

DEPARTMENT OF THE ARMY SUPPLY BULLETIN

STORAGE SERVICEABILITY
STANDARDS
FOR AMCCOM MATERIEL

AIR DEFENSE
ARTILLERY SYSTEMS

HEADQUARTERS, DEPARTMENT OF THE ARMY
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**STORAGE SERVICEABILITY STANDARDS
 FOR AMCCOM MATERIEL
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CHAPTER 1 INTRODUCTION

1-1. Purpose. This supply bulletin specifies the required inspection instructions for determining the serviceability of the subject items in storage.

1-2. Scope. The provisions of this bulletin are mandatory for conducting all types of surveillance inspection, as identified in this bulletin. The provisions are applicable only to the Department of the Army depots.

1-3. Definitions.

a. Commonly Used Quality Assurance Terms. Refer to MIL-STD-109 for definitions of these terms.

b. Specialized Terms. The following definitions are listed in alphabetical order by major heading. They apply to specialized terms used in this bulletin.

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

(a) Inspection Frequency Code (IFC). numeric code assigned to indicate the frequency of cyclical inspection performed on materiel in storage. The numeric codes and definitions are listed in paragraph 2-6 e.

(b) Quality Defect Code (QUAL DEF CODE). A three-digit 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 2-6 a.

(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 2-6 d.

(d) Test Required Code (TRC). A three-digit numeric-alpha code used in appendix A to indicate an examination is required (QUAL DEF CODES) and/or additional inspection requirements. The code meanings are in paragraph 2-6 f.

(2) *Corrosion, Metals.* See paragraph 2-6a(3)(j). *Stage I (Defect Code 90).* Discoloration or staining with no 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. Scale or rust adheres to the surface.

Stage III (Defect Code 92). Red, brown, green, black, or white corrosion product with major etching, pitting, or more extensive surface deterioration. Corrosion products are loose and granular. Form, fit, or function of an item may be slightly affected.

Stage IV (Defect Code 93). Red, brown, green,

black, or white corrosion product which affects form, fit, or function of an item. The surface of the item is powdery or scaly with pits or irregular areas of removed material.

(3) Defect Number. A three-digit number assigned to a particular defect in a defect table. It identifies the defect and the severity of the defect. The defect designated by a number is not unique (such as in Quality Defect Code paragraph 1-3 b(1)(b) above) but is redefined in each table where the number is used, although the definition may be similar to a Quality Defect Code definition. Sequential numbers starting with 0 (OXX) are critical defects; sequential numbers starting with 1 (1XX) are major defects; and sequential numbers starting with 2 (2XX) are minor defects.

(4) Deterioration. A change in an item's characteristics that adversely affects the item's ability to function as intended. See paragraph 2-6 a(3)(j).

(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). Liquified, cracked, crumbled (brittle), or fractured (broken) material which affects form, fit, or function.

(b) Deterioration, natural organic 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, water saturation, rot, insect infestation, brittle disintegration, or large or complete separations (cracks or tears) which affect form, fit, or function.

(c) Deterioration, inorganic vitreous items. Glass, ceramic, solid carbon, etc.

Stage I (Defect Code 96A). Small or craze cracks.

Stage II (Defect Code 96B). Spalling (chipped) or fractures (broken item, major cracks, or

splits) which affect form, fit, or function.

(5) *Inspection (Type of).*

(a) *Cyclical Inspection (CI).* An inspection of depot stored material to determine the serviceability of this materiel at the end of a specific storage time interval or cycle. The inspection cycle is specified by the Inspection Frequency Code (IFC) determined in appendix B (See para 2-6 e).

(b) *Initial Receipt Inspection (IRI).* An inspection of newly manufactured materiel received directly from a vendor, manufacturer, or government activity to determine if the item's unit packing, packing, or preservation have been damaged in transit and if the preservation, unit packing, packing and marking are correct. This inspection shall not be used for an acceptance-type inspection.

(c) *Pre-Issue Inspection (PII).* The inspection immediately preceding issue.

(d) *Prestorage Inspection (PSI).* An inspection of materiel received from other depots, posts, camps, stations, or overseas within CONUS to determine receipt condition and the current serviceability of the materiel prior to the storage in a depot.

(e) *Special Inspection (SPI).* An inspection requested by higher headquarters or for satisfying local installation requirements.

(J) *Unit Basis Inspection (UBI).* An inspection where each unit in the lot is inspected for a specific defect. The unit basis method is also used for serially-numbered major end items when each item is inspected.

(6) *Lots.*

(a) *Depot lot.* A combination of lots, irrespective of manufacturer or age, of the same kind and type of material grouped into one large single lot for the purpose of economy in surveillance. (b) *Grand lot.* All lots of the same kind and type of materiel from one manufacturer or reconditioning agency grouped into one large lot for the purpose of economy in surveillance.

(c) *Manufacturer's lot.* A quantity of one item of materiel manufactured or assembled in one plant, from raw materials or components having the same chemical and physical characteristics, under uniform conditions for homogeneity in accordance with the applicable specifications and drawings including renovated, reworked, and reconditioned lots.

(d) *Miscellaneous lot.* A combination of a single manufacturer's small lots or lot fragments possessing the same technical history.

(e) *Mixed lot.* A combination of the same kind and type of materiel wherein identification of the manufacturer, the lot number, or the time of manufacture is incomplete or cannot be determined.

(7) *Occurrence basis.* An inspection, without a predetermined time frame, that is performed as the need occurs, e.g., initial receipt inspection (IRI) is performed when the shipment arrives.

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

(9) *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. The two types of shelf-life items defined by AR 700-89 are:

(a) *Type I shelf-life item.* An item of supply that is determined, through an evaluation of technical test data or actual experience, to have a definite non-extendible shelflife.

(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, test, or restorative action.

(10) *Storage Serviceability Standards (SSS).* Technical documents containing the required inspection instructions for determining serviceability of materiel in storage.

(11) *Unserviceable.* An item's condition that has been determined by inspection to be unsatisfactory or unsafe for its intended use.

(12) *Qualified Inspector.* An individual who has been certified as a qualified inspector by a Department of Army depot.

1-4. Errors or Omissions. DA Form 2028 (Recommended Changes to Publications and Blank Forms) should be used to provide comments regarding errors or omissions in this bulletin. The completed DA Form 2028 should be sent to the Commander, U.S. Army Armament, Munitions and Chemical Command, ATTN: AMSMC-QAL, Rock Island, IL 61299-6000. An information copy should be sent to the Commander, US Army Armament, Munitions and Chemical Command, ATTN: AMSMC-QAF (D), Dover, NJ 07801-5001.

**CHAPTER 2
STORAGE AND SPECIAL INSTRUCTIONS**

2-1. References. The following publications are applicable to this bulletin:

AR 380-5	Information Security Program Regulation
AR 700-15 AR 700-89	Logistics Packaging of Material Identification, Control, and Utilization of Shelf-Life Items
AR 702-7	Reporting of Quality Deficiency Data
AR 708-1	Cataloging and Supply Management Data
AR 725-50	Requisitioning, Receipt, and Issue System
AR 73C-11-2	Reporting of Item and Packaging Discrepancies
AR 740-1	Storage and Supply Activity Operations
AR 740-3	Care of Supplies in Storage (COSIS)
AR 750-25	Army Test, Measurement, and Diagnostic Equipment Calibration and Repair Support Program
MIL-STD-105	Sampling Procedures and Tables for Inspection by Attributes
MIL-STD-109	Quality Assurance Terms and Definitions
TB 750-25-1	Army Test, Measurement, and Diagnostic Equipment (TMDE) Calibration and Repair Support Program
TM 743-200-1	Storage and Materials Handling

NOTE

Additional references applicable to a given group of subject items are cited, if needed, in the TRC appendix for that group of items.

2-2. Safety. During surveillance and normal handling (TM 743-200-1) of the subject items, inspection personnel shall observe the safety precautions prescribed for the operations personnel in Standard Operating Procedures (SOPs), applicable technical manuals and applicable appendixes of this bulletin.

2-3. Lotting.

a. Type of lotting permitted. Applicable TRC appendixes of this bulletin specify the type of lotting permitted by surveillance directives for conducting

surveillance of the subject items.

b. *Depot lot.* A depot lot is formed by combining lots regardless of manufacturer or age into a large single lot. Actual formation is a paper transaction; regrouping and marking of the materiel in storage is not required. A depot lot cannot be declared unserviceable. When, through surveillance, a lot within the depot lot appears unserviceable, the lot or lots shall be withdrawn and additional samples shall be taken by the sampling plan provided in this bulletin. If the suspect lot within the depot lot is found serviceable, it shall remain within the depot lot. If the suspect lot is found unserviceable, the lot shall be withdrawn for rework or disposal in accordance with the existing regulations. When 20 percent of the lots within the depot lot have become unserviceable, the depot lot shall be dissolved and the individual lots therein tested on a lot-by-lot basis. A depot lot shall meet the following criteria:

(1) *Kind, type, and model.* All items shall be the same kind, type, and model.

(2) *Storage.* All items shall be stored under similar conditions at the same depot.

(3) *Serviceability status.* All lots shall possess the same serviceability status, i.e., serviceability known (All lots shall have the same condition code based upon an acceptance inspection of new materiel or prior surveillance.) or serviceability unknown.

c. *Grand lot.* A grand lot is formed by combining all lots from one manufacturer into a large single lot. Actual formation is a paper transaction; regrouping and marking of the materiel in storage is not required. A grand lot shall not be declared unserviceable. When, through surveillance, a lot within the grand lot appears unserviceable, the lot or lots shall be withdrawn and additional samples shall be taken by the sampling plan provided in this bulletin. If the suspect lot within the grand lot is found serviceable, it shall remain within the grand lot. If the suspect lot is found unserviceable, the lot shall be withdrawn for rework or disposal in accordance with existing regulations. When 20 percent of the lots within the grand lot have become unserviceable, the grand lot shall be dissolved and the individual lots shall be tested on a lot-by-lot basis. A grand lot shall meet the following criteria:

(1) *Kind, type, and model.* All lots shall be the same kind, type, and model.

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

(3) *Preservation, unit packing, packing and marking.* All lots shall have the same type preservation, unit packing, packing and marking.

