

DEPARTMENT OF THE ARMY SUPPLY BULLETIN

STORAGE SERVICEABILITY STANDARDS
FOR ARRCOM MATERIEL

GENERAL STANDARD
FOR
UNCOMPLICATED PRINCIPAL ITEMS,
SECONDARY ITEMS,
SPARE AND REPAIR PARTS,
COMMON HARDWARE, AND
COMMON PIECE PARTS

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 WASHINGTON, DC, 3 February 1983

**STORAGE SERVICEABILITY STANDARDS FOR ARRCOM MATERIEL
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 SECONDARY ITEMS SPARE AND REPAIR PARTS,
 COMMON HARDWARE, AND COMMON PIECE PARTS**

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SECTION I

INTRODUCTION

1-1. Purpose. This bulletin provides storage serviceability standards for use in determining the materiel readiness status of stocks in the custody of supply and storage activities.

1-2. Scope. This bulletin applies to General Standard for Uncomplicated Principal Items, Secondary Items, Spare and Repair Parts, Common Hardware, and Command Piece Parts under the responsibility of the US Army Armament Materiel Readiness Command (ARRCOM).

1-3. Definitions.

a. Definitions for the majority of specialized terms used may be found in MIL-STD- 109.

b. Alphabetically, definitions for other specialized terms are as follows:

(1) Codes. Numbers and letters used for brevity.

(a) *Inspection frequency code (IFC).* A numeric code to tell how often inspection of materiel in storage is to be performed. The numeric codes and definitions are listed in paragraph 2-6e.

(b) *Quality defect code.* A numeric code assigned to indicate the category of a given defect and to identify, by explanation, that particular defect. The coding system and definitions are enumerated in paragraph 2-6a.

(c) *Shelf-life code (SLC).* A code assigned to a shelf-life item. The code identifies a period of time that starts with the date of manufacture or assembly and ends when the item must be issued or be subjected to inspection, test, restoration, or to disposal action (AR 700-89). The codes and associated times are listed in paragraph 2-6d.

(d) *Test required code (TRC).* A three-digit numeric-alpha code that is used in appendix A to indicate that only a simple examination is required (QUALITY DEFECT CODES) or to cross-reference additional inspection requirements. The code meanings are in paragraph 2-6f.

(2) *Corrosion, metals.* See paragraph 2-6a(3Xj). *Stage I (Defect Code 90).* Discoloration or staining with no direct visual evidence of pitting, etching, or other surface damage.

Stage II (Defect Code 91). Red, brown, green, black, or white corrosion product accompanied by minor etching

or minor surface pitting.

Stage III (Defect Code 92). Red, brown, green, black, or white corrosion product with or without etching, pitting, or more extensive surface deterioration resulting in a loose or granular condition.

Stage IV (Defect Code 93). Red, brown, green, black, or white corrosion progressed to the point where fit, wear, function, or life of the item has been affected. Powdered or scaly condition with pits or irregular areas of material removed from the *surface* of the item.

(3) *Cure date.* The date the item was manufactured or cured. The cure date is usually indicated by the applicable quarter of year digit, the letter Q, and is terminated with the last two digits of the applicable year. For purposes of cure dating, each year is divided into quarters as follows: First Quarter: *January*, February, and March; Second Quarter: April, May, and June; Third Quarter: July, August, and September; Fourth Quarter: October, November, and December.

(4) *Deterioration.* A change in an item's characteristics caused by an environment that adversely affects its ability to function as intended. See paragraph 2-6a(3Xj).

(a) *Deterioration, polymeric plastic items.* Molded organic compounds: celluloid, bakelite, lucite, vinyl, rubber, etc.

Stage I (Defect Code 94A). Fungus damage, color change, or distortion.

Stage II (Defect Code 94B). Sticky surface, craze cracks, dissolved paint, or small cracks.

Stage III (Defect Code 94C). Liquefied material, large cracks, crumbled (brittle), or fractured (broken) to an extent where fit, function, or life has been affected.

(b) *Deterioration, polymeric non-plastic items.* Non-molded organic components: cloth, leather, hair, fur, felt, paper, cork, cardboard, wood, etc.

Stage I (Defect Code 95A). Mold, fungus, damage, or color change.

Stage II (Defect Code 95B). Shredding, warping, shrinkage, distortion, embrittlement, small separations (cracks or tears), or slight swelling.

Stage III (Defect Code 95C). Gross swelling, soggy, large cracks, rot, insect infestation, brittle disintegration, or large or complete separations to an extent where fit, function, or life has been affected.

(c) *Deterioration, Inorganic Vitreous Items.* Glass, ceramic, solid carbon, etc.

Stage I (Defect Code 96A). Small cracks or crazed (crackled surface).

Stage H (Defect Code 96B). Spalling (chipped) or fractured (broken, major cracks, or splits) to an extent where fit, function, or life has been affected.

(5) *Inspection (types of).*

(a) *Cyclical inspection (CI).* Surveillance of materiel in storage performed on a regular basis. In this bulletin, the cycle is established in appendix A by the Inspection Frequency Code (IFC-see para 2-6e). The purpose is to determine the serviceability status of items at the end of each cycle.

(b) *Initial receipt inspection (IR).* An inspection

performed on newly manufactured materiel received directly from a vendor, manufacturer, or government activity. The purpose is to determine if the items, the packing, or the preservation have been damaged in transit and whether the packaging, marking, and preservation are correct. This inspection is not intended as an acceptance-type inspection.

