tables for Inspection by Attributes

DRAWINGS

US ARMY MUNITIONS COMMAND

- 9252304 - Separation Charge Assembly Metal Parts

PUBLICATIONS

ARMY

- ET-9252304 - Equipment Tabulation

(Copies of specifications, standards, drawings and publications required by suppliers in connection with specific procurement functions should be obtained from the procuring activity or as directed by the Contracting Officer.)

3. REQUIREMENTS

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

3.2 Parts.-The parts shall comply with all requirements specified on Drawing (Dwg.) 9252304, all associated drawings, and with all requirements specified in applicable specifications.

3.3 Workmanship.-All parts shall be fabricated and finished in a thorough, workmanlike manner. They shall be free of burrs, chips, sharp edges, cracks, unblended radii, surface defects, dirt, grease, rust, corrosion products, and other foreign matter. The cleaning method used shall not be injurious to any parts, nor shall the parts be contaminated by the cleaning agents.

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3.4 Submission of results of contractor-conducted examinations and tests.- The contractor shall forward copies of the results of any of his examinations or tests to the designated address as required by the contract. (see 6.4).

3.5 First article testing.-This specification makes provisions for first article testing. Submission of first article quantity by the contractor shall be as specified in the contract.

4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection.-Unless otherwise specified in the contract or purchase order, the supplier is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified in the contract or order, the supplier 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. Reference shall be made to MIL-STD-109 to define terms used herein. The provisions of MIL-A-2550 shall apply.

4.1.1 Submission of product.-At the time the completed lot of items deliverable under the contract is submitted to the Government for acceptance, the contractor shall supply the following information accompanied by a certificate which attests that the information provided is correct and applicable to the product being submitted:

- a. A statement that the lot complies with all the quality assurance provisions specified in this specification.
- b. Drawing and specification number and date, together with identification and date of changes thereto.
- c. A statement that all material purchased by the contractor meets requirements, when such material is controlled by Government or commercial specifications referenced in any of the contractual documents, and that certificates of conformance are on file and available for review.
- d. Number of items in the lot.
- e. Date submitted.

The certificate shall be signed by a responsible agent of the certifying organization. The initial certificate submitted shall be substantiated by evidence of the agent's authority to bind his principal. Substantiation of the agent's authority will not be required with subsequent certificates unless, during the course of the contract, this authority is vested in another agent of the certifying organization.

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4.2 First article inspection

4.2.1 Submission.-The contractor shall submit a first article quantity as designated by the Contracting Officer for evaluation in accordance with the provisions of 4.2.2. (See 6.1) The first article sample shall consist of the following:

- a. Fifty (50) separation charge covers.
- b. Fifty (50) separation charge cups.

All parts submitted shall have been produced by the contractor (or furnished by a supplier) using the same production processes, procedures and equipment as will be used in fulfilling the contract. All parts and materials, including packaging and packing, shall be obtained from the same sources of supply as will be used in regular production. The sample shall be accompanied by certificates of conformance. A first article quantity, or portion thereof, as directed by the Contracting Officer, shall also be submitted whenever there is a lapse in production for a period in excess of 90 days, or whenever a change occurs in manufacturing process, material used, drawing, specification or source of supply as to significantly affect product uniformity as determined by the Government. Prior to submission, the contractor shall inspect the sample to the degree necessary to assure that it conforms to the requirements of the contract and submit a record of this inspection with the sample. A sample containing known defects will not be submitted unless specifically authorized by the Contracting Officer.

4.2.2 Inspections to be performed.-Components will be subjected by the Government to any or all the examinations or tests specified in this specification and any or all requirements of the applicable drawings.

4.2.3 Rejection.-If any component fails to comply with any of the applicable requirements, the first article quantity shall be rejected. The Government reserves the right to terminate its inspection upon any failure of a component in the sample to comply with any of the stated requirements. In the event of rejection, the Government reserves the right to require the contractor to take corrective action and submit a new first article quantity or portion thereof. Until a first article quantity is accepted, the contractor is in no way authorized by the Government to resume regular production unless otherwise directed by the Contracting Officer.