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

(5) *Serviceability status.* All lots shall possess the same serviceability status, i.e., serviceability known (All lots shall have the same condition code based upon an acceptance inspection of new materiel or prior surveillance.) or serviceability unknown.

d. *Manufacturer's lot.* A manufacturer's lot consists of items manufactured or assembled by one manufacturer or reconditioning activity that bear the same manufacturer's or reconditioning agency's lot identification number. The manufacturer's lot shall meet the following criteria:

(1) *Preservation, unit packing, packing, and marking.* All items shall have the same type preservation, unit packing, packing and marking.

(2) *Storage.* All items shall be stored under similar conditions at the same depot.

(3) *Serviceability status.* All items shall possess the same serviceability status, i.e., serviceability known (All items shall have the same condition code based upon an acceptance inspection of new materiel or prior surveillance.) or serviceability unknown.

e. *Miscellaneous lot.* A miscellaneous lot is formed by combining a single manufacturer's small lots or lot fragments into one lot. The size of miscellaneous lots is restricted by the applicable appendix of this bulletin. Actual formation of the lot is a paper transaction; regrouping and marking of the materiel is not required. A miscellaneous lot may be declared unserviceable. The miscellaneous lot shall meet the following criteria:

(1) *Kind, type, and model.* All items shall be the same kind, type, and model.

(2) *Manufacturer.* Each small lot or lot fragment shall be the product of the same manufacturer or reconditioning agency.

(3) *Preservation, unit packing, packing and marking.* All items shall have the same preservation, unit packing, packing and marking.

(4) *Storage.* All items shall be stored under similar conditions at the same depot.

(5) *Serviceability status.* All items shall possess the same serviceability status, i.e., serviceability known (All items shall have the same condition code based upon an acceptance inspection of new materiel or prior surveillance.) or serviceability unknown.

f. *Mixed lot.* A mixed lot is formed by combining all items with incomplete identification into one lot. The size of the mixed lot is restricted by the applicable

appendix of this bulletin. Actual formation of the lot is a paper transaction; regrouping and marking of the materiel is not required. A mixed lot may be declared unserviceable. A mixed lot shall meet the following criteria:

(1) *Kind, type, and model.* All items shall be the same kind, type, and model.

(2) *Preservation, unit packing, packing, and marking.* All items shall have the same type preservation, unit pack, packing and marking.

(3) *Storage.* All items shall be stored under similar conditions at the same depot.

2-4. Sampling. Sampling for subject items shall be performed in accordance with this paragraph and the instructions provided in the applicable appendixes of this bulletin. In some instances, special sampling may be required for an item within a group due to the configuration, short shelf-life, or past quality history of the item.

a. *Initial Receipt Inspection (IRI).* Sampling shall be conducted in accordance with this paragraph and MIL-STD-105, General Inspection Level II, Table II-A, and AQL of 4.0 percent for Major Defectives, and an AQL of 6.5 percent for Minor Defectives. b. *Prestorage Inspection (PSI).* Sampling shall be conducted by this paragraph when the serviceability is known, using MIL-STD-105, General Inspection Level II, Table II-A, an AQL of 4.0 percent for Major Defectives, and an AQL of 6.5 percent for Minor Defectives. All field returned items coded A or B and items having an unknown serviceability shall be 100 percent inspected.

c. *Cyclical Inspection (CI).* Sampling shall be conducted by this paragraph and MIL-STD-105 using the Inspection Level and AQL specified in appendix A or the sampling instructions provided in the applicable appendix (TRC) of this bulletin for the item being sampled. In some instances, special sampling may be required for an item within a group due to the configuration, short shelf life, or past history of the item.

d. *Pre-Issue Inspection (PII).* Sampling, if required, (see para 2-5d(2)), shall be conducted by paragraph c above.

e. *Selection of samples.*

(1) All portions of the lot shall be located for sampling.

(2) Every reasonable effort shall be made to obtain a random sample. If each position or location in a container, pallet, stack, or warehouse is assigned its own unique number, a table of random numbers in the Department of Defense Handbook H53, or an equivalent, can be used to select the sample units to be inspected. When proper random sampling is

impossible, the reason which prevents random sampling shall be recorded in Block 35 of DD Form 1225, Storage Quality Control Report. See paragraph 2-9a(l)(q).

(3) A representative sample shall be chosen from depot lots, grand lots, or miscellaneous lots. For example, if a manufacturer's lot is one-third of the total lot, then select one-third of the lot sample at random from that manufacturer's lot.

f. *Sample Disposition.*

(1) All samples that have been inspected, packed and resealed in barrier material shall be identified as reinspected in the inspection records.

(2) The barrier material shall be resealed using the instructions furnished with the material, printed on the material, or furnished with the sealing iron.

(3) The serviceable samples shall be returned to storage with the parent lot.

(4) The samples with critical or major defects or samples that cannot be returned to the original package

configuration shall be segregated and reported in Block 35 of DD Form 1225, Storage Quality Control Report. See paragraph 2-9a(l)(q).

2-5. Inspection. All inspections and tests shall be conducted under the control of a qualified inspector (see para 1-3b(12)). The inspections and tests normally will be conducted at the surveillance inspection area; however, when authorized, examinations or tests may be performed at the storage site or elsewhere, but they must be in accordance with all safety and security requirements.

a. *Initial Receipt Inspection (IRI).*

(1) *Frequency.* The inspection shall be performed on an occurrence basis (see para 1-3b(7)).

(2) *Classification of defects.* The incoming material shall be inspected for the defects in Table 2-1

Table 2-1. *Initial Receipt Inspection (IRI) or Prestorage Inspection (PSI)*

Category	Defect Number	Number None defined.	Inspection Method
<i>Critical: Major:</i>	101	Item damage, incomplete, or improperly documented.	Visual
	102	Preservation, unit packing, or packing damaged or deteriorated so that adequate protection is no longer provided to the item or handling and storing would be adversely affected.	Visual
	103	Item unit packing, or packing contaminated, wet, or mildewed due to adverse shipping conditions.	Visual
	104	Preservation, unit packing, packing, or marking incorrect.	Visual
<i>Minor:</i>	201	Slight damage to preservation, unit packing, or packing but not affecting the protection.	Visual

(3) *Reporting.* DD Form 1225 shall be used in accordance with paragraph 2-9. Failure data and discrepancies shall also be reported on SF 368, Quality Deficiency Report, per AR 702-7. Preservation, packaging, packing, and related marking deficiencies and shipping-type discrepancies e.g. overages, shortages, expired shelf life and incorrect items shall also be reported on SF 364, Report of Discrepancy in accordance with AR 735-11-2.

b. *Prestorage Inspection (PSI).*

(1) *Frequency.* This inspection shall be performed on all items in which the original package was opened and/or the item had been used since the IRI.

(2) *Examination and test.* All lots shall be examined for receipt condition using Table 2-1 All field

returned items coded A or B and items having an unknown serviceability shall be inspected 100 percent for the defects in appendix A and any applicable appendix (TRC) of this bulletin.

(3) *Reporting.* DD Form 1225 shall be used in accordance with paragraph 2-9.

c. *Cyclical Inspection (CI).*

(1) *Frequency.* This inspection shall be performed at the frequency determined by using appendix B (see para 2-6e).

(2) *Examination and test.* The item shall be examined and tested for the defects in appendix A and any applicable appendix (TRC) of this bulletin.

(3) *Evaluation and reporting.* Evaluations and reports shall be in accordance with paragraphs 2-7 and 2-9.

d. *Pre-Issue Inspection (PII).*

(1) *Frequency.* This inspection shall be performed just before OCONUS shipment of the item.

(2) *Examination and test.* When one-half or more than one-half of the cyclic period (defined by the IFC) has passed since the last inspection, or the cyclical period has been exceeded, or the date of the last surveillance inspection is unknown, the item shall be completely inspected for the defects in appendix A and any applicable appendix (TRC) of this bulletin. When less than one-half of the cyclical period has passed, the item shall be only visually examined for the defects in appendix A and any applicable appendix (TRC).

(3) *Evaluation and reporting.* Evaluations and reports shall be in accordance with paragraphs 2-7 and 2-9.

e. *Special Inspection (SI).* This inspection shall be made if requested by higher headquarters or to satisfy local installation requirements. This inspection may also be performed to determine the economic advisability of conducting further inspection (screening) on unsegregated items, returns from overseas, or used items that have not been reconditioned. Reports prepared for local use are authorized. Reporting in accordance with paragraph 2-9, is not required for this inspection except when requested by higher headquarters.

2-6. Coded Standards. Explanations of the codes in appendix A are provided as follows:

a. *Quality Defect Code (QUAL DEF CODE).* The codes are based on the definitions given in appendix A of DARCOM-R 702-7, and are given as three digit numbers. The codes identify deterioration or damage. Any unusual circumstances, not contained in the tabulation, but observed, shall be reported. The first digit identifies the severity of the defect. The second digit identifies one of the named general groups. The third digit identifies the actual defect within one of the named general groups. *Example:* Using the meanings and explanations given below, Code 113 indicates; 1-major, 1-unit packing group, and 3-container damaged or deteriorated.

(1) *Severity (first digit).*

Quality Defect Code	Category
0	Critical
1	Major
2	Minor

(2) *General groups (second digit).*

Quality Defect Code	Name
0	Cleaning, preservation, painting, plating, or other processing.
1	Unit packing.
2	Packing, unitizing and outloading.
3	Marking and labeling.
4	Materiel deficiencies.
5	Materiel deficiencies (continued).

Quality Defect Code	Category
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).*

Quality Defect Code	Explanation
00	Appearance (paint runs, overspray, not uniform, or substandard).
01	Cleaning improper or inadequate.
02	Preservation improper or inadequate.
03	Wrapping improper or inadequate.
04	Protection afforded not compatible with mode of shipment, type of storage, destination, or other environment.
05	Inadequate coverage or improper thickness.
06	Improper and inadequate preparation.
07	Wrong type, method, or color.
08	Drying improper or inadequate.
09	Reserved for future use.

(b) *Group 1 (unit packing).*

Quality Defect Code	Category
10	No protection 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 pack. (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, utilizing and outloading).*

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

Quality Defect Code	Explanation
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 their 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 short-age-minor defect, if overage.)
28	Reserved for future use.
29	Reserved for future use.

(d) Ground 3 (Marking and labeling).

Quality Defect Code	Category
30	Unit packing and packing (UP/P) 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).
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).

Quality Defect Code	Explanation
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.

Quality Defect Code	Explanation
46	Leak (vapor): air or gas (nitrogen, oxygen, hydrogen, etc.).
47	Modification work order incompleated, improperly applied, or missing.
48	Soldering, welding, brazing, metallizing, or bonding unsatisfactory.
49	Reserved for future use.

