DEPARTMENT OF THE ARMY SUPPLY BULLETIN

SIGNAL, ILLUMINATION, GROUND: PARACHUTE, RED STAR, M126 SERIES; WHITE STAR, M127 SERIES; GREEN STAR, M195 AMMUNITION SURVEILLANCE PROCEDURE

Headquarters, Department of the Army, Washington, DC
20 March 1981

1. Purpose and Scope. This bulletin when used in conjunction with SB 742-1, provides a method for determining the serviceability of the following items:

Nomenclature	*DODAC*
Signal, Illumination, Ground: Parachute, Red Star, M126 Series	1370-L311
Signal, Illumination, Ground: Parachute, White Star, M127 Series	1370-L312
Signal, Illumination, Ground: Parachute, Green Star, M195	1370-L305

The function testing in this procedure will be accomplished under a centralized control program managed by the US Army 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 signals and their containers when the signals are packed one per container. When more than one signal is packed per container, this bulletin applies to the individual signal 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 recom mendations for improving this bulletin is authorized and encouraged. DA Form 2028 (Recommended Changes to Publications and Blank Forms) 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

*This bulletin supersedes SB 742-1370-31, 6 October 1971.

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

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

5. Size of Sample. Unless otherwise directed, a sample of 60 signals is required to make up a representative sample from a lot for a surveillance function test.

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

7. Surveillance Test Equipment. The following Ammunition Peculiar Equipment (APE) is to be used in testing rocket propelled and fin stabilized signals in accordance with the procedures described herein.

APE 1901 Tank, Immersion
APE 1902 M1 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 1918 E0001 Device, Holding, Hand Signal
APE 1937 Shelter, Personnel Protection
APE 1938 Chamber, Low Temperature

8. Preparation for Test.

a. Number the signals 1 through 60 and identify them as to the box from which they were drawn.

b. Immerse the 60 signals (without removing them from the metal containers) in water at 21.1°+5.60C (70° + 10°F) for 15 to 20 minutes. Position the containers horizontally 6 to 9 inches below the water surface. APE 1901 should be used for this purpose. Wipe the containers dry and temperature condition as indicated below.

c. Temperature condition containers 1 through 20 for 24 hours at 71.1° + 5.6°C (160° + 10°F).

d. Temperature condition containers 21 through 40 for 24 hours at 21.1° + 5.60C (70° + 100F).

e. Temperature condition containers 41 through 60 for 24 hours at -53.9°0 5.60C (-65°+ 10°F).

9. Test Procedure. Launch the signals vertically from a suitable fixture as soon as possible after temperature conditioning. Holding device for hand signals APE 1918 EOOO1 mounted on APE 1902 M1 should be used for this purpose. Signals will not be fired when the wind velocity exceed 15 mph, during an electrical, rain, or snow storm, or during any other weather 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 nonstandard conditions, whenever pertinent and practical, should be included. The observations to be reported are as follows:

a. Functioning altitude (point at which the first trace of light is observed) to the nearest foot. APE 1908 should be used for this purpose.

b. Angle from the vertical (angle between a vertical line from the point of launch and a line from the point of launch to the point of functioning) to the nearest degree.

c. Burning time (to the nearest tenth of a second) of star in air. Time during which illuminant is of good volume, easily visible, and with color 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 of the nonstandard conditions or malfunctions classified as defects in paragraphs 12 and 13 below.

(4) 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. Critical. Primer above flush.

b. Major.

(1) Any of the following components missing:
(a) Key
(b) Label containing instructions
(c) Primer

(2) Major damage to components such as:
(a) Key
(b) Sealed container
(c) Rocket barrel
(d) Firing cap assembly
(e) Any other component. Specify.

(3) Major rust

(4) Major corrosion

(5) Signal cannot be removed from container even with hand tools.

(6) Primer is not sealed.

c. Minor.

(1) Marking misleading or unidentifiable.

(2) Evidence of moisture inside sealed container.

(3) Removal of signal from container requires use of hand tools, such as pliers.

