

INCH-POUND

MIL-P-60377B (AR)  
AMENDMENT 2  
20 March 2000  
SUPERSEDING  
AMENDMENT 1  
08 December 1993

MILITARY SPECIFICATION  
  
PROJECTILE, 155MM, HE, M107  
LOADING, ASSEMBLING AND PACKING

MIL-P-60377B was inactivated after 11 May 1992 for new design.

This amendment forms a part of Military Specification MIL-P-60377B (AR) dated 11 May 1992 and is approved for use by the U.S. Army Armament Research, Development and Engineering Center and is available for use by all Departments and Agencies of the Department of Defense.

PAGE 2

- \* 2.1.2 Add the following drawing:

"12914619 - Packing and Marking for 155MM Projectile pallet."

- \* 2.1.3 Delete the following drawings:

"12944371" and "12944383"

PAGE 3

- \* 3.1.1 Delete: "Scrap from risers" and substitute:

"Scrap from Composition B risers"

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- \* 3.2.1 Delete in its entirety.

PAGE 6

- \* 3.4.1 First Sentence, delete: "all threads shall be"

PAGE 6

- \* 3.4.5 Delete: "liner assembly." and substitute: "liner."

PAGE 8

- \* 4.3.1 Delete: "Liner Assembly 12944371 5" and "Liner Pad 12944383 5".

PAGE 9

- \* Table II, Delete: "Components" "Liner Assembly" and "Liner Pad" in their entirety.

PAGE 10

- \* 4.4.1 Delete: "c. Fuze well liner" and "f. Liner, pad" in their entirety.

PAGE 13

- \* 4.4.2.2 Major 101, Delete: ", max"

PAGE 14

- \* 4.4.2.3 Delete paragraph in its entirety.

PAGE 15

- \* 4.4.2.4 Delete paragraph in its entirety.

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- \* 4.4.2.5 Critical, Delete: "None defined" and add:

"1 Caked explosive on mating  
surfaces of threads. 100% 3.4.1 Gage"

Special 1, delete: "threads"

"Delete Major 106 in its entirety".

PAGE 17

- \* 4.4.2.6 Change Title of Paragraph:

From: "Projectile, 155MM, HE, M107 (W/Supp. Chg.) LAP (prior to assembly of  
shock attenuating plug)"

To: "Projectile, 155MM, HE, M107 (w/Supp. Chg.) LAP (prior to assembly of lifting plug)"

PAGE 18

- \* 4.4.2.7 Change title of major defect 101.

Delete "shock attenuating" and substitute "lifting".

Major defect 103, Delete "Energy Adsorbing"

PAGE 20

- \* 4.4.2.10 Add New Page 20a included.

**QUALITY CONFORMANCE INSPECTION  
CLASSIFICATION OF CHARACTERISTICS**

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PARAGRAPH	TITLE			SHEET 1 OF 1	DRAWING NUMBER 12914619
4.4.2.10	Packing and Marking for 155MM Projectile Pallet				NEXT HIGHER ASSEMBLY
CLASSIFICATION	EXAMINATION OF TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	INSPECTION METHOD REFERENCE	
Critical	None defined				
Major					
101	Improperly assembled or parts missing	Level III	3.2	Visual	
102	Spacers loose or damaged	Level III	3.2	Visual	
103	Rods not properly engaged in cover or base	Level III	3.2	Visual	
104	Lifting plug or projectile missing or damaged	Level III	3.2	Visual	
105	Improper torque or nut at top of rod	Level III	3.2	AIE	
106	Cotter pin not properly engaged	Level III	3.2	Visual/Manual	
107	Projectile of different zones on the same pallet	Level III	3.2	Visual	
Minor					
201	Any marking missing, incorrect or unidentifiable	Level V	3.2	Visual	
202	Number of projectile assemblies incorrect	Level V	3.2	Visual	
203	Evidence of poor workmanship	Level V	3.8	Visual	
NOTES:					

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PAGE 22

- \* 4.4.3.1 Delete: "The sampling plan and procedures shall... be classified defective."

And substitute: "This test shall be conducted 100% with any projectile having cavitation, cracks, annular rings or base separation in excess of the applicable requirement rejected."

- \* 4.4.3.1.1 Delete in its entirety and substitute the following:

"4.4.3.1.1 Base separation. (See 3.3.5)-Critical Defect-Eight (8) projectiles with the largest base separations accepted by x-ray shall be selected for test per post cycle heat treatment lot. If insufficient samples are available with base separation, sufficient samples shall be randomly selected from those projectiles to be included in the post cycle heat treatment lot. The samples shall be placed in the coldest area of the post cycle chamber. If any sample projectile has base separation in excess of the applicable requirement, the post cycle heat treatment lot it represents shall be rejected. The test shall be performed as specified in 4.5.3 using equipment in accordance with 4.4.4. Sectioning of samples shall cease after one excessive gap is detected. Rejected post cycle lots may be recycled and re-tested with government permission, but not more than three total cycles may be conducted and cycle times shall be increased by nine (9) hours each during recycles. Samples remaining unsectioned from the prior test shall be included in the recycle base separation sample."

- \* 4.4.3.1.2 Delete the last sentence and substitute: "The presence of any indication of metal defects shall cause that projectile to be classed defective and removed from the lot (see 6.11)."

PAGE 23

- \* 4.4.3.1.3 Delete the last sentence and substitute: "The presence of any indication of foreign material in the explosive charge shall cause that projectile to be classed defective and removed from the lot."

PAGE 24

- \* 4.5.1.3 Delete paragraph in its entirety.

PAGE 26

- 4.5.2.1 Line 3, Delete "50% minimum" and substitute "25% minimum"

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- \* Delete 4.5.3 in its entirety and substitute:

“4.5.3 Determination of base separation. This test shall be conducted after post cycle heat treatment is completed. The temperature of the sample projectiles (metal parts and explosive) shall be 70 +/- 9 degrees F when sectioned and tested for base separation. A notch shall be cut from the base in the following manner: Cut parallel to the base approximately two (2) inches up from the base to the center of the projectile axis. Next cut through the base toward the nose perpendicular to the aforementioned cut so as to remove a wedge of steel and explosive to expose the explosive and metal parts base interface. Subject the projectile to an acceleration level of 200 to 250 G's in the nose down orientation and maintain the projectile in that orientation to measure for base separation with a one half (1/2) inch feeler gage.”

- \* 5.1 Revised as follows:

"5.1 Packing. Level A. The projectile shall be packed in accordance with drawing 9362569 or 12914619, as specified in the contract."

- \* 5.2 Revise as follows:

"5.2 Marking. Marking shall be in accordance with drawing 9362569 or 12914619, as specified in the contract."

PAGE 27

- \* Delete: "SMCAR-QAR-I" and substitute "AMSTA-AR-QAA-R".

- \* 6.6 Delete; "SMCAR-FSA-MS and SMCAR-QAR-Q" and substitute: "AMSTA-AR-FSA-A and AMSTA-AR-QAA-R" Delete: "ARRCOM, Attn: AMSMC-QAD" and substitute: "IOC, ATTN: AMSIO-QA".

PAGE 28

- \* 6.12 Add the following sentence: "TNT riser scrap is defined as clean."
- \* 6.15 Delete: "AMCCOM, Attn: SMCAR-QAR-Q" and substitute: ARDEC, Attn: AMSTA-AR-QAA-R".

PAGE 29

- \* 6.16 Delete in its entirety.
- \* 6.17 Delete in its entirety.

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