(f) Group 5 (materiel deficiencies-continued)

Quality Defect Code	Explanation
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 J or code K, per AR 725-50). (Charge-true condition classification (assign code able 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 a shipped and a major defect if the wrong minor defect if the correct item was item was shipped.) 55Shelf-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).

Quality Defect Code	Explanation
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 damage (caused by functional failure during end item or component test).
69	Failed test, see table of contents for the appropriate appendix for the specified test required code (TRC).

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

Quality Defect Code	Category
70	Wrong count (shortage). (Chargeable as one major defect per line item if value of quantity short is \$200 or more and one minor defect if less than \$200.)

Quality Defect Code	Explanation
71	Wrong count (overage). (Chargeable as one major defect per line item if value of quantity over is \$200 or more and one 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 738-750, 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.)
76	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).
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 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.

Quality Defect Code	Explanation
88	Reserved for future use.
89	Reserved for future use.
(j)	Group 9 (miscellaneous). (see paras 1-3b(2) and (4))
90	Corrosion, metals, stage I.
91	Corrosion, metals, stage II.
92	Corrosion, metals, stage III.
93	Corrosion, metals, stage IV.
*94	Deterioration, polymeric plastic items (vinyl, celluloid, bakelite, lucite, rubber, etc.)
*94A	Deterioration, stage I.
*94B	Deterioration, stage II.
*94C	Deterioration, stage III
*95	Deterioration, natural organic items (cloth, leather, hair, fur, felt, paper, cork, cardboard, wood, etc.).
*95A	Deterioration, stage I.
*95B	Deterioration, stage II.
*96	Deterioration, inorganic vitreous items (glass, ceramic, solid carbon, etc.).
*96A	Deterioration, stage I.
*96B	Deterioration, stage II.
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 paragraph 1-36(4) (Definitions) and are required for evaluation of AMCCOM materiel using this supply bulletin. Since the codes are not included in AR 740-3, they are not needed for reporting under ADP systems, i.e., SPEEDEX.

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

General Levels	Special Levels
G1 (I in MIL-STD-105)	S1
G2 (II in MIL-STD-105)	S2
G3 (III in MILSTD-105)	S3
	S4

c. *Acceptable Quality Level (AQL).* Acceptable quality levels have been selected from MIL-STD-105 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 (non-extendable) and Type II (extendable) shelf-life items are defined by AR 70089.

<i>Shelf life</i>	<i>Type</i>	<i>Type II</i>
Non-deteriorative	O	O
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

When the shelf life code (SLC) is different from that shown in the Army Master Data File (AMDF), the SLC in the AMDF shall be used.

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. See paragraph 2-6i for additional information on IFC. These codes are listed below:

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

See Appendix B, Inspection Frequency

f. *Test Required Codes (TRC).*

(1) Most uncomplicated items require only a simple examination. For these items, 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

(2) Items requiring a more detailed examination, are given unique codes. The table of contents of this bulletin lists appendixes corresponding to the unique codes. The item shall be inspected in accordance with the appendix corresponding to that code. The TRC is also given in the heading of each appendix and near the SB number on each page of the

appendix.

g. *Packing Codes (PC).* An alphabetic code that represents the minimum degree of protection required based on the prescribed storage conditions. See paragraph 2-6i for additional information on PC. The codes are as follows:

<i>Code</i>	<i>Level of Protection</i>
A	Level A
B	Level B
C	Level C

NOTE

When the packing code (PC) is different from the LOP given in the packaging segment of the Army Master Data File (AMDF), the LOP in the AMDF shall be used.

h. *Type Storage Codes (TSC).* An alphabetical code assigned to an item to specify the recommended type of storage. See paragraph 2-6i for additional information on TSC. These codes are defined by AR 708-1.

<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.
F	Freeze space.
G	Shed, nonwarehouse 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, chapter 6, section III, for guidance.

NOTE

When the type storage code (TSC) is different from the ITM TYP STO in the packaging segment of the AMDF, the ITM TYP STO shall be used.

i. *Coded Standards Application.* The shelf-life code (SLC) and the inspection frequency code (IFC) are similar since both are used to determine the time between inspections. The SLC is assigned to items known to be deteriorative. The IFC applies to all items regardless of deteriorative characteristics. An item shall be inspected in accordance with both codes but without duplication. The IFC inspection requirements are satisfied when a SLC inspection is conducted. If the SLC is zero, then the inspection shall be conducted to the IFC. The IFC shall be determined by using appendix B from the PC and TSC. If

multiple PC's and TSC's are specified in appendix A, then the left hand PC applies to the left hand TSC, the center to the center, and the right hand to the right hand. Appendix B contains special instructions for determining the IFC under various conditions of storage. If the IFC in appendix A is different than the IFC determined by appendix B, then the more frequent inspection shall be used. The packaging segment of the Army Master Data File (AMDF) should be checked periodically for changes to the PC and TSC. The PC and TSC are given as LOP and ITM TYP STO respectively in the AMDF.

2-7. Evaluation.

a. *Serviceability based on sampling inspection.* A lot shall be classified as serviceable provided no critical defect is observed and the number of major or minor defects does not exceed the number allowed in the sampling plan for the item.

b. *Serviceability on unit basis inspection.* An item inspected on a unit basis, or subjected to 100 percent inspection, is serviceable if the following criteria are met:

- (1) No defects are observed.

2.3142 = 2.31

The first digit dropped is less than 5-leave preceding digits unchanged regardless of any succeeding digits.

2.3249 = 2.32

2.3150 = 2.32

The first digit dropped is exactly 5, or 5 followed by zeroes-add 1 to the preceding digit if it is odd and leave it unchanged if it is even.

2.3250 = 2.32

The first digit dropped is 5 followed by other than zeroes-add 1 to the preceding digit.

2.3152 = 2.32

2.3252 = 2.33

2.3160 = 2.32

The first digit dropped is greater than 5-add 1 to the preceding digit regardless of any succeeding digits.

2.3260 = 2.33

e. *Condition coding.* Based on evaluation, lots or items shall be assigned appropriate condition codes as explained in AR 725-50. Enter the condition codes in Block 29 of DD Form 1225. See paragraph 2-9a(1)(o).

2-8. Surveillance Test and Measuring Equipment.

a. *Availability and adequacy.* Availability and adequacy of all test and measuring equipment required to perform the examinations and tests required by this bulletin shall be determined by a qualified inspector. If test or measuring equipment is unavailable or inadequate, this shall be reported within 30 days to the Commander, U.S. Army Armament, Munitions and Chemical Command, ATTN: AMSMC-QAG for weapon items or AMSMC-QAW for fire control items, Rock Island, IL 61299-6000.

b. *Calibration.* The test and measuring equipment shall be calibrated at prescribed intervals in accordance with the applicable technical bulletin, technical manual, or instruction manual. If adequate calibration procedures are not included in these documents, the proper calibration procedure shall be requested from the organization responsible for the

(2) All requirements for test or analysis are met.

(3) All units have been modified to existing Modification Work Orders (MWO's).

c. *Special instructions.* In addition to the criteria for evaluation contained in paragraph 2-7, special criteria for certain items or groups of items are provided, when necessary, in the applicable appendixes of this bulletin.

d. *Procedure for routizing off.* Numerical requirements, when stated, indicate the number of significant digits to be retained, i.e., the last figure or decimal place to be reported. The procedure given below shall be used for rounding off observed or calculated values.

(1) When the first digit dropped is less than 5, the preceding digit is not changed. When the first digit dropped is greater than 5, or 5 and some succeeding digit is not zero, the preceding digit is increased by 1. When the first digit dropped is 5, and there are no succeeding digits or all succeeding digits are zero, add 1 to the preceding digit if it is odd and leave it unchanged if it is even.

(2) Examples when rounding to two decimal places:

design or supply of the test equipment. A calibration system for inspection measuring gages and test equipment shall be established in accordance with AR 750-25. The records and reports for the calibration of Army equipment are described in TB 750-25-1.

2-9. Reports and Reporting. The inspections and tests for this bulletin shall be reported in accordance with the following subparagraphs.

a. *Forms.*

(1) *Storage Quality Control Report (DD Form 1225, Dec 83).* This form shall be used to record and report the results of all examinations and tests when conducting an initial receipt inspection, prestorage inspection, cyclical inspection (surveillance inspection), or pre-issue inspection.

NOTE

This form shall also be used for a special inspection when directed by higher headquarters.

Form Instructions

- (a) Block 1. Self-explanatory.
- (b) Block 2. Enter the local report number.
- (c) Blocks 3 and 4. Self-explanatory.
- (d) Block 5. Enter the National Stock Number (NSN) of the item.
- (e) Block 6. Self-explanatory.
- (f) Block 7. Enter the complete standard nomenclature of the item.
- (g) Blocks 8-10. Self-explanatory.
- (h) Block 11. Enter the complete manufacturer's lot number. When surveillance is authorized for 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 2-9a(2).
- (i) Blocks 12-15. Self-explanatory.
- (j) Block 16. Enter the manufacturer or reconditioning agency. When more than one manufacturer is represented because of the nature of the lot enter N.A.
- (k) Blocks 17-24. Self-explanatory.
- (l) Block 25. Enter the words "Major" and "Minor" with the corresponding AQLs given in appendix A.
- (m) Blocks 26 and 27. Self-explanatory.
- (n) Block 28. Enter this Storage Serviceability Standard bulletin number and the date of publication. Also, enter the latest change notice, if any, and the date of its publication.
- (o) Blocks 29-33. Self-explanatory.
- (p) Block 34. Enter the letter of authority or directive for any performed special inspection not in accordance with this SB.
- (q) Block 35. In narrative form provide the following:
 1. The actual storage location, which may not necessarily be the depot or storage activity having accountability.
 2. The current and past type of storage, e.g., heated warehouse, unheated warehouse, shed, or open.
 3. The type, date, and report number of the last inspection.
 4. The number of items (minus the sample size if the samples cannot be returned to the lot) remaining in the lot at the depot.
 5. All applicable visual defects or defectives in tables similar to the below examples providing Appendix, Table Number, Quality Defect Code, Category, Defect Number, and number of Defects or Defectives. (Quality Defect Codes are given in appendix A. Categories and Defect Numbers are given in classification of visual defects tables, if any, in TRC appendixes.)

