Change in Force: C1

SB 742-1310-94-459
Change 1

DEPARTMENT OF THE ARMY SUPPLY BULLETIN

CARTRIDGE, 40MM: PARACHUTE, WHITE STAR, M583, M583A1; GREEN STAR, M661 AND RED STAR, M662 AMMUNITION SURVEILLANCE PROCEDURES

Headquarters, Department of the Army, Washington, DC
30 June 1988

SB 742-1310-94-459, 19 January 1981, is **changed** as follows:

Page 3, add paragraph 13b(l 1) Cartridge fails to changer in launcher (BE029).

By Order of the Secretary of the Army:

CARL E. VUONO
General, United States Army
Chief of Staff

Official:

R. L. DILWORTH
Brigadier General, United States .4rmy
The Adjutant General

DISTRIBUTION:

To be distributed In accordance with DA Form 12-34, requirements for Ammunition Surveillance Procedure Cartridges, 40M*(STAR).*

U.S. Government Printing Office: 1988-201-422: 80011

DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

CARTRIDGE, 40-MM: PARACHUTE, WHITE STAR, M583, M583A1; GREEN STAR, M661; AND RED STAR, M662 AMMUNITION SURVEILLANCE PROCEDURE

Headquarters, Department of the Army, Washington, D. C.
19 January 1981

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 function testing in this procedure will be accomplished under a centralized control program managed by the Armament Materiel Readiness Command (ARRCOM), DRSAR-QAS, Rock Island, IL 61299. The bulletin is to be used in the assessment of the serviceability of individual signal cartridges only. The provisions of this bulletin are mandatory for use by all Department of the Army organizations within CONUS and OCONUS with an ammunition 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. 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 to Commander, ARRCOM, ATTN: DRSAR-QAS, Rock Island, IL 61299.

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 de- voted to technical manuals describing the item.

4. Personnel. Function testing will be conducted under the supervision of a Quality Assurance Specialist (Ammunition Surveillance) herein after referred to as QASAS.

5. **Size of sample.** The number of cartridges 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 .40
For confirmation investigation . as directed

6. Sample selection. Sample cartridges will be selected in accordance with the provisions of SB

This bulletin supersedes SB 742-1310-94-459,22 April 1977

742-1 with the exception that not more than five cartridges may be selected *from* any one box.

7. Surveillance test equipment. The following equipment is to be used in testing 40rnm pyrotechnic signal cartridges in accordance with the procedures described herein.

a. Ammunition *Peculiar Equipment (APE).*

APE 1902M1 Device, Holding, Function Test
APE 1908 Measuring Device, Altitude and Drift
APE 1912 Thermometer, Cup Cased
APE 1914 Anemometer
APE 1915 Wind Speed Indicator
APE 1916 Oven, Preconditioning
APE 1920 Shield, Operational
APE 1937 Shelter, Personnel Protection
APE 1938 Chamber, Low Temperature

b. Additional Test Equipment (ATE).

NS 1010-00-691-1382 Launcher, Grenade: 40mm, M79

8. Preparation for test. a. Number the cartridges 1 through 40 and identify them as to the box from which they were drawn.

b. Temperature condition cartridges 1 through 5 for 24 hours at 71.1° +5.60C (160° + 10F) immediately prior to firing.

c. Temperature condition cartridges 6 through 35 for 24 hours at 21.1° $^{+}$ 5.60C (70' + 10-F) immediately prior to firing.

d(. Temperature condition cartridges 36 through 40 for 24 hours at -53.9° + 5.60 C (-65° + 10°F) immediately prior to firing.

9. Test Procedure. After temperature conditioning, fire each cartridge from an M79 Grenade Launcher emplaced on an approved mount at 90 degrees quadrant elevation within three minutes from removal from the temperature chamber. All cartridges conditioned at a given temperature will be fired on the same occasion. Cartridges will not be fired when the wind velocity exceeds 15 mph; during electrical, rain, or snow storms; or during any other conditions that might make the observations inaccurate.