(c) *Pre-Issue inspection (PI).* The inspections and tests on materiel immediately preceding issue.

(d) *Prestorage inspection (PS).* An inspection performed on materiel received from other depots, posts, camps, stations, or overseas returns received within CONUS. The purpose is to determine the receipt condition and the current degree of serviceability of the items when serviceability status is unknown.

(e) *Special inspection (SI).* An inspection performed at the direction of higher headquarters or as deemed necessary to satisfy local installation requirements.

(f) *Unit basis inspection.* An inspection where each unit in the lot is inspected for the defect characteristic under consideration. The unit basis method is also used for serially-numbered major end items that are considered separately for surveillance purposes.

(6) *Occurrence basis.* An inspection, without a predetermined time frame, that is performed as the

need occurs, e.g., initial receipt inspection (IR) is performed when the shipment arrives.

(7) *Serviceable.* The condition of an item that has been determined by inspection to be satisfactory and safe for its intended use.

(8) *Shelf-life item.* An item of supply possessing deteriorative or unstable characteristics to the degree that a storage time period must be assigned to assure that it will perform satisfactorily in service. There are two types of shelf-life items:

(a) *Type I shelf-life item.* An item of supply which is determined, through an evaluation of technical test data or actual experience, to be an item with a definite non-extendable shelf life.

(b) *Type II shelf-life item.* An item of supply having an assigned shelf life, where the shelf life may be extended after the completion of a prescribed inspection, a test, or a restorative action.

(9) *Storage serviceability standards (SSS).* Technical documents containing inspection instructions and criteria essential to determine serviceability of materiel in storage.

(10) *Unserviceable.* The condition of an item that has been determined by inspection to be unsatisfactory or unsafe for its intended use.

1-4. General. An Army objective is to attain and maintain a constant materiel readiness status of supplies and equipment in depot stocks. The scope of this objective is of such magnitude that only general guidelines are provided by TM 743-200-1 for the quality evaluation of materiel in the custody of supply and storage activities. This bulletin supplements TM 743-200-1 by providing systematic procedures for storage inspection of materiel and indicates the limited degree of deterioration and damage acceptable. It also establishes the basis for identifying material requiring segregation, remedial care and preservation, or classification action. Applicable requirements of the standard may be used for performing receipt and preshipment inspection.

SECTION II

STORAGE AND SPECIAL INSTRUCTIONS

2-1. Packaging Degrees of Protection. Packaging protection (AR 700-15) shall be to the degree referenced in the Packaging Segment of the Army Master Data File (AMDF) (AR 708-1).

2-2. Marking. Marking shall be by MIL-STD-129 or MIL-STD-1188.

2-3. Storage.

a. *Type.* The type of storage for items listed in appendix A shall be by SB 740-1 or the Packaging Segment of the AMDF.

b. *Shelf life.* The shelf life for each item is provided as coded data (SLC) in appendix A. The assigned shelf life is based on the principle that the item is packaged and stored in conformance with the requirements of this bulletin.

c. *Age Control.* The items covered by this bulletin will generally be maintained within the shelf-life period through the application of the first-in-first-out (FIFO) principle of stock rotation.

2-4. Formation of Lots. The selection of representative samples for storage serviceability evaluation is based on the homogeneity of the lot. Subject to the need for lot homogeneity, lots should be as large as possible. Lots will consist of manufacturer's lots, grand lots, or mixed lots.

a. *Manufacturer's Lots.* Use the manufacturer's lot, batch, cure date, or control number whenever possible in the selection of samples. This shall include lots of sizable quantities in original packs.

b. *Grand Lots.*

(1) The grouping together of several lots of one manufacturer can effect an increase of lot size and, thereby, decrease the amount of inspection performed per unit in the stockpile. However, the following conditions must be met by these lots before material can be considered for grouping into a grand lot.

(a) Identical stock number, class, type, or model.

(b) Same manufacturer.

(c) Same period of manufacture, cure date, or warranty.

(d) Comparable storage history.

(e) Identical packaging.

(f) No known significant difference in quality.

(2) A grand lot may be formed when the complete analysis of all available data, including the conditions noted above, and the technical judgment of the quality control and reliability management teams

indicate sufficient similarity of all significant characteristics. The formation of a grand lot at a depot is primarily a paper transaction and does not require any rewarehousing or reworking of materiel. Where such grand lots are formed and sampled for surveillance, include in reports of results a complete description of the grand lot composition in each case. If the samples drawn from the grand lot indicate dissimilarity of the individual lots making up the grand lot, the lot shall then be terminated and manufacturer's lot sampling substituted.

(3) Should the grand lot exceed the allowable acceptance number, the inspection shall stop and the lot reformed into manufacturer's lot and inspected.

c. *Mixed Lot.* The mixed lot is formed of one or more lots whose identification by manufacturer or lot number has been lost, and its relationship to other lots cannot be determined. An example of this is depot roll-back or repacks or represerved material. Several mixed lots may be grouped into grand lots if they are from one manufacturer and the inspection data indicates that these mixed lots are similar in their significant characteristics.

2-5. Inspection.

a. *Frequency.* The inspection frequency (IFC) for items listed in appendix A are in accord with AR 740-1. The inspection frequencies for given types of storage and given packaging levels of protection (AR 700-15) are contained in appendix B.

