

DEPARTMENT OF THE ARMY SUPPLY BULLETIN

STARTER, FIRE, NP3, M2
STORAGE SERVICEABILITY STANDARD

Headquarters, Department of the Army, Washington, D.C.
20 August 1971

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1. Purpose and Scope. *a. Purpose.* This bulletin when used in conjunction with SB 3-30 and SB 742-1 provides the method for determining the serviceability of Starter Fire, NP3, M2.

b. Scope. The provisions of this bulletin are mandatory for use in conducting surveillance on the Starter, Fire, NP3, M2. This bulletin is not intended for use by organizations with stocks in basic loads.

2. Applicable Documents. The following Government documents referenced herein forms a part of this bulletin to the extent specified.

- MIL-S-13175 - Starter, Fire, NP3, M2.
- SB 3-30 - Serviceability Standard for CB Materiel.
- SB 742-1 - Ammunition Surveillance and Quality Evaluation Procedures.
- TM 38-750 - The Army Maintenance Management System.
- TM 9-1300-206 - Care, Handling, Preservation, and Destruction of Ammunition.

TM 9-1370-200 - Military Pyrotechnics.

3. Safety Provisions. *a. General.* Refer to SB 3-30, TM 9-1370-200, TM 9-1300-206 and local Standing Operating Procedures.

4. Surveillance. *a. Surveillance Interval.*

(1) *Initial receipt and prestorage inspection.*

Initial receipt and prestorage inspection will be conducted in accordance with SB 3-30 and SB 742-1.

(2) *Periodic cycle.* Surveillance will be performed at periodic cycles of one year. The first scheduled surveillance will be conducted within six months from the date of receipt at the depot.

(3) *Pressure inspection.* Pressure inspection of the subject item will be performed in accordance with SB 3-30 and the provisions of paragraphs 5 and 6 of this bulletin when one half or less of the periodic

cycle remains. A visual examination will be performed (in accordance with paragraph 5 of this bulletin) on the subject item if more than one half of the periodic cycle remains prior to shipment of the item. If no initial cycle examination has been performed, a complete examination as specified in paragraphs 5 and 6 of this bulletin will be performed prior to shipment.

b. Basis of Surveillance. Surveillance for the subject item will be conducted on the basis of Grand Lots, Manufacturers Lots and Miscellaneous Lots.

c. Surveillance Lots.

(1) *Grand lot.* A grand lot is created by grouping all lots from one manufacturer into one large single lot for the purpose of economy in surveillance.

(a) *Kind, type and model.* All lots must be of the same kind, type, and model; i.e., Starter, Fire, NP3, M2.

(b) *Manufacturer.* All lots must be the product of the same manufacturer or reconditioning agency.

(c) *Time of fabrication.* All lots must have been manufactured, fabricated or reconditioned within a period of twelve months.

(d) *Packing.* All lots must have the same type packing, and identification markings.

(e) *Storage.* All lots must be stored under similar conditions at the same depot.

(f) *Serviceability lot status.* All lots must possess the same serviceability lot status, i.e., serviceability known (based upon prior surveillance) or serviceability unknown. However, when new procurement is involved, serviceability will be based upon acceptance inspection in lieu of prior surveillance.

(2) *Manufacturer's lot.* A manufacturer's lot consists of those items manufactured or assembled by one manufacturing or reconditioning activity and bearing the same manufacturing or reconditioning agency's lot identification number. Where lot number is in accordance with MIL-STD-118 (i.e. an interfix number is used to control design changes and manufacturing procedures), the manufacturer's lot shall be restricted to items having the same interfix number.

(a) *Packing.* See 4c(1)(d).

(b) *Storage.* See 4c(1)(e).

(c) *Serviceability lot status.* See 4c(1)(f).

(3) *Miscellaneous lot.* A miscellaneous lot containing not more than 500 items, may be created by combining small manufacturer's lot or lot fragments possessing the same technical history, i.e., manufactured by the same technical procedure (indicated by the same lot series number).

(a) *Kind, type and model.* See 4c(1)(a).

(b) *Manufacturer.* See 4c(1)(b).

(c) *Time of fabrication.* See 4c(1)(c).

(d) *Packing.* See 4c(1)(d).

(e) *Storage.* See 4c(1)(e).

(f) *Serviceability lot status.* See 4c(1)(f).

d. Sampling. Sampling will be conducted as follows:

(1) *Boxes.* A sample quantity of boxes will be randomly selected as indicated in table I and a visual examination will be performed for packaging, packing, marking and preservation as specified in SB 742-1.

(2) *End Item.* A sample quantity of fire starters will be randomly selected as indicated in table I and subjected to a visual examination in accordance with Table II and SB 742-1. In addition, the sample will be subjected to the test(s) specified in section 6.

