

DEPARTMENT OF THE ARMY SUPPLY BULLETIN

GRENADA, RIFLE: SMOKE, COLORED,  
M22 SERIES  
SURVEILLANCE FUNCTION TEST

Headquarters, Department of the Army, Washington, D. C.  
19 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 rifle grenades 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 742-1.

**2. Errors, Omissions and Recommended Changes.** Reporting of errors, omissions, and recommendations for improving this bulletin by the individual user is encouraged. Reports should be submitted on DA Form 2028 (Recommended Changes to Publications) and forwarded direct to Director, U. S. Army Materiel Systems Analysis Agency, ATTN: AMXSU-RMWM, 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 rifle grenades

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..... 50
- For confirmation investigation ..... as directed

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

**6. Preparation for Test.** Number the rifle grenades 1 through 50 and identify them as to the box from which they were drawn.

**7. Test Procedure.**

a. Rifle grenades will be projected from a rifle grenade launcher of the M7 series attached to the muzzle of a service rifle using caliber .30 grenade cartridge M3. The rifle should be mounted on Holding Device APE 1902 to fire the grenades at 45 degrees elevation. Rifle grenades will not be fired when the wind velocity exceeds 15 mph. Rifle grenades with cracked, bent, or otherwise distorted bodies or stabilizer assemblies will not be fired but will be reported by type of defect as outlined in paragraph 10.

b. Cartridges packed with corresponding rifle grenades will be used in these tests unless their use is precluded because they are not standard for the

rifle being used, in which case, other rifle grenade cartridges that are standard for the rifle being used may be substituted. If substitute cartridges are used, the code for the lot will not apply to the cartridges packed with the rifle grenades.

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

a. Time (to the nearest tenth of a second) from ground impact to the beginning of smoke emission.

b. Smoke emission time to the nearest tenth of a second.

c. Description of smoke cloud.

d. Flight characteristics.

e. Range, to the nearest five yards.

f. All instances of any of the following:

(1) In nonstandard marking state whether misleading, incomplete or unidentifiable.

(2) Where rust or corrosion appears give location and extent.

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

(4) 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. *Critical.*

(1) Safety band assembly missing.

(2) Safety band assembly damaged to an extent that the rifle grenade is unsafe for storage or use.

(3) Propellant spills from the rifle grenade cartridge. Indicate cause of spillage such as:

(a) Missing wad.

(b) No lacquer on wad.

(c) Damaged wad.

(d) Any other cause. Specify.

b. *Major.*

(1) Body plug missing.

(2) Major damage to components such as:

(a) Body plug, i.e., damage to an extent

that smoke composition can escape.

(b) Head.

(c) Stabilizer tube.

(d) Fin assembly.

(e) Any other component. Specify.

(3) Major rust.

(4) Major corrosion.

(5) Rifle grenade cannot be removed from outer container even by means of hand tools such as pliers.

c. *Minor.*

(1) Marking misleading or unidentifiable.

(2) Tape over smoke port holes missing.

(3) Minor rust.

(4) Minor corrosion.

#### **11. Functioning Defects.**

a. *Critical.*

(1) Rifle grenade bursts on launcher.

(2) Color of smoke is incorrect.

b. *Major.*

(1) Stabilizer tube ruptures upon firing.

(2) Misfire.

(3) Hangfire.

(4) Rifle grenade fails to ignite.

(5) Rifle grenade emits smoke during flight.

(6) Time from ground impact to beginning of smoke emission is greater than 20 seconds.

(7) Smoke emission time is less than 20 seconds.

(8) Range is less than 120 yards.

c. *Minor.*

(1) Smoke color is not clearly distinguishable.\*

(2) Time from ground impact to beginning of smoke emission is greater than 15 seconds but not greater than 20 seconds.

(3) Smoke emission time is less than 30 seconds but not less than 20 seconds.

(4) Range is less than 160 yards but not less than 120 yards.

**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 50 rifle grenades by attributes:

(a) Not more than 2 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 rifle grenades by attributes:

\*Not clearly distinguishable is defined as smoke of the correct color but not of sufficient volume, rendering it nondistinguishable as to color when viewed against a background of contrasting color from a distance of 3.000 feet on a clear day.

(a) Not more than 7 major defectives.

(b) Not more than 12 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 rifle grenades:

(a) Not more than 2 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 rifle grenades:

(a) Not more than 7 major defectives.

(b) Not more than 12 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:

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VERNE L. BOWERS,  
*Major General, United States Army,  
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NG: None

USAR: None

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

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