APPENDIX A

Category	Defect	Number of Detects
Critical:	-	None
Major:	111	1
	121	2
	131	1
	132	1
Minor:	-	None

APPENDIX Y, TABLE Y-2

Category	Defect	Number of Detects
Critical:	-	None
Major:	107	1
	108	2
	109	1
Minor:	-	None

NOTE

The same defect shall not be listed twice. When a defect is in the TRC appendix for an item and it is in appendix A, the number of defects shall be recorded under the classification and Defect Number of the TRC appendix for the item rather than under appendix A, e.g., "Snap on strap corroded", is listed as a 107 defect in a TRC appendix; this defect shall be recorded only under the TRC appendix and not listed again as a code 111 defect under appendix A.

6. Any observation relevant to the condition of an item or to the actual inspection. Examples of observations are: different storage conditions of lot segments, unlisted defects, inspection equipment not available or calibration interval exceeded, and severity of defects. Include a brief lot history when possible.

7. The meteorological conditions at the test area if they are relevant to the test.

8. All applicable defects or defectives determined by functional or other testing in a table consisting of each individual sample number vs each test characteristic, and number of defects or defectives which are critical, major, or minor. If applicable, the outer packs of each individual sample shall be consecutively numbered, starting with "1". Indicate attribute deficiencies with "x" at the intersection of the individual sample number and the test characteristic, or enter the actual test result. Enter the total number of defects or defectives for each category, i.e., critical, major, or minor observed for each sample number.

9. A total of all the defects or defectives for each category, i.e., critical, major, or minor for the visual and testing inspections.

10. Whether the lot passed or failed the visual and test inspection requirements provided in appendix A and the TRC appendixes.

11. Any additional information which may have effected the test results.

12. Any recommendations on lot disposal, e.g., screen or renovate.

(r) *Blocks 36-44.* Self-explanatory.

(2) *Data sheet for Grand Lots, Miscellaneous Lots, or Depot Lots (DA Form 985, 1 Jul 52).* This form shall be used by the depot or storage activity to record the formation of these lots.

Forms 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 comprising 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 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 here shall correspond with that entered on DD Form 1225.

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

(3) *Quality Deficiency Report (QDR) (SF 368).* This form shall be submitted in accordance with AR702-7 when the initial receipt inspection reveals unsatisfactory new materiel from a manufacturer or unsatisfactorily renovated, repaired, or modified materiel from a depot/contractor.

(4) *Report of Discrepancy (ROD) (SF 364).*

This form shall be submitted in accordance with AR 735-11-2 when initial receipt inspection reveals preservation, packaging, or shipping-type deficiencies or discrepancies from a manufacturer or depot/contractor.

(5) *Critical defects report.* When a critical defect is found, it shall be reported immediately via teletype or telephone to the Commander, US Army Armament, Munitions and Chemical Command, ATTN: AMSMC-QAG for weapon items or AMSMC-QAW for fire control items, Rock Island, IL 61299-6000. A DD Form 1225 in accordance with paragraph 2-9a(l) on the critical defect shall be sent after the initial report to the same address.

b. *Errors in reporting.*

(1) only errors that affect the serviceability status of the materiel being evaluated shall be corrected. The corrections shall be made 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 corrected page shall be marked "Corrected Copy". The corrected entries shall be circled to identify them.

c. *Classified data.* Unless specifically authorized by the US Army Armament, Munitions and Chemical Command, Security Office, classified information shall not be placed on the materiel serviceability reports. If classified information is submitted, it shall be placed on a separate sheet rather than the materiel serviceability report form and special codes shall be used as much as possible. The separate sheet shall be properly classified and transmitted. AR 380-5 states that unnecessary classification or higher than necessary classification shall be avoided.

d. *Submission of reports.* With the exception of reports used for "Special Inspection", the original and two copies of all reports required by this bulletin shall be submitted to the Commander, US Army Armament, Munitions and Chemical Command, ATTN: AMSMC-QAG for weapon items or AMSMC-QAW for fire control items, Rock Island, IL 61299-6000.

2-10. Special Instruction.

TRC cross-referencing. The TRCs given for the items in appendix A can be found in paragraph 2-6 for the TRC appendixes of this bulletin listed in the table of contents. The additional inspection shall be in accordance with the TRC. Any TRC not given in paragraph 2-6f is also stated on the TRC appendix title page and near the SB number on each page of the TRC appendix.

APPENDIX A
CODED STANDARDS

NATIONAL STOCK NUMBER	NOMENCLATURED	QUALITY DEFECT CODES	IL	AQL			IFC	TRC	PC	TSC
				MAJ	MIN	SLC				
1005-00-602-2105	M GUN, HVY BARREL, 50 CAL M2	102 104 111 113 121 123 130 140 141 143 148 150 151 154 168 169 174 192 194B 194C 195B 195C 233 278 291 294A 295A	S2	1.50	4.00	0	5	OOV 5MG	ABC	B--
1005-00-605-7710	MACHINE GUN, 7.62 MM, M60	102 104 111 113 121 123 130 140 141 143 148 150 151 154 168 169 174 192 194B 194C 195B 195C 233 278 291 294A 295A	S2	1.50	4.00	0	5	OOV 5MG	ABC	B-
1005-00-673-3246	MOUNT, AA, 50 CAL MG, M63 W/E	102 104 111 113 123 130 140 141 143 148 151 154 157 174 192 194B 194C 195B 195C 233 250 278 291 294A 295A	S2	2.50	4.00	0	5	OOV	ABC	B-
1005-00-673-4750	MOUNT, TRAILER, 50 CAL MG, M55	102 104 120 130 140 141 143 146 148 151 154 157 174 180 192 194B 194C 196A 196B 233 250	S2	2.50	4.00	0	5	OOV	ABC	BZZ
1005-00-726-5636	M GUN, 50 CAL, FLEXIBLE, M2	102 104 111 113 121 123 130 140 141 143 148 150 151 154 168 169 174 192 194B 194C 195B 195C 233 278 291 294A 295A	S2	1.50	4.00	0	5	OOV 5MG	ABC	BC-
1005-00-895-3726	CANNON, 20 MM, AIR DEF, M168	102 104 111 113 121 123 130 140 141 143 148 150 151 154 157 168 169 174 192 194B 194C 195B 195C 233 278 291 294A 295A	S2	1.50	4.00	0	5	OOV 5MG	ABC	BBC
1005-01-014-0837	GUN, AIR DEF, 20 MM, M167A1	102 104 133 140 141 143 146 148 151 154 157 174 180 192 194B 194C 250 278 291 294A	S2	2.50	4.00	0	5	OOV	ABCA	GBZB
1005-01-177-9237	GUN, AIR DEF, 20 MM, M167A2	102 104 133 140 141 143 146 148 151 154 157 174 180 192 194B 194C 250 278 291 294A	S2	2.50	4.00	0	5	OOV	N	-
1010-00-349-4119	BARREL ASSY, M2A1 40 MM GUN	101 102 104 111 113 120 121 123 130 140 141 143 150 154 192 233 278 291	S3	.65	4.00	0	5	OOV	ABC	BBZ
1010-00-730-5371	CANNON, 40 MM, DUAL GUN, M2A1	102 104 111 113 121 123 130 140 141 143 148 150 151 154 157 168 169 174 192 194B 194C 195B 195C 233 278 291 294A 295A	S2	1.50	4.00	0	5	OOV 5MG	ABC	B-
0110-00-945-9986	TUBE, M2A140 MM GUN CANNON	101 102 104 111 113 120 121 123 130 141 150 154 192 233 278 291	S3	.65	4.00	0	5	OOV	ABC	BBZ
1220-00-766-5137	SIGHT, COMPUTING, M38	102 103 104 111 113 123 130 140 141 143 148 150 151 154 157 169 174 180 191 194B 194C 196A 196B 233 278 290 294A	S3	.65	4.00	0	5	OOV 50P	ABC	BCZ
1220-00-766-5139	COMPUTER ASSY-M38 SIGHT	102 104 111 113 123 130 140 141 143 148 150 151 154 157 191 194B 194C 233 278 290 294A	S3	.65	4.00	0	5	OOV	ABC	BCZ
1220-00-766-5224	BRACKET ASSEMBLY, M38 SIGHT	102 104 111 113 123 130 140 141 143 148 191 233 250 278 290	S3	.65	4.00	0	5	OOV	ABC	BCC

APPENDIX A
CODED STANDARDS-Continued

NATIONAL STOCK NUMBER	NOMENCLATURED	QUALITY DEFECT CODES	IL	AQL			IFC	TRC	PC	TSC
				MAJ	MIN	SLC				
1220-00-766-5819	CHEST ASSEMBLY-M38 SIGHT	102 104 111 113 123 130 140 141 143 148 150 151 154 191 194B 194C 195B 195C 233 278 290 294A 295A	S3	.65	4.00	0	5	OOV	ABC	BCZ
1220-00-767-6208	COVER, M38COMPUTING SIGHT	102104 111 113 123 130 141 191 233 250 278 290	S3	.65	4.00	0	5	OOV	ABC	BBC
1220-01-026-0155	SIGHT, LEAD COMPUTING, M61	102103 104 111 113 123 130 140 141 143 148 150 151 154 169 174 180 191 194B 194C 196A 196B 233 257 278 290 294A	S3	.65	4.00	0	5	OOV 50P	ABCB	B-B
1240-00-179-1154	MOUNT, TELESCOPE, M164	102 104 111 113 123 130 140 141 143 148 150 151 154 174 191 233 257 278 290	S3	.65	4.00	0	5	OOV	ABC	BCC
1240-00-179-1155	TELESCOPE, STRAIGHT, M134	102 103 104 111 113 123 130 140 141 143 148 150 151 154 169 174 180 191 194B 194C 196A 196B 233 257 278 290 294A	S3	.65	4.00	0	5	OOV 50P	ABC	B--
1240-00-405-9809	TARGET SELECTOR GROUP, M10	102 103 104 111 113 123 130 140 141 143 148 150 151 154 174 191 194B 194C 196A 196B 233 278 290 294A	S3	.65	4.00	0	5	OOV	ABC	BZZ
1240-00-764-8288	SIGHT, REFLEX, M24C	102 103 104 111 113 123 130 140 141 143 148 150 151 154 169 174 180 191 194B 194C 195B 195C 196A 196B 233 278 290 294A 295A	S3	.65	4.00	0	5	OOV 50P	ABC	BCZ
1240-00-765-2971	PERISCOPE, INFRARED, M19	102 103 104 111 113 123 130 140 141143 148 150 151 154 169 174 180 191 194B 194C 196A 196B 233 257 278 290 294A	S3	.65	4.00	05	OOV 50P		ABAB	CCBB
1240-00-891-1287	CELL ASSY, M120 TELESCOPE	102 103 104 111 113 123 130 140 141 143 148 150 151 169 180 191 180 191 194B 194C 196A 196B 233 257 278 290 294A	S3	.65	4.00	0	5	OOV 50P	ABC	BCC
1240-00-891-1288	CELL ASSY, M120 TELESCOPE	102 103 104 111 113 123 130 140 141 143 148 150 151 169 180 191 196A 196B 233 278 290	S3	.65	4.00	0	5	OOV 50P	ABC	BBZ
1240-01-005-6035	PERISCOPE, INFRARED, M19A1	102 103 104 111 113 123 130 140 141 143 148 150 151 154 169 174 180 191 194B 194C 196A 196B 233 257 278 290 294A	S3	.65	4.00	05	OOV 50P		ABCB	BCCB
1260-00-561-0364	RELAY ASY, DISTRIBUTION BOX	102 104 111 113 123 130 140 141 143 148 150 151 154 191 194B 194C 233 278 290 294A	S3	.65	4.00	0	5	OOV	ABC	BCC
1260-00-565-1021	SWITCH ASSEMBLY, ELEVATION	102 104 111 113 123 130 140 141 143 148 150 151 154 191 194B 194C 233 278 290 294A	S3	.65	4.00	0	5	OOV	ABC	BZZ
1260-00-766-5330	RECEIVER ASSY, M16GA1E1 LCS	102 104 111 113 123 130 140 141 143 148 157 191 233 250 278 290	S3	.65	4.00	0	5	OOV	ABC	BCC
1260-00-766-5350	STARTER ASSY-M16GA1E1 LCS	102 104 111 113 123 130 140 141 143 148 150 151 154 191 194B 194C 233 278 290 294A	S3	.65	4.00	0	5	OOV	ABC	BZZ