NOTE

When the shelf-life code (SLC) in the AMDF is different than shown in appendix A, the SLC in the AMDF shall be used.

b. *Sampling Plan Determination.* Sample using the plan given in appendix A, IL and AQL, for MIL-STD-105D.

c. *Sample Selection.* Select samples of materiel in a manner that will insure that each unit in the lot has an equal chance of being selected. Do not use biased methods, such as selecting items from the same position in the container, pallet, or stack, taking all items from one location, or selecting items because they appear non-defective or defective. If each position or location in a container, pallet, stack, or warehouse is assigned its own unique number, a table of random numbers, such as that in Department of Defense Handbook H53, can be used to select the sample units to be inspected. This procedure will insure that each unit in

the lot will have the same chance of being selected as any other unit.

d. Inspection Methods.

(1) For those lots provided Level A or Level B military packaging protection, inspect each item in the sample selected for damaged or deteriorated packaging.

(a) In the event packaging of an item is determined not to be damaged or deteriorated, do not remove the packaging. Further inspection of the item is not required and the item shall be accepted.

(b) In the event packaging of an item is determined to be damaged or deteriorated, inspect the item for the defects coded in appendix A or specified in any applicable quality assurance inspection instruction.

(2) For those lots provided industrial packaging protection, inspect each item in the sample selected for the defects coded in appendix A or specified in any applicable quality assurance inspection instruction.

e. Defect Classification. Defects are classified by severity (critical, major, or minor). See MIL-STD-105D for definitions. Quality defect codes are defined in paragraph 2-6a. Specific codes pertaining to each stock numbered item are cited in appendix A.

2-6. Coded Standards. The following is an explanation by heading of the codes used in appendix A.

a. Quality Defect Code. The codes, based on the definitions given in appendix A of DARCOM-R 702-7, are given as three digit numbers. The first digit identifies the severity of the defect by category. The second digit identifies one of the named general groups. The third digit identifies the actual defect within one of the general groups.

Example: Using the meanings and explanations given below, Code 113 indicates; 1-major, 1-packaging group, and 3-container damaged or deteriorated. The codes in appendix A require inspection of an item for the actual defect identified. Unusual circumstances, such as storage conditions, temperature, or humidity, may cause other deficiencies not tabulated in appendix A. Report any other defects observed but not contained in the tabulation using the following coding system.

(1) Severity (first digit).

<i>Quality Defect Code</i>	<i>Category</i>
0	Critical
1	Major
2	Minor

(2) General groups (second digit)

Quality Defect

<i>Code</i>	<i>Name</i>
0	Cleaning, preservation, painting, plating, or other processing.
1	Packaging.
2	Packing and loading.
3	Marking and labeling.
4	Materiel deficiencies.
5	Materiel deficiencies (continued).
6	Functional certification or performance test
7	Document recording or routing deficiencies.
8	Storage deficiencies.
9	Miscellaneous.

(3) General groups and defects (second and third digits).

(a) Group 0 (cleaning, preservation, painting, plating, or other processing).

<i>Quality Defect Code</i>	<i>Explanation</i>
0	Appearance (paint runs, overspray, not uniform, or not meeting standard).
0 1	Cleaning improper or inadequate.
0 2	Preservation improper or inadequate.
0 3	Wrapping improper or inadequate.
0 4	Protection afforded not compatible with mode of shipment, type of storage, destination, or other environment.
0 5	Inadequate coverage or improper thickness.
0 6	Improper and inadequate preparation.
0 7	Wrong type, method, or color.
0 8	Drying improper or inadequate.
0 9	Reserved for future use.

(b) Group 1 (packaging).

<i>Quality Defect Code</i>	<i>Explanation</i>
10	No packaging applied.
11	Sealing defective (bags or containers).
12	Failed pressure retention, leak, or other test.
13	Container damaged or deteriorated.
14	Protection not compatible with mode of shipment, type of shipment, destination, or other environment.
15	Wrong level applied.
16	Containers or other packaging materials do not meet specifications (e.g., size, type, class, or style).
17	Wrong quantity per unit package. (Chargeable as one defect per unit pack. Major defect, if shortage-minor defect, if overage.)
18	Reserved for future use.
19	Reserved for future use.

(c) Group 2 (packing and loading).

<i>Quality Defect Code</i>	<i>Explanation</i>
20	Improper loading, blocking, bracing, tiedown, etc.
21	Stapling, nailing, strapping, or banding improper or inadequate.

<i>Quality Defect Code</i>	<i>Explanation</i>
22	Excessive weight or cube for containers.
23	Containers, boxes, crates, or pallets damaged or deteriorated.
24	Intermediate or exterior container protection not compatible with mode of shipment, type of storage, destination, or other environment.
25	Wrong level applied.
26	Containers, boxes, crates, or pallets do not meet specifications.
27	Wrong quantity per intermediate or exterior container. (Chargeable as one defect per container. Major defect, if shortage-minor defect, if overage.)
28	Reserved for future use.
29	Reserved for future use.

(d) Group 3 (marking and labeling).

<i>Quality Defect Code</i>	<i>Explanation</i>
30	Preservation, and packing (PIP) level markings omitted, illegible, or incorrect.
31	Labels omitted, illegible, or incorrect.
32	Special markings omitted, illegible, or incorrect.
33	Description or identification marking omitted, illegible, or incorrect (e.g., stock number, quantity, unit of issue, contract data, or condition code).
34	Address marking omitted, illegible, or incorrect.
35	Markings improperly located or wrong method of marking used.
36	Reserved for future use.
37	Reserved for future use.
38	Reserved for future use.
39	Reserved for future use.

(e) Group 4 (materiel deficiencies).