(4) Tear strip breaks or terminates, preventing the removal of the signal from its container.

(5) Minor rust.

(6) Minor corrosion.

13. Functioning Defects.

a. Critical.

(1) Premature burst.

(a) Signal bursts in launcher.

(b) Signal bursts within 100 feet of launcher.

(c) Star ejects at an altitude of less than 100 feet above the ground within a horizontal distance of 250 feet of the launcher.

(d) Star ejects at an altitude of less than 50 feet above the ground at a horizontal distance greater than 250 feet from the launcher.

(2) Incorrect color of star.

b. Major.

(1) Signal fails to project.

(2) Signal projects less than 100 feet from the launcher but fails to ignite.

(3) Signal bursts at a distance of 100 feet or more from the launcher.

(4) Star ejects at an altitude of less than 300 feet but not less than 100 feet above the launcher.

(5) Altitude of first trace of light is less than 500 feet.

(6) Angle of departure from the vertical is greater than 30 degrees.

(7) Star is not expelled.

(8) Star fails to ignite.

(9) Star burning time in air is less than Time "A" of Table 1 below.

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

c. Minor.

(1) Primer ruptures.

(2) Star ejects at an altitude of less than 500 feet but not less than 300 feet above the launcher.

(3) Altitude of first trace of light is less than 600 feet but not less than 500 feet.

(4) Star burning time in air is less than Time "B" but not less than Time "A" of Table 1 below.

(5) Parachute malfunctions* and star burning time in air is less than 20 seconds but not less than 10 seconds.

Table 1

	Illuminant Burning Time in Seconds	
Signal	A	B
M126 Series Red Star	45	50
M127 Series White Star	20	25
M195 Green Star	45	50

14. Evaluation. Functional codes and nonfunctional characteristics will be recommended in accordance with the following criteria. Based on the functional code and the nonfunctional characteristic, an interim condition code will be assigned in accordance with SB 742-1. A lot will be classified as Condition Code J and reported in accordance with B 742-1 if one or more critical defects are observed.

a. Nonfunctional Characteristics.

(1)Serviceable. A lot not classified as Condition Code J shall qualify as serviceable if it meets the following requirements on inspection of 60 signals by attributes:

(a) Not more than 3 major defectives.

(b) Not more than 5 minor defectives.

(2) *Priority of issue.* A lot not classified as Condition Code J or serviceable shall qualify for Priority of Issue if it meets the following requirements on inspection of 60 signals by attributes.

(a) Not more than 8 major defectives.

(b) Not more than 13 minor defectives.

(3) *Unserviceable.* A lot not classified as Condition Code J, serviceable or priority of issue shall be classified as unserviceable.

b. Functional Codes.

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

(a) Not more than 3 major defectives.

(b) Not more than 5 minor defectives.

(2) *Code B.* A lot not classified as Condition Code J or Functional Code A shall qualify for Functional Code B if it meets the following requirements in the test of 60 signals.

(a) Not more than 8 major defectives.

(b) Not more than 13 minor defectives.

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

15. Records and Reports. Function test results will be recorded and reported on DA Form 984 as outlined in SB 742-1.

*Specify type of parachute malfunction, such as: separation from etc

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 12-34B, requirements for Ammunition, Handling, Transportation and Storage.

U.S. GOVERNMENT PRINTING OFFICE: 193- 342-421161847

TEAR ALONG PERFORATED LINE

RECOMMENDED CHANGES TO EQUIPMENT TECHNICAL PUBLICATIONS

SOMETHING WRONG WITH THIS PUBLICATION?

FROM: (PRINT YOUR UNIT'S COMPLETE ADDRESS)

DATE SENT

PUBLICATION NUMBER	PUBLICATION DATE	PUBLICATION TITLE

BE EXACT. . .PIN-POINT WHERE IT IS

PAGE NO.	PARA-GRAPH	FIGURE NO	TABLE NO.

IN THIS SPACE TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT:

PRINTED NAME, GRADE OR TITLE, AND TELEPHONE NUMBER	SIGN HERE:

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.

PIN : 048350-000