## DEPARTMENT OF THE ARMY SUPPLY BULLETIN

## **IGNITER, TME BLASTING FUSE: WEATHERPROOF, M60**

## SURVEILLANCE FUNCTION TEST

# Headquarters, Department of the Army, Washington, D.C. 25 February 1972

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**1. Purpose and Scope.** This bulletin when used in conjunction with SB 7421 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 igniters 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 distribution 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 7421.

# 2. Errors, Omissions, and Recommended Changes.

Reporting of errors, omissions and recommendations for improving this bulletin is encouraged. Reports should be submitted on DA Form 2028 (Recommended Changes to Publications) and forwarded to Director, US Army Materiel Systems Analysis Agency, ATTN: AMXSY-RW, 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 implementing instructions, with special attention devoted to technical manuals describing the item.

**4. Size of Sample.** The number of igniters 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	650
For confirmation investigation	as directed

**5. Sample Selection.** Sample igniters will be selected in accordance with the provisions of SB 742-1 with the exception that not more than 10 igniters may be selected from any one box.

#### 6. Preparation For Test.

a. Number the sample igniter 1 through 50 and identify them as to the box from which they were drawn.

b. Partially unscrew the plastic cap on the plug sealed end of the igniter by turning the cap 2 or 3 times.

#### CAUTION

## Do not unscrew the fuse holder cap completely because internal parts may become disarranged.

c. Press the plastic plug into the igniter to re

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lease the collets, then remove the plug by rotating it back and forth as it is being withdrawn.

d. After removal of the storage plug, attach one igniter to each end of a freshly cut 12 inch length of M700 fuse of known good quality. The fuse should be dry and have clean, square cut ends, and should be inserted into the igniter as far as it can go to avoid any sizable air gap between the fuse and the primer.

e. Re-tighten the cap sufficiently to insure waterproofness and proper holding force. Finger tight closures shall be used.

f. Immerse igniters 1 through 24 in water at 700 +  $100F(21.10^{\circ} 5.60C)$  to a depth of 31 + 1 inch for 6.5 + 0.5 hours. APE 1901 should be used for this purpose.

g. Igniters 25 through 50 will receive no treatment prior to testing.

# 7. Test Procedure.

a. Cut the fuse midway between the igniters.

b. Remove the safety pin with the forefinger by pulling on the safety pin cord in the direction of withdrawal of the safety pin. If the safety pin cord breaks or becomes untied, retie it and pull again.

c. Attach a tension recording scale to the pull ring and pull on the scale in the direction of withdrawal-of the pull rod until a tension of 3 pounds is obtained or the striker is released, whichever occurs first. Remove scale.

d. Function the igniter with the forefinger by pulling on the pull ring in the direction of withdrawal of the pull rod, using a quick hand twist after partial withdrawal of the pull rod. If the pull ring pulls apart or separates, attempt to function the igniter by some other means. When an igniter fails to fire the primer on the first attempt, make two additional attempts to fire the primer, resetting the igniter when necessary by pushing the pull rod back into the igniter until stopped by the pull ring.

e. Disassemble fuse end of those igniters which fail to reset for next attempt to fire primer. Inspect for cause of failure and note whether primer is properly seated in the primer holder.

# NOTE

A fixture may be used for holding the igniter, however, the safety pin and the pull rod should be pulled directly by hand, using a glove or finger protector if desired.

**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 reported are any of the following:

a. Nonstandard marking. State whether misleading, incomplete or unidentifiable.

b. Rust or corrosion. Give location and extent.

c. The occurrence of any of the nonstandard conditions or malfunctions classified as defects in paragraphs 10 and 11.

d. The occurrence of any nonstandard conditions or malfunctions not classified as defects in paragraphs 10 and 11, 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 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. Major.
  - (1) Any of the following missing:
    - (a) Primer.
    - (b) Pull ring.
    - (c) Striker.
    - (d) Spring.
    - (e) Any other component which precludes use of the igniter.
  - (2) Major damage to components such as:
    - (a) Primer.
    - (b) Pull ring.
    - (c) Striker.
    - (d) Spring.
    - (e) Any other component which precludes use of the igniter.
  - (3) Major rust.
  - (4) Major corrosion.
- b. Minor.
  - (1) Marking is misleading or unidentifiable.
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(2) Minor rust.

(3) Minor corrosion.

11. Functioning Defects.

a. Critical. Striker is released and the primer fires when 3 pounds or less tension is applied to the pull rod.b. Major.

(1) Striker is released, but the primer does not fire when 3 pounds or less tension is applied.

(2) Safety fuse cannot be fully inserted into the fuse holder due to defective fuse holder assembly.

(3) Pull ring is pulled apart or separates from pull rod prior to release of striker.

(4) Striker is not released.

(5) Striker is released but primer fails to fire after 3 attempts

(6) Primer fires but fuse is not ignited.

(7) Safety fuse blows out of fuse holder.

(8) Igniter fails to reset to permit an additional attempt at firing the primer.

c. Minor. Primer is not fired on first attempt but is fired on second or third attempt.

**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 700-13001. 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 50 igniters by attributes.

(a) Not more than 4 major defectives.

(b) Not more than 7 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 50 igniters 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 50 ignitiers.

(a) Not more than 4 major defectives.

(b) Not more than 7 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 50 igniters.

(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 7421.

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By Order of the Secretary of the Army:

Official:

VERNE L. BOWERS, Major General, United States Army, The Adjutant General.

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> NG: None USAR: None For explanation of abbreviations used, see AR 310-50

W. C. WESTMORELAND, General, United States Army, Chief of Staff.

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