APPENDIX A
CODED STANDARDS-Continued

NATIONAL STOCK NUMBER	NOMENCLATURED	QUALITY DEFECT CODES	IL	AQL			IFC	TRC	PC	TSC
				MAJ	MIN	SLC				
1260-00-766-5412	TRANSMISSION/ VALVE ASY-LCS	102 104 111 113 123 130 140 141 143 148 151 154 191 194B 194C 233 250 278 290 294A	S3	.65	4.00	0	5	OO	VABC	B-C
1260-00-766-5418	DIFFERENTIAL- M16A1E1 LCS	102 104 111 113 123 130 140 141 143 148 150 151 154 157 191 194B 194C 233 278 290 294A	S3	.65	4.00	0	5	OOV	ABC	B--
1260-00-766-5456	SPIDER, TRANS- MISSION DIFFER	102 104 111 113 123 130 141 191 233 250 278 290	S3	.65	4.00	0	5	OOV	ABC	BCC
1260-00-766-5749	SOLENOID ASSY, FIRING-LCS	102 104 111 113 123 130 140 141 143 148 150 151 154 191 194B 194C 233 278 290 294A	S3	.65	4.00	0	5	OOV	ABC	BCZ
1260-00-766-6914	MOTOR ASSEMBLY- M16A1E1 LCS	102 104 111 113 123 130 140 141 143 148 150 151 154 157 191 194B 194C 233 278 290 294A	S3	.65	4.00	0	5	OOV	ABC	BCC
1260-00-767-3871	DRIVE ASSY, VARIABLE SPEED	102 104 111 113 123 130 140 141 143 191 233 250 278 290	S3	.65	4.00	0	5	OOV	ABC	BCC
1260-00-767-6347	GEAR ASY, CAM ACTUATING-LCS	102 104 111 113 123 130 140 141 143 191 233 250 278 290	S3	.65	4.00	0	5	OOV	ABC	BCC
1260-00-767-6350	DRIVE ASSEM- ELY, AZIMUTH- LCS	102 104 111 113 123 130 140 141 143 191 233 250 278 290	S3	.65	4.00	0	5	OOV	ABC	BZZ
1260-00-767-6351	DRIVE ASSY, ELEVATION-LCS	102 104 111 113 123 130 140 141 143 191 233 250 278 290	S3	.65	4.00	0	5	OOV	ABC	BCC
1285-00-454-5336	BRAKE, MAG- NETIC, ANIVPS-2	102 104 111 113 123 130 140 141 143 148 150 151 154 191 194B 194C 233 278 290 294C	S3	.65	4.00	0	5	OOV	ABC	BC-
1290-00-103-2355	RING ASSY, SLIP- M16A1E1 LCS	102 104 111 113 123 130 140 141 143 148 150 151 154 191 194B 194C 233 278 290 294C	S3	.65	4.00	0	5	OOV	ABC	BCZ
1290-00-168-5989	INDICATOR ASY, AZIMUTH-VADS	102 103 104 111 113 123 130 140 141 143 148 150 151 154 157 174 180 191 194B 194C 195B 195C	S3	.65	4.00	0	5	OOV	ABC	BBZ
1290-00-168-5990	INDICATOR ASY, AZIMUTH-VADS	102 103 104 111 113 123 130 140 141 143 148 150 151 154 157 174 180 191 194B 194C 195B 195C	S3	.65	4.00	0	5	OOV	ABC	B--
1290-00-335-5062	INDICATOR ASSEMBLY, AZIMUTH	102 103 104 111 113 123 130 140 141 143 148 150 151 154 157 174 180 191 194B 194C 195B 195C 233 278 290 294A 295A	S3	.65	4.00	0	5	OOV	ABC	BCZ
1290-00-546-9692	INVERTER ASSY- M16A1E1 LCS	102 104 111 113 123 130 140 141 143 148 150 151 154 191 194B 194C 233 278 290 294C	S3	.65	4.00	0	5	OOV	ABC	BCZ
1290-00-766-5297	GEAR, OIL, M6A1E1-M16A1E1 LC	102 104 111 113 123 130 140 141 143 148 150 151 154 157 174 191 194B 194C 233 278 290 294A	S3	.65	4.00	0	5	OOV	ABC	BZZ

APPENDIX A
CODED STANDARDS-Continued

NATIONAL STOCK NUMBER	NOMENCLATURED	QUALITY DEFECT CODES	IL	AQL		SLC	IFC	TRC	PC	TSC
				MAJ	MIN					
1290-00-766-5397	DRIVE, CONTROLLER, M12E2-LCS	102 104 111 113 123 130 140 141 143 148 150 151 154 157 191 194B 194C 233 278 290 294A	S3	.65	4.00	0	5	OOV	ABC	BCZ
1290-00-766-5497	RING ASSY, SLIP-M16A1E1 LCS	102 104 111 113 123 130 140 141 143 148 150 151 154 191 194B 194C 233 278 290 294C	S3	.65	4.00	0	5	OOV	AB-X	BCBC
1290-00-766-5876	LOCAL CONTROL SYS, M16AIE1	102 104 111 113 123 130 140 141 143 148 150 151 154 157 174 191 194B 194C 233 278 290 294A	S8	.65	4.00	0	5	OOV	ABC	BZZ
1290-00-891-9999	QUADRANT, GUNNERS, MIAI W/C	102 103 104 111 113 123 130 140 141 143 145 148 150 151 154 174 180 191 194B 194C 195B 195C 196A 196B 233 278 290 294A 295A	S3	.65	4.00	0	5	OOV	ABC	B--
1290-00-917-5771	RING ASSY, SLIP-M16A1EI LCS	102 104 111 113 123 130 140 141 143 148 150 151 154 191 194B 194C 233 278 290 294A	S3	.65	4.00	0	5	OOV	ABC	BCC
2350-00-149-4791	GUN, AIR DEFENSE, 40M'M, M42A1	102 104 133 140 141 143 145 148 151 154 157 174 180 192 194B 194C 250 278 291 294A	S2	2.50	4.00	0	5	OOV	ABC	BZZ
2350-00-796-8000	GUN, AIR DEFENSE, 40 MM, M42	102 104 133 140 141 143 145 148 151 154 157 174 180 192 194B 194C 250 278 291 294A	S2	2.50	4.00	0	5	OOV	ABC	BZZ
2350-01-017-2113	GUN, AIR DEFENS, 20MM, M1163A1	102 104 133 140 141 143 145 148 151 154 157 174 180 192 194B 194C 250 278 291 294A	S2	2.50	4.00	0	5	OOV	ABC	BB-
2350-01-101-6785	CARRIER, MISSILE SYS, M975	102 104 133 140 141 143 145 148 151 154 157 174 180 192 194B 194C 250 278 291 294A	S2	2.50	4.00	0	5	OOV	ABC	BZZ
2350-01-169-2833	GUN, AIR DEFENS, 20MM, M163A2	102 104 133 140 141 143 145 148 151 154 157 174 180 192 194B 194C 250 278 291 294A	S2	2.50	4.00	0	5	OOV	ABC	BZZ
4931-00-179-5571	TEST SET, ANTENNA, AN/VPM-1	102 103 104 111 113 123 130 140 141 143 148 150 151 154 157 174 191 194B 194C 196A 196B 233 278 290 294A	S3	.65	4.00	0	5	OOV	ABC	BBZ
4931-00-4124226	CIRCUIT CARD ASY, AN/TPM-22	102 103 104 111 113 123 130 140 141 143 148 150 151 154 180 191 194B 194C 196A 196B 233 278 290 294A	S3	.65	4.00	0	5	OOV	ABC	B-Z
4931-00-412-4227	CIRCUIT CARD ASY, AN/TPMA-22	102 103 104 111 113 123 130 140 141 143 148 150 151 154 180 191 194B 194C 196A 196B 233 278 290 294A	S3	.65	4.00	0	5	OOV	ABC	BBC
4933-00-86G6269	PANEL ASSY, SERVO AMPLIFIER	102 104 111 113 123 130 140 141 143 148 150 151 154 191 194B 194C 233 278 290 294A	S3	.65	4.00	0	5	OOV	ABC	BZZ
4933-01-017-5652	PANEL AS, AN/MWM-3 TEST SET	102 103 104 111 113 123 130 140 141 143 148 150 151 154 180 191 194B 194C 196A 196B 233 278 290 294A	S3	.65	4.00	0	5	OOV	ABC	BZZ