4.3 Inspection provisions.

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4.3.1 Lot formation.--The term "inspection lot" as used in this specification is defined as an essentially homogeneous collection of units of product from which a representative sample is drawn and inspected to determine conformance with applicable requirements. The sample selected shall represent only that quantity of units from which the sample was drawn and shall not be construed to represent any prior or subsequent quantities presented for inspection. Homogeneity shall be considered to exist provided the inspection lot has been produced by one manufacturer, in one unchanged process, in accordance with the same drawing, same drawing revision, same specification and same specification revision and complies with the provisions for submission of product as specified in MIL-STD-105. Changes to process, specification, or drawing not affecting safety, performance, interchangeability, or storage, as determined by the Government, shall not be deemed to alter the homogeneity of an inspection lot. All material submitted for inspection in accordance with this specification shall comply with the homogeneity criteria specified herein regardless of the type of sampling procedure which is being applied to determine conformance with requirements. Lot numbering, as required, shall be in accordance with MIL-STD-1168.

4.3.2 Examination.--The examinations listed in the following subparagraphs shall be performed on inspection lots (See 4.3.1) of the components or assemblies designated in the applicable paragraph headings. Inspection for critical defects (and major defects, when so specified) shall be 100 percent. Sampling plans for major and minor defects shall be in accordance with MIL-STD-105 except that continuous sampling plans in accordance with MIL-STD-1235 may be used if approved by the Government. Instead of applying the AQL's designated herein to the groups of major and minor defects listed, the contractor may elect to apply AQL's to individual defects using an AQL of 0.40 percent for each major defect and an AQL of 0.65 percent for each minor defect. When this method is elected, it shall be applied to all of the major and minor defects listed in the applicable subparagraph of this section, except where 100 percent inspection is specified, and be documented as part of the contractor's inspection system. Equipment necessary for the performance of the inspections listed shall be in accordance with 4.3.4.

4.3.2.1 Cover, separation charge (See Dwg. 8864623 covering a detail of Dwg. 9252304).--

Categories	Defects	Method of Inspection	Code No.
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Critical: None defined

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Major	AQL 0.65 Percent		
101.	Inside diameter	Gage	01001
102.	Depth to bottom of cavity	Gage	01002
103.	Wall thickness, max	Gage	01003
104.	Puncture or crack	Visual	01004

Minor	AQL 0.65 Percent		
201.	Evidence of poor workmanship (See 3.3)	Visual	01005

4.3.2.2 Cup, separation charge (See Dwg. 886462" covering a detail of Dwg. 9252304).-

Categories	Defects	Method of Inspection (See 4.3.3.1)	Code No.
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Critical: None defined

Major	AQL 0.65 Percent		
101.	Outside diameter	Gage	02001
102.	Depth to bottom	Gage	02002
103.	Thickness through the portion in bottom	Gage	02003
104.	Puncture or cut	Visual	02004

Minor	AQL 0.65 Percent		
201.	Evidence of poor workmanship (See 3.3)	Visual	02005

4.3.3 Testing.-

4.3.3.1 Dimensional control of stamped parts, Code No. 03001.-In place of the normal sampling associated with the Classification of Defects, and with the approval of the Contracting Officer, a sample of at least ten (10) parts may be dimensionally inspected to qualify the tool used in the stamping process for use in production. In addition, a random sample of five (5) parts shall be selected from the last portion of each hour's production for dimensional inspection as a control of the tool during production.

If any defective parts are found during qualification of the tool, the tool producing the defective part shall not be used in production.

If any defective parts are found when inspection is performed for control of the tool, the tool producing the defective part shall be removed from production. Further, that portion of production since the last tool control check shall be returned to the contractor for corrective action.