<i>Quality Defect Code</i>	<i>Explanation</i>
40	Parts, components, or controls loose, improperly installed or assembled, out of adjustment, do not fit, or fail to function properly.
41	Damaged or defective item or parts (bent, broken, scratched, chipped, marred, cracked, warped, torn, stripped, crimped, burned, twisted, burned out, perforated, or pitted).
42	Does not meet specified tolerances or requirements (dimensional, finish, strength, torque, output, volume, color, stretch, size, illumination, or weight).
43	Parts or components missing.
44	Wrong part or component found installed on end item or other assembly, or used to make up set or kit.
45	Leak (liquid): gasoline, diesel, oil, water, etc.
46	Leak (vapor): air or gas (nitrogen, oxygen, hydrogen, etc.).
47	Modification work order incomplete, improperly applied, or missing.
48	Soldering, welding, brazing, metallizing, or bonding defect.
49	Reserved for future use.

(f) Group 5 (materiel deficiencies-continued).

<i>Quality Defect Code</i>	<i>Explanation</i>
50	Contamination (contains dirt, sludge, moisture, or other foreign matter).
51	Excessive moisture, fungus, mildew, rot, infestation, or weather cracks.
52	Item improperly classified.
53	Test or research required to determine true condition classification (assign code J or code K, per AR 725-50). (Chargeable as one minor defect per line item.)
54	Materiel marking missing or incorrect (e.g., serial number, data plate, piece mark, or cure date). (Chargeable as minor defect if correct item shipped and major defect if wrong item shipped.)
55	Shelf-life date exceeded.
56	Wrong item received or selected for shipment.
57	Lubrication improper or incomplete.
58	Improper identification.
59	Other.

(g) Group 6 (functional, certification, or performance test).

<i>Quality Defect Code</i>	<i>Explanation</i>
60	Required test not accomplished.
61	Failed test requirements (hydraulic).
62	Failed test requirements (electrical or electronic).
63	Failed test requirements (environmental).
64	Failed test requirements (mechanical).
65	Failed test requirements (pressure).
66	Failed certification or laboratory test.
67	Excessive heat or noise during operational test.
68	Parts or components damaged (caused by functional failure during end item or component test).
69	Reserved for future use.

(h) Group 7 (document, recording, or routing deficiencies).

<i>Quality Defect Code</i>	<i>Explanation</i>
70	Wrong count (shortage). (Chargeable as one major defect per line item if value of quantity short is \$200 or more and minor defect if less than \$200.)
71	Wrong count (overage). (Chargeable as one major defect per line item if value of quantity over is \$200 or more and minor defect if less than \$200.)
72	Improper routing or process planning. (Chargeable as one minor defect per line item.)
73	Mixed materiel (two or more stock numbers recorded under the same stock number). (Chargeable as one minor defect per line item.)
74	Historical records, including The Army Maintenance Management System, TM 38-750, missing, incorrect, or incomplete.
75	Contract, specifications, receiving reports, or other required documents incorrect, incomplete, not available, or changes not with the contract. (Chargeable as one minor defect per line item.)

<i>Quality Defect Code</i>	<i>Explanation</i>
76	Contract specifications or other required documents inadequate for inspection or acceptance purposes. (Chargeable as one minor defect per line item.)
77	Materiel not segregated (serviceable and unserviceable items intermingled). (Chargeable as one major defect per line item.)
78	Stock selection deficiency [first-in/first-out (FI-FO)]. (Chargeable as one minor defect per line item.)
79	Reserved for future use. (i) Group 8 (storage deficiencies).

<i>Quality Defect Code</i>	<i>Explanation</i>
80	Improper or inadequate stacking or storing. (Chargeable as one minor defect per line item.)
81	Facility deficiencies: roof leaking, grid markings incorrect, equipment deficiencies, etc. (Chargeable as one minor defect per line item.)
82	Improper pallet count or quantities in location-inventory defects. (Chargeable as one minor defect per line item.)
83	Improper marking or placarding. (Chargeable as one minor defect per line item.)
84	Materiel mislocated. (Chargeable as one major defect per line item.)
85	Handling deficiencies (storage). (Chargeable as one minor defect per line item.)
86	Improper storage space. (Chargeable as one major defect per line item.)
87	Reserved for future use.
88	Reserved for future use.
89	Reserved for future use. (j) Group 9 (miscellaneous).

<i>Quality Defect Code</i>	<i>Explanation</i>
	[see paras 1-3b(2) and (4)]
90	Corrosion, metals, stage I.
91	Corrosion, metals, stage II.
92	Corrosion, metals, stage m.
93	Corrosion, metals, stage IV.
*94	Deterioration, polymeric plastic items (celluloid, bake-lite, lucite, vinyl, rubber, etc.).
*94A	Deterioration, stage I.
*94B	Deterioration, stage H.
*94C	Deterioration, stage m. (Chargeable as three major defects per line item.)
*95	Deterioration, polymeric non-plastic items (cloth, leather, hair, fur, felt, paper, cork, cardboard, wood, etc.).
*95A	Deterioration, stage I.
*95B	Deterioration, stage II.
*95C	Deterioration, stage III. (Chargeable as three major defects per line item.)
*96	Deterioration, inorganic vitreous items (glass, ceramic, solid carbon, etc.).
*96A	Deterioration, stage I.
*96B	Deterioration, stage II. (Chargeable as three major defects per line item.)
97	Reserved for future use.
98	Reserved for future use.
99	Reserved for future use.

