DETONATION, SIMULATOR, EXPLOSIVE: M80 SURVEILLANCE FUNCTION TEST

Headquarters, Department of the Army, Washington, D.C. 21 October 1971

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1. Purpose and Scope. This bulletin when used in conjunction with SB 742-1 provides a method for determining the serviceability of the subject item. The bulletin is to be used in the assessment of the serviceability of individual simulators and their containers when the simulators are packed one per container. When more than one simulator is packed per container, this bulletin applies to the individual simulators only. The provisions of this bulletin are mandatory for use by all Department of the Army organizations within CONUS and overseas with a receipt, storage, and issue mission. This bulletin is not intended for use by organizations with stocks in basic loads. Additional information pertaining

to frequency of test, sample selection, defect standards, reports and records, are contained in SB 742-1.

2. Errors, Omissions, and Recommended Changes. Direct reporting of errors, omissions, and recommendations for improving this bulletin is authorized and encouraged. DA Form 2028 (Recommended Changes to Publications) will be completed and forwarded direct to Commanding Officer, U.S. Army Aberdeen Research and Development Center, ATTN: AMXRD-ARW, Aberdeen Proving Ground, Md. 21005.

3. Safety. The surveillance function testing must be conducted in accordance with the provisions set forth in

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appropriate safety regulations and implementing instructions, with special attention devoted to technical manuals describing the item.

5. Sample Selection. Sample simulators will be selected in accordance with the provisions of SB 742-1 with the exception that not more than ten simulators may be selected from any one box.

6. **Preparation for Test.** No special preparation is required.

7. Test Procedure.

a. Functioning test. Fifty simulators will be placed on a suitable support and ignited.

b. Sensitivity test. Ten simulators will be tested by placing each on its side on a solid support and dropping a suitable 5-pound weight from a distance of 2 feet in such a manner that the weight crushes the simulator. The striking surface of the weight will be flat and will be of such proportion that no edge strikes the simulator.

8. Observations. All observations of nonstandard conditions and malfunctions, especially those not included among the defects listed in paragraphs 10 and 11 below, should be described in full detail. Pictorial evidence of nonstandard conditions, whenever pertinent and practical should be included. The observations to be recorded are as follows:

a. Functioning test.

(1) Order of functioning (high order, low order, or dud). A simulator that spits but fails to explode will be considered a dud.

(2) Burning time of fuse (measure with three stopwatches to the nearest tenth of a second). The burning time of the fuse will be measured from the first spit of the fuse to the explosion of the simulator.

b. Sensitivity test. Evidence of exposion of ignition.

c. All instances of any of the following:

(1) Nonstandard marking. State whether misleading, incomplete, or unidentifiable.

(2) The occurrence of any of the nonstandard conditions or malfunctions classified as defects in paragraphs 10 and 11 below.

(3) The occurrence of any nonstandard conditions or malfunctions not classified as defects in paragraphs 10 and 11 below, but which in the opinion of responsible personnel merits consideration.

9. Classification of Defects. Defects observed during inspection and testing will be classified in accordance with paragraphs 10 and 11 below and SB 742-1. Any defects observed which are not listed in paragraphs 10 and 11 will be fully described and reported with the ammunition inspector's recommendation as to classification.

10. Nonfunctioning Defects.

a. Critical. Evidence of spillage of loose powder from contents of the simulator (prior to test).

b. Major. Any opening (cut, puncture, improper sealing, etc.) in assembly.

- c. Minor.
 - (1) Fuse insecure.
 - (2) End cup insecure.
 - (3) Assembly bent or dented.
 - (4) Marking misleading.
 - (5) Marking illegible.

11. Functioning Defects.

a. Critical. Fuse burning time less than 3 seconds.

b. Major—functioning test.

- (1) Dud
- (2) Low order functioning

(3) Fuse burning time is greater than 7 seconds.

c. Major-sensitivity test. Any evidence of explosion or ignition of simulator.

12. Evaluation. Functional and nonfunctional codes will be recommended in accordance with the following criteria and the interim condition code will be assigned in accordance with SB 700-1300-1. A lot will be classified Condition Code J and reported if one critical defect is observed.

a. Nonfunctional Codes.

(1) *Code A.* A lot not classified as Code J shall qualify for Code A if it meets the following requirements on inspection of 60 simulators by attributes:

- (a) Not more than 3 major defectives.
- (b) Not more than 5 minor defectives.

(2) *Code B.* A lot not classified as Code J or Code A shall qualify for Code B if it meets the following requirements on inspection of 60 simulators by attributes:

(a) Not more than 8 major defectives.

(b) Not more than 13 minor defectives.

(3) *Code D.* A lot not classified as Code J, Code A, or Code B shall be Code D.

b. Functional Codes.

(1) *Code A*. A lot not classified as Code J shall qualify for Code A if it meets the following requirements in the test of 60 simulators:

- (a) Not more than 3 major defectives.
- (b) Not more than 5 minor defectives.
- (2) Code B. A lot not classified as Code J

or Code A shall qualify for Code B if it meets the following requirements in the test of 60 simulators:

(a) Not more than 8 major defectives. (b) Not more than 13 minor defectives. (3) *Code D*. A lot not classified as Code J, Code A, or Code B shall be Code D.

13. Records and Reports. Function test results will be recorded and reported as outlined in SB 742-1.

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NG: None

USAR: None

For explanation of abbreviations used, see AR 310-50.

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