Table I. Sampling Plan

| Lot size | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|-----------------|----|---|----|----|-----|----|----|----|---|
| Up to 359 | 9 | 0 | 2 | - | 9 | 0 | 2 | 9 | 0 |
| 36 to 200 | 14 | 0 | 3 | 9 | 23 | 1 | 5 | 14 | 0 |
| 201 to 1200 | 19 | 0 | 4 | 20 | 39 | 2 | 9 | 14 | 0 |
| 1201 to 3500 | 31 | 1 | 7 | 27 | 58 | 3 | 13 | 14 | 0 |
| 3501 to 22,000 | 47 | 2 | 11 | 46 | 3 | 93 | 5 | 22 | 0 |
| 22,001 and over | 70 | 3 | 16 | 74 | 144 | 8 | 35 | 14 | 0 |

Explanation of columns and symbols

1 First sample size - visual.

2 Acceptance number - major defective (defects) (first sample).

3 Acceptance number - minor defective (defects) (first sample).

4 Second sample size - visual

5 Combined sample size - visual.

6 Acceptance number - major defective (defects) (combined samples).

7 Acceptance number - minor defective (defects) (combined samples).

8 Sample size - Function test

9 Acceptance number - Function test

(3) *Second sample size.* When the number of major defectives exceeds the quantity specified in column 2, but does not exceed the quantity specified in column 6, a second sample equal in size to that specified in column 4, will be taken, and the acceptance number specified in column 6 will be used for acceptance. A second sample is not taken for a minor defective.

(4) *Combined sample size.* When the surveillance interval has been exceeded by 25-percent, or when the approximate date of the last inspection is unknown, the combined sample plan specified in columns 4, 5, and 7 will be used. The combined sample plan may also be used when additional assurance of quality is desired, e.g., after rework of an item where component quality is unknown.

(5) *Visual examination.* Only a visual examination of packing for a new or reprocessed unit upon receipt at a depot storage area is required. If used units are received unprocessed at a storage area, a complete visual and functional examination shall be performed in accordance with the instructions contained in this bulletin when reprocessing and repacking.

5. Inspection. *a. Visual examination.* The sample will be examined for defects listed in 5b.

b. Classification of defects. Refer to table II for classification of defects. Defects other than those listed in this table or SB 742-1 will be reported. Serviceability will be withheld pending investigation by Commanding Officer, Edgewood Arsenal, Quality Assurance Directorate, Engineering Division, Specifications Branch to determine proper defect category into which the unlisted defect belongs.

Table II. Fire Starter, NP3, M2

| Categories | Defect | Inspection methods |
|------------------|--|--------------------|
| <i>Critical:</i> | None defined | |
| <i>Major:</i> | | |
| 101 | Body damaged to an extent that incendiary leakage is observed at seams of partitions | Visual |
| 102 | Fails to burn completely | 6 |
| 103 | Scratch wire broken | Visual |
| <i>Minor:</i> | | |
| 201 | Scratch wire breaks during functioning | 6 |

Note.

For desert not included in this table (e.g., corrosion, illegible marking, etc.) see SB 742-1. These defects will be included in the inspection, however the Sampling Plan (table I) and accept/reject criteria in this SB will be used to evaluate the serviceability of the item.

6. Functional Tests. *a. Requirements.* The burning will continue until all but the metal parts are consumed.

b. Procedure. Immerse the fire starter to a minimum depth of 6 inches from the surface, in water maintained

at $75 \pm 5^\circ \text{ F.}$ ($24 \pm 3^\circ \text{ C.}$) for a period of 20 + 5 minutes. The starter will be conditioned at a temperature not less than that of the water. At the end of the immersion period, remove starter from the water and dry. Within 1 hour of the immersion test, ignite by piercing red top of starter case with end of handle and pulling wire straight out of side of igniter with a steady, energetic pull. When piercing the red top of the fire starter with the end of the handle, bend the wire near the mid-length to avoid unnecessary flexing of the wire at the point where it enters the body. Keep fingers clear of red area and point fire starter away from the body.

7. Documentation. *a. Report forms.* When reporting data, the following forms will be used:

DA Form 984 - Materiel Serviceability Report.

DA Form 985 - Data Sheet for Grand Lots, Miscellaneous Lots or Depot Lots.

DA Form 2415 - Ammunition Condition Report.

b. Reporting.

(1) *Data.* When reporting data, forms specified in 7a and 7b will be prepared in accordance with instructions contained in SB 3-30, SB 742-1 and TM 38-750.

(2) *Submission.* Reports required by this document will be submitted as follows:

(a) Original and one copy to the Commanding Officer, Edgewood Arsenal, ATTN: SMUEAQAER, Edgewood Arsenal, MD 21010.

(b) One copy to the Commanding General, US Army Ammunition Procurement and Supply Agency, ATTN: SMUAP-QA-LM, Joliet, IL 60436.