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All tools formerly removed from production because of some fault, may, after reworking, be returned to production providing they pass the qualification test specified above. The contractor may request a change of inspection frequency providing he presents objective evidence to substantiate the request to the Contracting Officer.

4.3.4 Inspection equipment.-Equipment Tabulation (ET) number 9252304 and Equipment Lists (EL's) referenced thereon identify the inspection equipment required to perform the examinations and tests prescribed in this section. The contractor shall design inspection equipment in accordance with the instructions in 6.3. Supply and maintenance of the equipment listed on the EL's shall be in accordance with MIL-I-45607.

4.3.4.1 Government rights to documentation.-Inspection equipment drawings and lists provided and revised in accordance with the requirements of this specification may be used by DOD activities for design, procurement, manufacture, testing, evaluation, production and receiving inspection, overhaul, shipping, storage, identification of stock, ordering and storage of replacement parts, inspection of items at overhaul, general maintenance of equipment, construction, survey, and whenever inspection equipment drawings are needed.

4.4 Test methods and procedures.-Not applicable

5. PREPARATION FOR DELIVERY

5.1 Preservation and packaging.

5.1.1 Level C.-The separation charge cup metal parts shall be preserved and packaged in accordance with MIL-STD-1169.

5.2 Packing.

5.2.1 Level C.-The separation charge cup metal parts, preserved and packaged as specified in 5.1.1, shall be packed for shipment in accordance with MIL-STD-1169.

5.3 Marking.-Marking of the carton shall comply with MIL-STD-1169.

5.4 Shipping.-When shipments from more than one lot are shipped as a carload, each lot shall be kept separate, and the division between lots clearly indicated to prevent mixing of the lots in transit.

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6. NOTES

6.1 Ordering data.-Procurement documents shall specify the following:

- a. Title, number and date of this specification.
- b. Data cards shall be prepared for each lot in accordance with the information specified in Standard MIL-STD-1167.
- c. Provisions for submission of first article samples.

6.2 Inspection code numbers.-The five-digit code numbers assigned to the inspections herein are to facilitate future data collection and analysis by the Government. These code numbers are also used to correlate the characteristics cited on Equipment Lists with the inspections listed in this specification. These code numbers shall be listed on drawings of equipment designs submitted by the contractor (see 6.3.5).

6.3 Inspection equipment.-The contractor shall design inspection equipment as required by the referenced Equipment Lists (EL) in accordance with the instructions of paragraphs 6.3.1 through 6.3.5.

6.3.1 Equipment lists.-Equipment lists indicate the availability of inspection equipment designs by showing in the "Part Number" column of the list of inspection equipment (Form SMUPA 1010) the numbers of drawings or Federal Stock numbers of existing equipment designs, or codes as indicated in paragraph 6.3.2. Design action required of the contractor is described in paragraphs 6.3.3 and 6.3.4. The contractor will be required to prepare detailed drawings in accordance with 6.3.4 for all the equipment coded as "Contractor Design" in the "Part Number" column. These contractor designs must be approved by the Government prior to fabrication or procuring of the equipment. Designs shall be submitted for approval as specified in 6.3.5.

6.3.2 Equipment list codes.-The inspection equipment as defined in 6.3.3 and 6.3.4 will be designated in the EL by the following codes:

- CD - Contractor design on controlled contractor format and/or commercial equipment.
- MU - Army design, mandatory for use.

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6.3.3 Army designs.-Army designs are reflected on detailed drawings which completely depict all the information necessary for the fabrication of the item of inspection equipment. The contractor need provide no design when an Army design is listed for an item of inspection equipment. Army designs fall into two basic classifications: Mandatory (designated "M") and non-mandatory (indicated by drawing or Federal Stock Number). When an equipment list references mandatory Army Designs, the contractor shall comply with, and use these designs accordingly. The contractor may, however, in connection with non-mandatory designs, with the approval of the Government, design alternate inspection equipment to facilitate his operations. Such contractor-prepared designs (see 6.3.4) or commercial equipment selections must be approved by the Government prior to fabrication or procuring of the equipment. Designs shall be submitted for approval as specified in 6.3.5.