10. Observations. All observations of nonstandard conditions and malfunctions, especially those not included among the defects listed in paragraphs 12 and 13 below, should be described in full detail. Pictorial evidence of non-standard conditions, whenever pertinent and practical, should be included. The observations to be reported are as follows:

a. Altitude of functioning, to the nearest foot. This is the ignition altitude and it is measured from
the point of launch to the point (identified by a puff of smoke) where the parachute and star assembly eject from the projectile body.

b. Delay time in parachute opening, to the nearest tenth of a second. This is the time from the point (identified by a puff of smoke) where the parachute and star assembly eject from the projectile body to the point where the parachute opens or malfunctions.

c. Buring time of the signal in air, to the nearest tenth of a second. This is the time during which the illuminant of the star is burning with good volume, easily visible, and the color is easily distinguishable.

d. All instances of any of the following:

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

(2) Rust or corrosion; give location and extent.

(3) The occurrence of any nonstandard conditions or malfunctions not classified as defects in paragraphs 12 and 13 below, but which in the opinion of responsible personnel merits consideration.

11. Classification of defects. Defects observed during inspection and testing will be classified in accordance with paragraphs 12 and 13 below and SB 742-1. Any defects observed which are not listed in paragraphs 12 and 13 will be fully described and reported with the recommendations of the QASAS as to classification.

12. Nonfunctioning defects. *a. Ciritico1l.*

(1) Incorrect ogive
(2) Marking incorrect as *to* type **or** color of signal
(3) Marking unidentifiable

b. Major.

(1) Missing component of the cartridge
(2) Major damage to any component
(3) Major rust
(4) Major corrosion

c. Minor.

(1) Marking is illegible but is not misleading as to type of cartridge.
(2) Minor rust
(3) Minor corrosion

13. Functioning *defects. a. Critical.*

(1) Projectile bursts in the launcher.
(2) Projectile bursts within 50 feet of the launcher.
(3) Signal element is ejected from the projectile within 50 feet of the launcher.*
(4) Projectile assembly sticks in the launcher.

b. Major.

(1) Projectile projects less than 50 feet from the Launcher but fails to ignite.
(2) Projectile bursts at a distance of 50 feet or more from the launcher.

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*Signal element ejection upon ground impact due to fuse failure after normal flight will not be considered a critical defect

(3) Altitude of star ignition is less than 350 feet but not less than 50 feet.

(4) Signal element is not expelled.

(5) Star fails to ignite.

(6) Star color is not clearly distinguishable.

(7) Star breaks up.

(8) Parachute delay in opening time is greater than 8 seconds.

(9) Star burning time is less than 25 seconds.

(10) Parachute malfunctions* and star burning time in air is less than 25 seconds.

C. Minor.

(1) Cartridge case is not ejected from the launcher.

(2) Star burning time is less than 30 seconds but is not less than 25 seconds.

(3) Parachute malfunctions* and star burning time in air is less than 30 seconds but is not less than 25 seconds.

(4) Parachute delay in opening time is greater than five seconds but is less than or equal to eight seconds.

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

a. No-fictional 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 40 cartridges by attributes:

(a) Not more than two major defectives.

(b) Not more than three 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 40 cartridges by attributes:

(a) Not more than five major defectives.

(b) Not more than eight 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 40 cartridges.

(a) Not more than one major defective.

(b) Not more than three 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 40 cartridges.

(a) Not more than four major defectives.

(b) Not more than eight minor defectives.

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

15. 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:

E. C. MEYER
General, United States Army
Chief of staff

Official:

J. C. PENNINGTON
Major General, United States Army
The Adjutant General

Distribution:

To be distributed in accordance with DA Form 12-34, Requirements for Storage of Supplies and Equipment.

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*Specify type of parachute malfunction, such as, parachute fails to open, opens only partially, separates from signal element, delays opening, etc.

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DA FORM 1 JUL 79 2028-2

PREVIOUS EDITIONS ▸ ARE OBSOLETE.

P.S.—IF YOUR OUTFIT WANTS TO KNOW ABOUT YOUR RECOMMENDATION MAKE A CARBON COPY OF THIS AND GIVE IT TO YOUR HEADQUARTERS.

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