***Note.** These defect codes relate to the deterioration defined in para 1-3b(4), Definitions. They are required for evaluation of ARRCOM materiel using this supply bulletin. Since the codes are not included in DARCOM-R 702-7, they need not be used for reporting under ADP systems, i.e., SPEDEX.

b. *Inspection Level (L).* Inspection levels have been selected from MIL-STD-105D to provide the smallest possible sample size consistent with quality requirements. Inspection level codes are as follows:

<i>General Levels</i>	<i>Special Levels</i>
G1 (I in MIL-STD-105D)	S1
G2 (II in MIL-STD- 105D)	S2
G3 (III in MIL-STD-105D)	S3
---	S4

c. *Acceptable Quality Level (AQL).* Acceptable quality levels have been selected from MIL-STD-105D to give that level of sampling protection required to provide serviceable equipment to users. Separate AQL's are provided for major and minor defects.

d. *Shelf-Life Codes (SLC).* The codes shown in appendix A were assigned by the developers of the item. Shelf-life codes for Type I and Type II shelf-life items are defined by AR 700-89.

<i>Shelf-life period</i>	<i>Type I</i>	<i>Type II</i>
Nondeteriorative	0	0
1 month	A	-
2 months	B	-
3 months	C	1
4 months	D	-
5 months	E	-
6 months	F	2
9 months	G	3
12 months	H	4
15 months	J	-
18 months	K	5
21 months	L	-
24 months	M	6
27 months	N	-
30 months	P	-
36 months	Q	7
48 months	R	8
60 months	S	9

NOTE

Military essential and medical items with a shelf life of greater than 60 months (5 years) shall be assigned shelf-life code X.

e. *Inspection Frequency Codes (IFC).* A numeric code assigned to indicate the frequency of cyclical inspection during storage. These codes are as follows:

<i>Code</i>	<i>Frequency (months)</i>
1	6
2	12
3	24
4	30
5	60

f. *Test Required Codes (TRC).*

(1) Except for the letter codes given below, the first character (numeric) will indicate a hardware related item. The second and third characters (alpha)

will identify a specific inspection requirements. At this time no special TRC's are used in this bulletin.

(2) Some noncomplicated items require only a simple examination. To cover those items not requiring more detailed examination, the following codes apply:

<i>Inspection</i>	<i>TRC Code</i>
Dimensional	OOD
Functional	OOF
Hardness	OOH
Laboratory	OOL
Nondestructive	OON
Pressure	OOP
Tensile	OOT
Visual	OOV
Weight	OOW

g. Preservation or Packing Codes (PC). An alpha code that represents the minimum degree of packaging protection required based on the prescribed storage conditions. The codes are as follows:

<i>Code</i>	<i>Degree of Packaging Protection</i>
A	Maximum military
B	Intermediate military protection
X	Industrial

h. Type Storage Codes (TSC). An alpha or numeric code assigned to an item to indicate the recommended type of storage. These codes are defined by DAR- COM-R 702-23.

<i>Code</i>	<i>Explanation</i>
A	Heated warehouse space (general purpose).
B	Unheated warehouse space (general purpose).
C	Controlled humidity warehouse space.
E	Chill space.
Q	Hazardous commodity space (non-Class V items; e.g., acids, compressed gasses, or radioactive).
U	Open space (materiel may be stored in open storage).
Y	Storage space for ammunition items (Class V), covered by specific regulations elsewhere.
Z	A storage environment identified by one of the codes is not mandatory. See AR 740-1 for guidance and guide lines.

2-7. Other Instructions. *a. Rejected Lots.* Each rejected lot shall be classified to identify the degree of serviceability, condition, and completeness in terms of readiness (AR 725-50). Follow the provisions of AR 740-3 for reporting rejected materiel to the National Inventory Control Point (NICP).

b. Condition Coding. Based on evaluation, lots or items shall be assigned appropriate condition codes as explained in AR 725-50. Condition codes shall be entered in Part I, Block 21b and 21c [see para 2-8a(1) Part I (v) and (w)] of DA Form 984.

c. Repackaging of Samples Inspected. Restore pack- aging of samples inspected and accepted to the level of the lot from which samples were drawn.

d. Marking of Inspected Materiel. Use materiel condition tags or labels to identify and control items found unserviceable for issue.

e. Shelf-Life Items. Classify Type II items that have exceeded their assigned shelf-life period to Condition Code J and report such to the NICP for disposition and possible extension.

2-8. Reports and Reporting. Report inspections and tests made using this bulletin to the commands designated in the following subparagraphs. Report on the designated forms.

a. Forms.

(1) *Munitions Surveillance Report (DA Form 984).* Use this form to record and report the results of all examinations and tests when conducting prestorage inspection, initial receipt inspection, cyclical inspection, or pre-issue inspection.

NOTE

This form may also be used for special inspection when so directed by higher headquarters.

FORM INSTRUCTIONS

Part I: Descriptive Data of Ammunition Represented By Sample.

(a) *Block 1.* Enter the actual storage location, which may not necessarily be the depot or storage activity having accountability.

(b) *Block 2.* Enter the local report number.

(c) *Block 3.* Enter the date of the report.

(d) *Block 4.* Enter the complete standard nomenclature and model number of the item.

(e) *Block 5.* Record the complete manufacturer's lot number. When surveillance is authorized on the basis of a depot lot, miscellaneous lot, or grand lot, enter the lot number applicable to the type of lot, and complete DA Form 985 (Data-Sheet for Grand Lots, Miscellaneous Lots, or Depot Lots) using the instructions in paragraph 2-8a(2).