6.3.4 Contractor designs.-Contractor designs are designs of inspection equipment for which the Government has assigned design responsibility to the contractor. Contractor designs shall be supported by detailed drawings which depict all information necessary to completely fabricate, calibrate and operate an item of inspection equipment. This requires that the necessary views, dimensions, materials, finishes, notes and operating and calibration instructions be properly depicted in accordance with approved practices to the extent that further calculation or clarification will not be required. Unless otherwise specified, contractor designs may be developed on the format the contractor normally employs in his equipment design procedure provided such format reflects the detail and information specified above, subject to the following controls: All submitted contractor designs shall conform to Specification "IL-D-1000, Category E, Form 2. Legibility and reproducibility shall permit conventional making of clearly understandable, high-contrast reproductions. Contractors shall submit three copies of final designs as a flat set. Designs shall be submitted for approval as specified in 6.3.5.

6.3.5 Submission of contractor design.-All submitted designs shall contain a reference to the applicable 5-digit code number contained in Section 4 of this specification and the appropriate component or assembly drawing number and revision letter to which the specific design applies. Unless otherwise specified on the EL, all designs of equipment for inspection of defects classified as critical and major shall be submitted for approval to the Commanding Officer, Picatinny Arsenal, ATTN: SMUPA-ND13. All other designs of inspection equipment shall be approved by the inspection element of the agency administering the contract. Submission shall be as directed by the contracting officer. Partial submission of inspection equipment designs is permissible and encouraged. However, the Arsenal completion date for design review will be based on the date of the final submission of designs. Picatinny Arsenal design review will be accomplished, normally, within one month after receipt.

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6.4 Submission of results of contractor-conducted examinations and tests.-
Unless otherwise specified by the Contracting Officer, the contractor shall
forward requested records of examinations or tests to Commanding Officer,
Picatinny Arsenal, ATTN: SMUPA-ND3.

Custodian:
Army-MU

Preparing activity:
Army-MU

Project Number: 1390-A-793

SPECIFICATION ANALYSIS SHEET		Form Approved Budget Bureau No. 119-R004
INSTRUCTIONS		
This sheet is to be filled out by personnel either Government or contractor, involved in the use of the specification in procurement of products for ultimate use by the Department of Defense. This sheet is provided for obtaining information on the use of this specification which will insure that suitable products can be procured with a minimum amount of delay and at the least cost. Comments and the return of this form will be appreciated. Fold on lines on reverse side, staple in corner, and send to preparing activity.		
SPECIFICATION		
ORGANIZATION	CITY AND STATE	
CONTRACT NO.	QUANTITY OF ITEMS PROCURED	DOLLAR AMOUNT
		\$
MATERIAL PROCURED UNDER A		
<input type="checkbox"/> DIRECT GOVERNMENT CONTRACT <input type="checkbox"/> SUBCONTRACT		
1. HAS ANY PART OF THE SPECIFICATION CREATED PROBLEMS OR REQUIRED INTERPRETATION IN PROCUREMENT USE? A. GIVE PARAGRAPH NUMBER AND WORDING. B. RECOMMENDATIONS FOR CORRECTING THE DEFICIENCIES		
2. COMMENTS ON ANY SPECIFICATION REQUIREMENT CONSIDERED TOO RIGID		
3. IS THE SPECIFICATION RESTRICTIVE? <input type="checkbox"/> YES <input type="checkbox"/> NO IF "YES", IN WHAT WAY?		
4. REMARKS (Attach any pertinent data which may be of use in improving this specification. If there are additional papers, attach to form and place both in an envelope addressed to preparing activity)		
SUBMITTED BY (Printed or typed name and activity)		DATE

DD FORM 1426
1 OCT 64

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