

DEPARTMENT OF THE ARMY SUPPLY BULLETIN

FUSEE, WARNING, RAILROAD: RED, 20 MINUTE, M72  
SURVEILLANCE FUNCTION TEST

Headquarters, Department of the Army, Washington, D. C.  
31 August 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 fusees 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 appropriate safety regulations and imple-

menting instructions, with special attention devoted to technical manuals describing the item.

**4. Size of Sample.** The number of fuses required to make up a representative sample from a lot for a surveillance function test is as follows:

For check investigation .....as directed

For classification investigation ..... 60

For confirmation investigation .....as directed

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

**6. Preparation for test.** a. Number the fuses from each carton, 1 through 10 and identify them as to the box from which they were drawn.

b. Sample fuses will be prepared for test in three phases as follows:

(1) Phase I-burning time and burning quality test-dry. Fuses 1 through 10 from cartons No. 1 and No. 2 are to be tested in this phase. No preparation is required.

(2) Phase II-burning time and burning quality test-wet. Fuses 1 through 10 from cartons No. 3 and No. 4 are to be tested in this phase. The cartons (with seals unbroken) will be immersed in water to a depth of 6 to 9 inches for 24 hours.

(3) Phase III-Spontaneous ignition and functioning test. Fuses 1 through 10 from cartons No. 5 and No. 6 are to be tested in this phase. The fuses (which may be removed from cartons) will be exposed continuously to a temperature of 140° + 10°F for 72 hours and then tested as soon as possible.

**7. Test Procedure.** Each fuse will be ignited by removing the bonnet (paper covering) over the cap with the aid of the tear strip, and striking the match head with the striking composition on the outer surface of the cap. The fuse will then be placed in an inclined position in the ground or in a holder and allowed to burn out.

**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. Phase I. Color and intensity of illuminant (chimney, excessive smoke, etc.).

b. Phase II.

(1) Evidence of carton leaking (for information).

(2) All observations of a above.

c. Phase III.

(1) Evidence of spontaneous ignition of fuse.

(2) All observations of a above.

d. All instances of any of the following: (1) Nonstandard marking. State whether mis" leading, 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.**

Minor.

(1) Missing bonnet on cap.

(2) Missing spike.

(3) Spike excessively loose.

(4) Missing tear strip.

(5) Torn tear strip.

(6) Body tube damaged.

(7) Marking misleading.

(8) Marking illegible.

**11. Functioning defects.**

a. Critical. Spontaneous ignition of the fuse (Phase III).

b. Major.

(1) Failure to ignite.

(2) Chimney in such a manner as to materially obscure the flame.

(3) Burning time is less than 15 minutes.

(4) Burning time is more than 28 minutes.

c. Minor.

(1) Burning time is less than 18 but not less than 15 minutes.

(2) Burning time is more than 25 but not more than 28 minutes.

(3) Failure to burn with proper color.

(4) Failure to burn with brilliant flame.

**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 fusees by attributes:"

(a) Not more than 4 major defectives.

(b) Not more than 8 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 fusees by attributes:

(a) Not more than 9 major defectives.

(b) Not more than 17 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 fusees.

(a) Not more than 4 major defectives.

(b) Not more than 8 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 fusees.

(a) Not more than 9 major defectives.

(b) Not more than 17 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.

By Order of the Secretary of the Army:

W. C. WESTMORELAND,  
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Chief of Staff.

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ARNG: None.

USAR: None.

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

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