(f) *Block 6.* Describe the packing of items in narrative form.

(g) *Block 7.* Enter the National Stock Number (NSN) of the item.

(h) *Block 8.* Enter the current and past type of storage, e.g., heated warehouse, unheated warehouse, shed, or open.

(i) *Block 9.* Record the number of samples selected for examination and test.

(j) *Block 10.* Record the number of items (minus the sample size if the samples cannot be returned to the lot) remaining in the lot at the depot.

(k) *Block 11.* Self-explanatory.

(l) *Block 12.* Self-explanatory.

(m) *Block 13.* Enter the date and type of the last inspection, e.g., Prestorage, 10 July 1981.

(n) *Block 14.* Enter the type of inspection and the date that this current inspection or test is performed, e.g., Cyclical, 1 July 1982.

(o) *Block 15.* Record the manufacturer or reconditioning agency and the date of manufacture. When more than one manufacturer is represented because of the nature of the lot enter N.A.

(p) *Block 16.* Self-explanatory.

(q) *Block 17.* Self-explanatory.

(r) *Block 18.* Record the condition of the preservation, packing, packaging, and marking.

(s) *Block 19.* State whether the lot passed or failed the visual inspection requirements of this bulletin. Record all observed defects or defectives, as applicable, by category, quality defect code, and number of defects or defectives. Use the category and quality defect codes given in appendix A and paragraph 2-6a.

(t) *Block 20.* Note any observation relevant to the condition of an item or to the actual inspection in this block. Examples of such observations are: different storage conditions of lot segments, unlisted defects, inspection equipment not available or calibration interval exceeded, and severity of defects listed in block 19. Include a brief lot history when possible.

(u) *Block 21a.* Self-explanatory.

(v) *Block 21b.* Based on the results of visual examination (Part 1, Block 19) enter the condition code (see para 2-7b).

(w) *Block 21c.* Based on the test results (Part II, Block 13) enter the condition code (see para 2-7b).

(x) *Block 22.* Self-explanatory.

Part II: Results of Surveillance Test.

(a) *Block 1.* Self-explanatory.

(b) *Blocks 2, 2a, and 2b.* Enter bulletin number, revision, or change, and the date of supply bulletin, revision, or change. When applicable, enter the letter of authority or directive for any performed special surveillance not in accord with this bulletin.

(c) *Blocks 3, 4, 5, and 6.* Enter the meteorological conditions at the test area if they are relevant to the test. Otherwise enter N.A.

(d) *Blocks 7 and 8.* Consecutively number the outer packages from which the samples were selected, and the individual samples, starting with "1". Record these numbers in blocks 7 and 8.

(e) *Blocks 9a and 9b.* Enter the type and model of the component or item in the header of each column and enter the lot number of each sample on the appropriate line.

(f) *Block 10.* In the heading of each column, describe the test characteristic to be tabulated. Indicate attribute deficiencies with "x" at the intersection of the individual sample number and the test characteristic, or enter the actual test result.

(g) *Blocks 11 and 12.* In the space above blocks 11 and 12 indicate whether the evaluation is based on "defects" or "defectives" by crossing out the one that does not apply. Enter an "x" at the intersection

of the applicable defective column sample number when deficiencies have been noted in block 10 and evaluation is based on defectives. Enter the total number of defects observed for each sample in the appropriate columns when the evaluation is based on defects.

(h) *Block 13.* State whether the lot passed or failed the test requirements established in the applicable appendix. Enter any additional information that might have had an affect on test results. Enter any recommendations on lot disposal, e.g., screen or renovate.

(i) *Block 14.* Self-explanatory.

(j) *Block 15.* Not applicable. (2) *Data sheet for Grand Lots, Miscellaneous Lots, or Depot Lots, (DA Form 985, 1 July 1953).* This form shall be used by the depot or storage activity to record the formation of these lots.

FORM INSTRUCTIONS

(a) *Block 1.* Enter the complete standard nomenclature and model number of the item. Enter the National Stock Number (NSN).

(b) *Block 2.* Enter the depot or storage activity where the items composing the lot are stored.

(c) *Block 3.* Enter the type of storage.

(d) *Block 4.* State the previous serviceability of each lot composing the grand lot, miscellaneous lot, or depot lot.

(e) *Block 5.* Enter the method of packing and preservation,

(f) *Block 6.* Not applicable.

(g) *Column a.* Enter the manufacturer or manufacturers of the individual lots forming the grand lot, miscellaneous lot, or depot lot.

(h) *Column b.* Enter the manufacturer's lot number for each of the individual lots.

(i) *Column c.* Enter the date of manufacture of each lot.

(j) *Column d.* Enter the lot size for the individual lots listed in column b. Total the column values and enter the sum in the total block at the foot of the column.

(k) *Column e.* Record the number of samples selected for test from each lot listed in column b. Total the column values and enter the sum in the total block at the foot of the column.

(l) *Column f.* Record the number of samples selected for visual examination from each lot listed in column b. Total the column values and enter the sum in the total block at the foot of the column.

(m) *Columns g, h, and i.* Not applicable.

(n) *Remarks.* Enter any pertinent information regarding formation of the lot or sampling procedure.

(o) *Supplementing serviceability report number.* The report number entered here shall correspond with the entered on DA Form 984.

(p) *Other blocks.* Self-explanatory.

(3) *Quality Deficiency Report (QDR) (SF 368).* Submit this form when initial receipt inspection re-

veals unsatisfactory new materiel from a manufacturer or unsatisfactorily renovated, repaired, or modified materiel from a contractor. Prepare and distribute SF 368 as specified in AR 702-7.