**APPENDIX A
CODED STANDARDS-Continued**

NATIONAL STOCK NUMBER	NOMENCLATURED	QUALITY DEFECT CODES	IL	AQL		SLC	IFC	TRC	PC	TSC
				MAJ	MIN					
4933-01-047-3389	TEST SET, ELECTR, AN/TSM-100	102 103 104 111 113 123 130 140 141 143 148 150 151 154 174 191 194B 194C 196A 196B 233 278 290 294A	S3	.65	4.00	0	5	OOV	ABC	BZZ
4933-01-129-5748	PANEL AS, SIGHT CURRENT GEN	102 104 111 113 123 130 132 133 140 141 143 148 150 151 154 155 178 191 194B 194C 290 294A	S3	.65	4.00	2	1	OOV	ABC	BBZ
4940-01-105-5394	SHELTER, VADS, AN/ITSM-115A	102 103 104 111 113 123 130 140 141 143 148 150 151 154 174 191 194B 194C 195B 195C 196A 196B 233 278 290 294A 295A	S3	.65	4.00	0	5	OOV	ABC	B--
4940-01-128-9878	TEST SET, RADAR, AN/TPM-22A	102 103 104 111 113 123 130 140 141 143 148 150 151 154 174 191 194B 194C 195B 195C 196A 196B 233 278 290 294A 295A	S3	.65	4.00	0	5	OOV	ABC	BZZ
4940-01-212-6575	SHELTER. VADS, AN/TSM-115B	102 104 133 140 141 143 148 150 151 154 174 191 194B 194C 195B 195C 196A 196B 278 290 294A 295A	S3	.65	4.00	0	5	OOV	ABC	BZZ
5180-00-575-0716	TOOL KIT, ELECTRONIC, VULCAN	102 104 111 113 123 130 140 141 143 148 150 151 154 191 194B 194C 195B 195C 233 278 290 294A 295A	S3	.65	4.00	0	5	OOV	ABC	BZZ
5180-00-575-0717	TOOL KIT, RADAR ANTENNA, VAD	102 103 104 111 113 123 130 140 141 143 148 150 151 154 191 194B 194C 195B 195C 196A 196B 233 278 290 294A 295A	S3	.65	4.00	0	5	OOV	ABC	BZZ
5180-00-575-0721	TOOL KIT, ELECTRONIC, VULCAN	102 104 111 113 123 130 140 141 143 148 150 151 154 191 194B 194C 195B 195C 233 278 290 294A 295A	S3	.65	4.00	0	5	OOV	ABC	BBC
5180-00-695-0138	TOOL KIT, AA ARTILLERY MECH	102 104 111 113 123 130 140 141 143 148 151 154 191 194B 194C 195B 195C 233 250 278 290 294A 295A	S3	.65	4.00	0	5	OOV	ABC	BBC
4931-00-435-7746	RADAR ANTENNA DRIVE SHOP	102 104 111 113 123 130 140 141 143 145 146 148 150 151 154 191 194B 194C 195B 195C 196A 196B 233 278 290 294A 295A	S3	.65	4.00	0	5	OOV	ABC	GBC
4931-00-879-0905	TEST SET, OR MAIN, AN/TPM-23	102 104 111 113 123 130 140 141 143 148 150 151 154 174 191 194B 194C 233 278 290 294A	S3	.65	4.00	0	5	OOV	ABC	B-
4931-01-0423536	TESTER, RADAR SYS, AN/VPM-2	102 104 111 113 123 130 140 141 143 148 150 151 154 174 191 194B 194C 233 278 290 294A	S3	.65	4.00	0	5	OOV	ABC	B-
4931-01-143-9332	TOOL & EQUIPMENT KIT-AIR D	102 104 111 113 123 130 140 141 143 148 150 151 154 191 194B 194C 233 278 290 294A	S3	.65	4.00	0	5	OOV	ABC	BZZ
4933-00-010-1501	PANEL AS, SIGHT CURRENT GEN	102 104 111 113 123 130 140 141 143 148 150 151 154 191 194B 194C 233 278 290 294A	S3	.65	4.00	0	5	OOV	A	B

**APPENDIX A
CODED STANDARDS-Continued**

NATIONAL STOCK NUMBER	NOMENCLATURED	QUALITY DEFECT CODES	IL	AQL				PC	TSC
				MAJ	MIN	SLC	IFC		
4933-00-010-1583	PANEL ASY. DIS- TRIBUTION BOX	102 104 111 113 123 130 140 141 143 148 150 151 154 191 194B 194C 233 278 290 294A	S3	.65	4.00	0	5	OOV ABC	B--
4933-00-010-1584	PANEL ASSY, POWER, TEST SET	102 103 104 111 113 123 130 140 141 143 148 150 151 154 180 191 194B 194C 196A 196B 233 278 290 294A	S3	.65	4.00	0	5	OOV ABC	BBZ
4933-00-348-7398	TOOL KIT, ARTIL- LERY, SET A	102 103 104 111 113 123 130 140 141 143 145 148 150 151 191 194B 194C 195B 195C 196A 196B 233 278 290 294A 295A	S3	.65	4.00	0	5	OOV ABCB	BBZZ
4933-00-421-4071	TEST SET, ADA, AN/MWM-3	102 103 104 111 113 123 130 140 141143 148 150 151 154 174 191 194B 194C 196A 196B 233 278 290 294A	S3	.65	4.00	0	5	OOV ABC	B--
4933-00-679-1751	TOOL SET, 40 MM AA GUN, FM	102 103 104 111 113 123 130 140 141 143 148 150 151 154 169 180 191 194B 194C 196A 196B 233 278 290 294A	S3	.65	4.00	0	5	OOV 50P ABC	BZZ
4933-00-852-6312	TEST SET, VUL- CAN, AN/MWM-2	102 103 104 111 113 123 130 140 141 143 148 150 151 154 174 191 194B 194C 196A 196B 233 278 290 294A	S3	.65	4.00	0	5	OOV ABC	BBC
5180-00-937-4517	TOOL KIT, AA ARTILLERY, VADS	102 104 111 113 123 130 140 141 143 148 151154 191 194B 194C 195B 195C 233 250 278 290 294A 295A	S3	.65	4.00	0	5	OOV ABC	BBZ
5340-00-865-2318	BRACKET ANGLE, AN/TSM- 115 S	102 104 111 113 123 130 141 191 233 250 278 290	S3	.65	4.00	0	5	OOV ABC	BBC
5840-00-147-2595	SPARK GAP, AN/ TPM-22 TEST S	103 104 113 123 130 141 150 180 196A 196B 211 233 278	S3	.65	4.00	0	5	OOV ABC	B-C
6130-00-883-8129	POWER SUPPLY, AN/TSM-100 TS	102 104 111 113 123 130 140 141 143 148 150 151 154 191 194B 194C 233 278 290 294A	S3	.65	4.00	0	5	OOV ABC	B--
6650-00-318-4426	BORESCOPE, M	1102 103 104 111 113 123 130 140 141 143 148 150 151154 169 174 180 191 194B 194C 196A 196B 233 257 278 290 294A	S3	.65	4.00	0	5	OOV 50P ABC	B-
6650-00-704-3549	PERISCOPE, M17	102 103 104 111 113 123 130 140 141 143 148 150 151 154 169 174 180 191 194B 194C 196A 196B 233 257 278 290 294A	S3	.65	4.00	0	5	OOV 50P ABC	BB-
7510-01-139-3395	INK CARTRIDGE, AN/TSM-115A	104 111 113 123 130 132 133 141 143 145 150 151 154 155 178 180 194B 194C 294A	S3	.65	4.00	4	2	OOV ABC	BBC
8030-01-197-4392	LOCKING COM- POUND, ANVPS-2	104 111 113 123 130 132 133 141 150 151 154 155 178 180	S3	.65	4.00	4	2	OOV C	C
8040-01-134-6820	ADHESIVE-AN/ TSM-115 SHOP	104 111 113 123 130 132 133 141 150 151 154155 178 180	S3	.65	4.00	1	1	OOV ABC	BBC

**APPENDIX B
INSPECTION FREQUENCY**

B-1. Purpose. The purpose of this special instruction is to provide the storage inspection frequency for each National Stock Number (NSN) listed in appendix A.

B-2. Instructions.

a. The inspection frequency for each type storage and level of protection is shown in Table B-1

b. The abbreviations used in Table B-1 are as follows:

IFC-Inspection Frequency Code

PC-Packing Code

TSC-Type Storage Code

c. The codes used in Table B-1 are defined in section II., paragraph 2-6.

d. An example using Table B-1 to determine inspection frequency is given below.

(1) *Given.* A quantity of an item with an NSN listed in appendix A has been provided Level B, intermediate military protection, and is stored in an unheated warehouse.

(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, which can be found on Table B-1 as PC B (Packing Code B).

(c) The type storage has been given as an unheated warehouse, which is designated Type Storage Code B in section II, paragraph 2-6f of this bulletin. Type Storage Code B is abbreviated as TSC B on Table B-1

(d) The intersection of Type Storage (TSC B) and level of protection (PC B) is at IFC 3.

(e) IFC 3 lists a period of 24 months. Therefore, all items stored in Type Storage Code B and packaged with Packing Code B, shall be inspected every 24 months.

(f) If the IFC determined by the above procedure is different from the IFC given in appendix A, then the item shall be inspected to the more frequent IFC.

Table B-1. Inspection Frequency

LEVEL OF PROTECTION		
PC A (MAX MIL)	PC B (INTEPPAED MIL)	PC C (MIN MIL)

TYPE
STORAGE

INSPECTION FREQUENCY

TSC (Controlled) Humidity	CIFC 5 (60 months)	IFC 5 (60 months)(30 months)	IFC 4
TSC A Heated Space	IFC 4 (30 months)	IFC 4 (30 months)	IFC 3 (24 months)
TSC B Unheated Space	IFC 3 (24 months)	IFC 3 (24 months)	IFC 2 (12 months)
TSC 0 and others	IFC 2 (12 months)	*NOT PERMITTED	NOT PERMITTED

*NOTE: Items with Federal Stock Class 2510 are permitted and shall have an IFC 2 (12 months).

APPENDIX C
QUALITY ASSURANCE INSPECTION INSTRUCTIONS
OPTICAL MATERIAL-;PRESSURIZED ITEMS
TRC-50P

WARNING

The antireflective coating on all infrared optics contains thorium fluoride which is slightly radioactive. The only potential hazard involves ingestion (swallowing or inhaling) of this coating material. Broken lenses shall be disposed in accordance with AR 385-11. Questions concerning radioactive safety or procedures may be directed to Radiological Protection Officer, Attn: AMSMC-SFS, Rock Island, IL, 61299-6000.