8. Special Instructions. *Errors or omissions.*

Comments regarding errors or omissions will be forwarded on DA Form 2028 to Commanding Officer, Edgewood Arsenal, ATTN: SMUEA-QAES-B, Edgewood Arsenal, MD 21010.

By Order of the Secretary of the Army:

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

Official:

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

Distribution:

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USAMUCOM (25)
USACDCEC (10)
CONARC (25)
OS Maj. Comd (10)
LOGCOMD (2)
MDW (1)
Armies (2)
Corps (2)

Div. (5)
Bde (2)
Regt/gp/bat gp (2)
Bn(1)
Instl (2)
PMS Sr. Div. Units (1)
Gen. Dep. (5)
Dep. (5)
Army Dep. (5)
Arsenals (2) except
Edgewood (75)
PG (5)
USAAPSA (60)

ARNG: State AG(3); Div. (1).

USAR. None.

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

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The Metric System and Equivalents

Linear Measure

1 centimeter = 10 millimeters = .39 inch
 1 decimeter = 10 centimeters = 3.94 inches
 1 meter = 10 decimeters = 39.37 inches
 1 dekameter = 10 meters = 32.8 feet
 1 hectometer = 10 dekameters = 328.08 feet
 1 kilometer = 10 hectometers = 3,280.8 feet

Weights

1 centigram = 10 milligrams = .15 grain
 1 decigram = 10 centigrams = 1.54 grains
 1 gram = 10 decigrams = .035 ounce
 1 decagram = 10 grams = .35 ounce
 1 hectogram = 10 decagrams = 3.52 ounces
 1 kilogram = 10 hectograms = 2.2 pounds
 1 quintal = 100 kilograms = 220.46 pounds
 1 metric ton = 10 quintals = 1.1 short tons

Liquid Measure

1 centiliter = 10 milliliters = .34 fl. ounce
 1 deciliter = 10 centiliters = 3.38 fl. ounces
 1 liter = 10 deciliters = 33.81 fl. ounces
 1 dekaliter = 10 liters = 2.64 gallons
 1 hectoliter = 10 dekaliters = 26.42 gallons
 1 kiloliter = 10 hectoliters = 264.18 gallons

Square Measure

1 sq. centimeter = 100 sq. millimeters = .155 sq. inch
 1 sq. decimeter = 100 sq. centimeters = 15.5 sq. inches
 1 sq. meter (centare) = 100 sq. decimeters = 10.76 sq. feet
 1 sq. dekameter (are) = 100 sq. meters = 1,076.4 sq. feet
 1 sq. hectometer (hectare) = 100 sq. dekameters = 2.47 acres
 1 sq. kilometer = 100 sq. hectometers = .386 sq. mile

Cubic Measure

1 cu. centimeter = 1000 cu. millimeters = .06 cu. inch
 1 cu. decimeter = 1000 cu. centimeters = 61.02 cu. inches
 1 cu. meter = 1000 cu. decimeters = 35.31 cu. feet

Approximate Conversion Factors

| <i>To change</i> | <i>To</i> | <i>Multiply by</i> | <i>To change</i> | <i>To</i> | <i>Multiply by</i> |
|------------------|--------------------|--------------------|--------------------|---------------|--------------------|
| inches | centimeters | 2.540 | ounce-inches | Newton-meters | .007062 |
| feet | meters | .305 | centimeters | inches | .394 |
| yards | meters | .914 | meters | feet | 3.280 |
| miles | kilometers | 1.609 | meters | yards | 1.094 |
| square inches | square centimeters | 6.451 | kilometers | miles | .621 |
| square feet | square meters | .093 | square centimeters | square inches | .155 |
| square yards | square meters | .836 | square meters | square feet | 10.764 |
| square miles | square kilometers | 2.590 | square meters | square yards | 1.196 |
| acres | square hectometers | .405 | square kilometers | square miles | .386 |
| cubic feet | cubic meters | .028 | square hectometers | acres | 2.471 |
| cubic yards | cubic meters | .765 | cubic meters | cubic feet | 35.315 |
| fluid ounces | milliliters | 29.573 | cubic meters | cubic yards | 1.308 |
| pints | liters | .473 | milliliters | fluid ounces | .034 |
| quarts | liters | .946 | liters | pints | 2.113 |
| gallons | liters | 3.785 | liters | quarts | 1.057 |
| ounces | grams | 28.349 | liters | gallons | .264 |
| pounds | kilograms | .454 | grams | ounces | .035 |
| short tons | metric tons | .907 | kilograms | pounds | 2.205 |
| pound-feet | Newton-meters | 1.356 | metric tons | short tons | 1.102 |
| pound-inches | Newton-meters | .11296 | | | |

Temperature (Exact)

| | | | | |
|----|------------------------|----------------------------|---------------------|----|
| °F | Fahrenheit temperature | 5/9 (after subtracting 32) | Celsius temperature | °C |
|----|------------------------|----------------------------|---------------------|----|