(4) *Critical defects report.* When a critical defect is found, report it immediately to the Commander, US Army Armament Materiel Readiness Command, ATTN: DRSAR-QAE, Rock Island, IL 61299. Report the incident via teletype or telephone and follow the initial report with a DA Form 984 giving complete information concerning the extent of, and the circumstances pertaining to, the critical defect.

b. Errors in Reports.

(1) Only errors that affect the serviceability status of the materiel evaluated need be corrected. Make corrections by replacing those specific pages affected by the error with "Corrected Copies."

(2) The inspection activity that initiated the erroneous report shall prepare and distribute the corrected pages required by (1) above. Each such page

shall be marked "Corrected Co V." Denote the corrected entries by encircling them.

c. Classified Data. Unless specifically authorized by the US Army Armament Research and Development Command, Security Office, place no classified information on the materiel serviceability reports. Use special codes as much as possible in preparing the documents when materiel or information is classified. If classified information is required place it on a separate sheet, not the materiel serviceability report form. Properly mark this sheet and transmit it by authorized means according to its degree of classification. Attention is directed to AR 380-5 which states that unnecessary classification or higher than necessary classification is to be avoided.

d. Submission of Reports. With the exception of reports used for "Special Inspection", submit an original and two copies of all reports required by this bulletin to the Commander, US Army Armament Materiel Readiness Command, ATTN: DRSAR-QAE, Rock Island, IL 61299.

2-9. References. The following publications are applicable to this bulletin.

AR 380-5	Information Security Program Regulation
AR 700-15	Packaging of Materiel
AR 700-89	Identification, Control, and Utilization of Shelf-Life Items
AR 702-7	Reporting of Product Deficiencies Across Component Lines
AR 708-1	Cataloging and Supply Management Data
AR 725-50	Requisitioning, Receipt, and Issue System
AR 740-1	Storage and Supply Activity Operations
AR 740-3	Care of Supplies in Storage (COSIS)
DARCOM-R 702-7	Depot Quality Assurance System
DARCOM-R 702-23	Storage Serviceability Standards
Handbook H53	Quality and Reliability Assurance Guide for Sampling Inspection
MIL-STD- 105D	Sampling Procedures and Tables for Inspection by Attributes
MIL-STD-109	Quality Assurance Terms and Definitions
MIL-STD- 129	Marking for Shipment and Storage
MIL-STD-1188	Commercial Packaging of Supplies and Equipment
SB 740-1	Storage and Supply Activities; Covered and Open Storage
TM 38-750	The Army Maintenance Management System (TAMMS)
TM 743-200-1	Storage and Materiel Handling

**APPENDIX A
CODED STANDARDS**

CODED STANDARDS

Line	National Stock number	Item name	Quality Defect code	IL	AQL		SLC	IFC	TRC	PC	TSC
					Maj	Min					
1	AS ASSIGNED (ALL ITEMS)	PACKAGING	102 111 113 123 133	S3	6.5	10	0	-	OOV	--	--
2	AS ASSIGNED (ALL ITEMS)	METALIC AND NONMETALIC ITEMS	140 141 143 144 150	S3	6.5	10	0	-	OOV	--	--
3	AS ASSIGNED (FERRIC AND NONFERRIC METALIC ITEMS)	STEEL, CAST IRON, ALUMINUM, BRASS, COPPER MAGNESIUM, ETC ITEMS	150 190 191 192 193	S3	6.5	10	0	-	OOV	--	--
4	AS ASSIGNED (POLYMERIC PLASTIC ITEMS)	CELLULOID, BAKELITE, LUCITE, VINYL, RUBBER ETC, ITEMS	150 294A 194B 194C	S3	6.5	10	0	-	OOV	--	--
5	AS ASSIGNED (POLYMERIC NON-PLASTIC ITEMS)	CLOTH, LEATHER, HAIR FUR, FELT, PAPER, CORK, CARDBOARD, WOOD, ETC ITEMS	150 295A 195B 195C	S3	6.5	10	0	-	OOV	--	--
6	AS ASSIGNED (INORGANIC VITREOUS ITEMS)	GLASS, CERAMIC, SOLID CARBON ETC ITEMS	150 196A 196B	S3	6.5	10	0	-	OOV	--	--

APPENDIX B

INSPECTION FREQUENCY

B-1. Purpose. The purpose of this special instruction is to provide the storage inspection frequency for each item covered by this supply bulletin.

B-2. Instruction. a. The inspection frequency for given storage environments and given packaging levels of protection is shown in table B-1. The packaging degrees of protection and the storage environments cited in the table are required to set the inspection frequency.

b. Abbreviations used on the table are as follows:

IFC-Inspection Frequency Code

PC-Packaging Code

TSC-Type Storage Code

c. Codes used in the tables are defined in paragraph 2-6, of this bulletin.

d. An example of the use of the table follows:

(1) *Given.* A quantity of a stock numbered item selected for inspection has been provided Level B, minimum military packaging protection, and is stored in unheated warehouse space.

(2) *Problem.* Determine the inspection frequency.

(3) *Solution.*

(a) Refer to table B-1.

(b) The level of protection has been given as Level B. This is shown on the table as PC B (Packaging Code B).

(c) The storage environment has been given as unheated warehouse. From paragraph 2-6 of this bulletin, it is determined that the unheated warehouse storage environment is designated B. This is shown on the table as TSC B (Type Storage Code B).