C-1. Purpose. The purpose of this inspection instruction is to provide instructions for the inspection of Armament Fire Control Material which either contains optics and/or are pressurized with dry nitrogen.

C-2. Policy. These inspection instructions shall be used to detect any significant deterioration of material in storage and to avoid overinspection.

C-3. Instructions. These instructions apply to material identified in appendix A which cites the TRC of this appendix for supplementary inspection instructions. Each item shall be inspected for the defects listed in appendix A and according to the instructions in this appendix.

a. *References.*

(1) AR 385-11 Ionizing Radiation Protection (Licensing, Control, Transportation, Disposal and Radiation Safety)

(2) TM 750-116 General Procedures for Purging and Charging of Fire Control Instruments

(3) NSN 4931-00-065-1110 Purging Kit, Fire Control

b. *Inspection Conditions.*

(1) Inspection Lot. An inspection lot is defined as all items having the same level of packaging and year of manufacture, rebuild or modification.

(2) Inspection frequency. The inspection frequency shall be in accordance with appendix B or other requirements.

(3) Inspection lot disposition criteria. The lot shall be either accepted or rejected in accordance with paragraph C-3d.

c. *Defect Classification.*

(1) Any defect found by the visual inspection of the sample items for the Quality Defect Codes (QDCs)

in appendix A shall be classified a critical, major, or minor defect in accordance with the QDC.

(2) Any defect found during the inspection procedure of paragraph C-4 shall be classified in accordance with that paragraph.

d. *Inspection Methods.*

(1) For a lot of items, Inspection Level (IL) S-3 shall apply. See Table I, Sample Size Code Letters of MIL-STD-105.

(2) For a lot of items, the following Acceptable Quality Levels (AQL's) shall apply:

Majors *Minors*

0.65 4.0 See Table II-A, Single Sampling Plan for Normal Inspection of Mil-STD-105.

(3) A sample from the lot of items shall be selected in a random manner.

(4) The packaging of each sample item shall be visually inspected for the defects cited in section II and appendix A.

(5) The packaging shall be removed.

(6) Each sample item shall be inspected for the defects cited in appendix A and paragraph C-4. The technique of shading shall not be used except for detecting moisture. In case of deviation between this inspection instruction and the item technical data package (TDP), or an applicable technical manual (TM), the TDP or the TM shall take precedence (Refer to MIL-STD-124 for definitions).

(7) Items found acceptable shall be replaced to their original configuration and returned to storage.

(8) A defective item shall remain defective until it is repaired or replaced.

(9) Samples with major defects or samples which cannot be returned to their original package configuration shall be segregated and reported for disposition instructions.

C-4. Inspection Procedure.

a. *Optical Material.*

(1) *Moisture or condensation.* Any moisture, condensation, or staining resulting from moisture on an optical item shall be classified a major defect. Some items contain dry nitrogen gas under a slight

pressure to keep moisture out and avoid oxidation. If the item has purging and charging ports, the item shall be purged and charged with dry nitrogen using Purging Kit, NSN 4931-00-065-1110 as specified in TM 750-116, General Procedures for Purging and Charging of Fire Control Instruments (see C-4.b.).

(2) *Fracture.* A fracture on any surface of an optical item shall be classified a major defect.

(3) *Smears or fingerprints.* Any smears or fingerprints on an *external* optical surface of an item shall be classified a minor defect. Any smears or fingerprints on an *internal* optical surface of an item shall be classified a major or minor defect in accordance with the applicable drawings and specifications.

(4) *Chips.* Chips on optics between the reticle and the objective end of the instrument will be permitted if they are stoned or ground and do not extend more than 1/16 inch into the clear aperture. Chips on the reticle, and between the reticle and eyelens will be permitted if they are ground or stoned and do not extend into the clear aperture. Areas that have been stoned or ground shall not cast a shadow on the prism or permit seepage of a sealing compound. A chip not meeting either of the above conditions shall be classified a major defect.

(5) *Scratches and lint.* Scratches and lint will be permitted if the total effect of such discrepancies do not exceed that allowed in the applicable table(s) cited in paragraph (12). For example, the number of discrepancies may exceed that specified in the table, if the dimensions of such discrepancies are proportionally smaller than that specified in the table(s). Likewise, if the number of discrepancies are considerably less than that permitted in the table(s), they may be proportionally larger than the maximum specified in the table. However, any discrepancy which exceeds the table(s), size 80, or as described above shall be classified a major defect.

(6) *Digs, pits, and bubbles.* Digs, pits and bubbles will be permitted in accordance with criteria given in the table(s) cited blow. Deviation from the criteria given in the table(s) are permissible as specified

for scratches cited in (5) above. However, any discrepancy which exceeds the table(s), size 50 or as described in this paragraph shall be classified a major defect.

(7) *Dirt.* When the reticle is focused with the eyepiece, the central area of the reticle, and/or field lens superimposed on the reticle shall have no more than 3 pieces of dirt or other foreign matter greater in size than the width of the smallest reticle line or a total of 5 pieces over entire the reticle surface. Foreign matter on other optics shall be treated similarly to pits and digs, but shall never exceed the size given in the applicable table(s). Foreign matter on an optical item not meeting the minimally acceptable criteria shall be classified a major defect.

(8) *Coating.* Optics with not more than 25 percent of the coating deteriorated, will be acceptable if the deterioration is not concentrated in a given area. Crushes or rubs not heavily concentrated are permissible if they do not extend into the optic surface. Optics having a coating outside the above acceptable criteria shall be classified a major defect.

(9) *Cement separation.* Any cement separation shall be classified a major defect.

(10) *Polished surfaces.* Any greyness or stain on polished optical surfaces shall be classified a minor defect.

(11) *Radioluminous items.* The failure of radioluminous items to provide illumination shall be classified a major defect. Any instrument containing a radioluminous source shall not be opened, vented, or purged if there is no illumination in the assembly. The local Radiological Protection Officer (RPO) must be notified, and the defective unit will be replaced by a serviceable one. Radioluminous sources shall be inspected in accordance with appendix TRC-5RA.

(12) *Tables.*

Table C-1. Prisms and Mirrors

Eve Surface Area (see note 1)	Number of Scratches	Scratch Size	Maximum Length	Number of Pits, Digs or Bubbles	Size of Pits, Digs, or Bubbles
Up to 1.250	4	60	1/5	4	40
1.251-2.250	6	60	1/4	5	40
2.251-up	8	60	5/16	6	40

Table C-2. Field Lens (see note 2)

Eye Surface Area (see note 1)	Number of Scratches	Scratch Size	Maximum Length	Number of Pits, Digs or Bubbles	Size of Pits, Digs, or Bubbles
Up to 1.250	3	60	1/8	3	10
1.251-2.250	3	80	3/16	3	20
2.251-up	3	80	1/4	3	40

Table C-3. Eye Lens

Eye Surface Area (see note 1)	Number of Scratches	Scratch Size	Maximum Length	Number of Pits, Digs or Bubbles	Size of Pits, Digs, or Bubbles
Up to 1.250	3	60	1/8	3	20
1.251-2.000	5	60	3/16	5	20
2.001-up	8	60	1/4	8	20

Table C-4. Objective, Erector Lenses, and Windows

Eye Surface Area (see note 1)	Number of Scratches	Scratch Size	Maximum Length	Number of Pits, Digs or Bubbles	Size of Pits, Digs, or Bubbles
Up to 1.250	5	60	3/16	4	40
1.251-2.000	8	60	1/4	7	40
2.001-up	10	60	5/16	10	40

Table C-5. Reticle (see note 3)

Eye Surface Area (see note 1)	Number of Scratches	Scratch Size	Maximum Length	Number of Pits, Digs or Bubbles	Size of Pits, Digs, or Bubbles(note 4)
Up to 1.250	3	60	1/8	3	10
1.251-2.000	3	80	3/16	3	20
2.001-up	3	80	1/4	3	40

NOTES

- For defects in the outer zone (outside the central area of eye viewing surface), the allowable defects may be increased 50 percent and 50 percent in size.
- Scratches, pits, etc., in the central area or eye surface (25 percent of area surface) shall not be greater than shown in the table.
- Scratches, pits, lint, etc., which would significantly impact the intended use of the instrument shall not be permitted in the central area (25 percent or area at center line) of field lens where it would be superimposed on the reticle pattern.
- For a definition of the size numbers, see MILO-13830 and Drawing C7641866.

(13) *Function1 testing.* As applicable, the controls (knobs, levers, door handles, covers, sleeves, extendable legs, etc.) shall be manually functioned or operated. Any function failure shall be classified a major defect.

b *Pressurized Items.*

NOTE

Pressurized items have color-coded ports. The inlet port has a gray color band and the Outlet port has a yellow color band. Prior to the physical nitrogen pressure test of the item, the test equipment system shall be purged and charged in accordance with TM 750-116 or applicable specifications to eliminate erratic readings.

CAUTION

An instrument containing a radioluminous source shall not be opened, vented, or purged if there is no illumination in the assembly. See paragraph

C4a(11), *Radioluminous items*, for the classification of this defect and corrective action.

(1) The pressure test shall be performed utilizing either a Purging Kit, Fire Control, NSN 4931-00-065-1110 or a suitable substitute.

(2) The Operators Maintenance Manual shall be used for installation, removal procedures, and test adjustments after installation.

(3) With the pressure gage installed, the pressure shall be read after allowing 10 minutes for the pressure to stabilize. The pressure should be within **0.1** pounds per square inch (PSIG) of the item TDP. Any pressure reading less than that required, but more than 0.5 PSIG shall be classified a minor defect. Any pressure reading less than 0.5 PSIG shall be classified a major defect. The pressure reading shall be at standard ambient temperature (77 + 5 degrees F) or corrected to it.

Table C-6. Pressure Reading

Example	No. 1	No. 2	No. 3
TDP Required Pressure	3.0	3.0	3.0
Actual Pressure Reading	2.9	2.0	0.4

(4) If an item pressure reading is zero, the Commander, U.S. Army Armament, Munitions and Chemical Command, ATTN: AMSMC-QAW, Rock Island, IL 61299-6000, shall be contacted for instructions.