(d) The intersection of the storage environment line TSC B, and the level of packaging protection column PC B, is at IFC 4.

(e) IFC 4 indicates that the stock numbered item, stored and packaged as indicated above, should be inspected every 30 months.

*Table B-1. Inspection Frequency
Level of Packaging Protection*

	PCA (Max Mil)	PCB (Intermed Mil)	PCX (Ind)
TSC C (Controlled Humidity)	IFC 5 (60 Months)	IFC 5 (60 Months)	IFC 5 (60 Months)
TSC A (Heated Warehouse)	IFC 5 (60 Months)	IFC 5 (60 Months)	IFC 4 (30 Months)
TSC B (Unheated Warehouse)	IFC 4 (30 Months)	IFC 4 (30 Months)	IFC 3 (24 Months)
TSC G (Shed Non-Warehouse)	IFC 3 (24 Months)	IFC 3 (24 Months)	Not Applicable

Inspection Frequency

By Order of the Secretary of the Army:

Official:

ROBERT M. JOYCE
Major *General, United States Army*
The Adjutant General

E. C. MEYER
General, *United States Army*
Chief of Staff

Distribution:

To be distributed in accordance with DA Form 12-34, requirements for SB 740: Storage Serviceability Standards.

RECOMMENDED CHANGES TO EQUIPMENT TECHNICAL PUBLICATIONS



THEN... JOT DOWN THE DOPE ABOUT IT ON THIS FORM, CAREFULLY TEAR IT OUT, FOLD IT AND DROP IT IN THE MAIL!

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:

TEAR ALONG PERFORATED LINE

PRINTED NAME, GRADE OR TITLE, AND TELEPHONE NUMBER

SIGN HERE:

DA FORM 2028-2
1 JUL 79

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.

THE METRIC SYSTEM AND EQUIVALENTS

WEIGHT MEASURE

1 Centimeter = 10 Millimeters = 0.01 Meters = 0.3937 Inches
 1 Meter = 100 Centimeters = 1000 Millimeters = 39.37 Inches
 1 Kilometer = 1000 Meters = 0.621 Miles

WEIGHTS

1 Gram = 0.001 Kilograms = 1000 Milligrams = 0.035 Ounces
 1 Kilogram = 1000 Grams = 2.2 lb.
 1 Metric Ton = 1000 Kilograms = 1 Megagram = 1.1 Short Tons

LIQUID MEASURE

1 Milliliter = 0.001 Liters = 0.0338 Fluid Ounces
 1 Liter = 1000 Milliliters = 33.82 Fluid Ounces

SQUARE MEASURE

1 Sq. Centimeter = 100 Sq. Millimeters = 0.155 Sq. Inches
 1 Sq. Meter = 10,000 Sq. Centimeters = 10.76 Sq. Feet
 1 Sq. Kilometer = 1,000,000 Sq. Meters = 0.386 Sq. Miles

CUBIC MEASURE

1 Cu. Centimeter = 1000 Cu. Millimeters = 0.06 Cu. Inches
 1 Cu. Meter = 1,000,000 Cu. Centimeters = 35.31 Cu. Feet

TEMPERATURE

$5/9(^{\circ}\text{F} - 32) = ^{\circ}\text{C}$
 212° Fahrenheit is equivalent to 100° Celsius
 90° Fahrenheit is equivalent to 32.2° Celsius
 32° Fahrenheit is equivalent to 0° Celsius
 $9/5^{\circ}\text{C} + 32 = ^{\circ}\text{F}$

APPROXIMATE CONVERSION FACTORS

TO CHANGE	TO	MULTIPLY BY
Inches	Centimeters	2.540
Feet	Meters	0.305
Yards	Meters	0.914
Miles	Kilometers	1.609
Square Inches	Square Centimeters	6.451
Square Feet	Square Meters	0.093
Square Yards	Square Meters	0.836
Square Miles	Square Kilometers	2.590
Acres	Square Hectometers	0.405
Cubic Feet	Cubic Meters	0.028
Cubic Yards	Cubic Meters	0.765
Fluid Ounces	Milliliters	29.573
its	Liters	0.473
arts	Liters	0.946
allons	Liters	3.785
Ounces	Grams	28.349
Pounds	Kilograms	0.454
Short Tons	Metric Tons	0.907
Pound-Feet	Newton-Meters	1.356
Pounds per Square Inch	Kilopascals	6.895
Miles per Gallon	Kilometers per Liter	0.425
Miles per Hour	Kilometers per Hour	1.609

TO CHANGE	TO	MULTIPLY BY
Centimeters	Inches	0.394
Meters	Feet	3.280
Meters	Yards	1.094
Kilometers	Miles	0.621
Square Centimeters	Square Inches	0.155
Square Meters	Square Feet	10.764
Square Meters	Square Yards	1.196
Square Kilometers	Square Miles	0.386
Square Hectometers	Acres	2.471
Cubic Meters	Cubic Feet	35.315
Cubic Meters	Cubic Yards	1.308
Milliliters	Fluid Ounces	0.034
Liters	Pints	2.113
Liters	Quarts	1.057
ers	Gallons	0.264
ms	Ounces	0.035
ograms	Pounds	2.205
Metric Tons	Short Tons	1.102
Newton-Meters	Pounds-Feet	0.738
Kilopascals	Pounds per Square Inch	0.145
ometers per Liter	Miles per Gallon	2.354
ometers per Hour	Miles per Hour	0.621



PIN: 042883-000