(5) The pressure gage shall be removed and the system shall be reconnected to its original configuration. Leakage shall be checked by utilizing a

soap solution, in accordance with TM 750-116. If the pressure drops and bubbles appear, the leakage shall be classified a major defect.

C-5. Report and Reporting. The report and reporting shall be in accordance with paragraph 2-9.

APPENDIX D

QUALITY INSPECTION INSTRUCTIONS
MACHINE GUNS AND AUTOMATIC GUNS
TRC-5MG

D-1. Purpose. The purpose of this inspection instruction is to provide instructions for the inspection of Machine Guns and Automatic Guns.

D-2. Policy. These inspection instructions shall be used to detect any significant deterioration of material in storage and to avoid over-inspection.

D-3. Instructions. This inspection instruction provides supplementary inspection instructions for the material in appendix A which cites the TRC of this appendix.

a. *References.*

(1) TB 9-1000-247-34 Standards for Overseas Shipment or Domestic Use of Small Arms, Aircraft Armament, Towed Howitzers, Mortars, Recoiless Rifles, Rocket Launchers, and Associated Fire Control Equipment.

(2) TM 02705E-24 & P Interim Organizational and Intermediate Maintenance Manual for Machine Gun, 7.62 MM, M60E3 (NSN 1005-01-169-7019) and Mount, Tripod, Machine Gun, 7.62 MM, M122 (NSN 1005-00-710-5599).

(3) TM 9-1005-200-20 & P Organizational Maintenance Manual for Gun, Automatic M242, (1005-01-086-1400).

(4) TM 9-1005-201-23 & P Organizational and Direct Support Maintenance Manual for Machine Gun, 5.56 MM, M249 (1005-01-127-7510).

(5) TM 9-1005-212-25 Organizational, DS, GS, and Depot Maintenance Manual Including Repair Parts and Special Tools List, Machine Gun, Caliber .30: Browning M1919A4, Flexible W/E (1005-672-1643), Machine Gun, Caliber .30: Browning M1919A6 W/E (1005-611-6005), Machine Gun, Caliber .30: M37 (1005-716-2946), Mount, Tripod, Machine Gun, Caliber .30: M2 W/E (1005-322-9718).

(6) TM 9-1005-213-25 Organizational, Direct Support, General Support, and Depot Maintenance Manual Including Repair Parts and Special Tools Lists, Machine Gun, Caliber .50: Browning, M2, Heavy Barrel, Flexible, W/E (1005-322-9715), Mount, Tripod, Machine Gun: M3 W/E (1005-322-9716), Mount, Machine Gun, Antiaircraft, M63, W/E (1005-073-3246), Machine Gun, Caliber .50: Browning, M2, Heavy Barrel, Flexible for Vehicles (1005-726-5636), Machine Gun, Caliber .50: Browning, M2, Heavy Barrel, Turret Types for: M1 Cupola (1005-693-4854), M13 Cupola (1005-

606-8412), M45 Series (1005-602-2105), M48 Tank (1005-957-3893), Commander's Cupola (1005-013-6944).

(7) TM 9-1005-224-24 Organizational, Direct Support, and General Support Maintenance Manual for Machine Gun, 7.62 MM, M60, W/E (1005-00-605-7710); Mount, Tripod, Machine Gun, 7.62 MM, M122, (1005-00-710-5599), and Machine Gun, 7.62 MM, M60D W/E (1005-00-909-3002).

(8) TM 9-1005-231-24 & P Organizational, Direct Support, and General Support Maintenance Manual Including Repair Parts and Special Tools List for Machine Gun, Caliber .50, Fixed, M85 (1005-00-690-2790).

(9) TM 9-1005-233-24 Organizational, Direct Support, and General Support Maintenance Manual Including Repair Parts and Special Tools List for Machine Gun, 7.62 MM, M73 (1005-869-8816), Machine Gun, 7.62 MM, M73A1 (1005-937-7323), and Machine Gun, 7.62 MM, M219 (1005-077-2354).

(10) TM 9-1005-246-24 Organizational, DS and GS Maintenance Manual Including Repair Parts and Special Tools List for Gun, Automatic, 20 Millimeter, M139 (1005-999-0896).

(11) TM 9-1005-286-20-1 Organizational Maintenance Manual for Gun, Air Defense Artillery, Towed: 20 MM, M167A1, Cannon M168, Carriage M42A1, Sight M61, and Radar AN/VPS-2 (NSN 1005-01-014-0837).

(12) TM 9-1005-286-34-1 Direct Support and General Support Maintenance Manual for Gun, Air Defense Artillery, Towed: 20 MM, M167A1, Cannon M168, Carriage M42A1, Sight M61, and Radar AN/VPS-2 (NSN 1005-01-014-0837).

(13) TM 9-1005-313-23 Organizational and Direct Support Maintenance Manual for Machine Gun, 7.62 MM. M240 (1005-01-025-8095) and Machine Gun, 7.62 MM, M240C (1005-01-085-4750).

(14) TM 9-1010-230-23 & P Organizational and Intermediate Maintenance Manual Including Repair Parts List, Machine Gun, 40 MM, MK19 Mod 3, NSN: 1010-01-126-9063).

(15) TM 9-1090-202-12 Operator and Organizational Maintenance Manual, Armament Subsystem, Helicopter, 7.62 Millimeter Machine Gun-2.75 Inch Rocket Launcher: M21 (1090-923-5971).

(16) TM 9-1090-202-34 Direct Support and General Support Maintenance Manual for Armament Subsystem, Helicopter, 7.62 Millimeter Machine Gun-2.75 Inch Rocket Launcher: Twin, High Rate, M21 (1005-923-5971).

(17) TM 9-1090-206-20-1 Aviation Unit Maintenance Manual for 20 MM Automatic Gun Helicopter Armament Subsystem: M97A2, PN 9324960.

(18) TM 9-1090-206-30 Aviation Intermediate Maintenance Manual for 20 MM Automatic Gun Helicopter Armament Subsystems: M97A2-PN 9324960 (1005-01-100-4469), M97A1-PN 9324699 (1005-01-063-4762).

(19) TM 9-1090-208-23-1 Aviation Unit and Intermediate Maintenance Manual for Armament Subsystem, Helicopter: M139 Gun, Automatic, 30 Millimeter: M230 Rocket Management Subsystem, Inventory Deployment: M140.

(20) TM 9-2350-202-ESC Equipment Serviceability Criteria for Gun, Antiaircraft, Artillery, Self-Propelled: Twin 40 MM, M42 and M42A1.

(21) TM 9-2350300-20-1 Organizational Maintenance Manual for Gun, Air Defense Artillery, Self-Propelled, 20 MM, M163A1, Cannon M168, Mount 157A1, Sight M61, and Radar AN/VPS-2 (NSN 2350-01-01-7-2113).

(22) TM 9-2350-300-34-1 Direct Support and General Support Maintenance Manual for Gun, Air Defense Artillery, Self-Propelled, 20 MM, M163A1, Cannon M168, Mount M157A1, Sight M61, and RadarAN/VPS-2 (NSN 2350-01-017-2113).

(23) TM 9-3045 Ordnance Field and Depot Maintenance, 40 MM Dual Automatic Gun, M2A1 and 40 MM Twin Gun Mount M4E1.

a. *Inspection Conditions.*

(1) *Field Returns.* All field returned items coded A or B shall be 100% inspected in accordance with paragraphs D-3b and D3c (5).

(2) *Inspection Lot.* An inspection lot is a group of items having the same level of packaging and year of manufacture, rebuild, or modification.

(a) *Inspection Frequency.* Inspection frequency shall be in accordance with appendix B.

(b) *Inspection Lot Disposition Criteria.* The lot shall be either accepted or rejected in accordance with paragraph D-3c.

b. *Defect Classification.*

(1) Any defect found by the visual inspection of the sample items for the Quality Defect Codes (QDCs) in

appendix A shall be classified a critical, major, or minor defect in accordance with the QDC.

(2) The failure of any applicable functional inspection or test shall be classified a major defect.

c. *Inspection Methods.*

(1) For a lot of guns, the Inspection Level (IL) shall be S-2. See Table I, Sample Size Code Letters of MIL-STD-105.

(2) For a lot of guns, the Acceptable Quality Levels shall be as follows:

<i>Majors</i>	<i>Minors</i>	
1.5	4.0	See MILSTD-105, Table II-A, Single Sampling Plan for Normal Inspection

(3) A sample from the lot of guns shall be selected in a random manner.

(4) Each item in the sample shall be inspected for damaged and/or deteriorated packaging.

(a) For sample items which do *not* have damaged or deteriorated packaging, and this inspection is the first inspection since the item's manufacture or the packaging was removed and a visual/functional inspection was conducted on sample items for this lot on the prior inspection, the inspection shall be limited to the coded defects cited in appendix A that do *not* require the removal of the packaging or effect the integrity of the packaging.

(b) For sample items that have damaged or deteriorated packaging, and/or this inspection is the second inspection for this lot since the item's manufacture or the previous inspection for this lot only inspected the packaging, the packaging shall be removed and each sample item shall be inspected for the coded defects cited in appendix A and in accordance with paragraph D-3c (5).

(5) Each sample machine or automatic gun shall be completely inspected, lubricated and assembled in accordance with the applicable referenced manual listed below (made ready to be fired, i.e., magazine inserted, mounted on a bench or the proper machine gun mount, etc.) and shall be hand operated with an inert cartridge to assure smoothness of operation of assemblies and subassemblies without interference. A minimum of two complete cycles of hand operation shall be performed on each of the machine or automatic guns. The failure of the assemblies or subassemblies due to excessive looseness, binding, interference, erratic action or other malfunction shall be classified a major defect.

<i>Gun</i>	<i>NSN</i>	<i>Number of Referenced Manual</i>
Machine Gun, 5.56 MM, M249	1005-01-127-7510	4
Machine Gun, 7.62 MM, M219	1005-00-077-2354	9
Machine Gun, 7.62 MM, M60	1005-00-605-7710	7
Machine Gun, 7.62 MM, M73	1005-00-679-6763	9
Machine Gun, 7.62 MM, M73	1005-00-869-8816	9

<i>Gun</i>	<i>NSN</i>	<i>Number of Referenced Manual</i>
Machine Gun, 7.62 MM, M134	1005-00-903-0751	15 or 16
Machine Gun, 7.62 MM, M60CA1	1005-00-906-6313	7
Machine Gun, 7.62 MM, M60D	1005-00-909-3002	7
Machine Gun, 7.62 MM, M73A1	1005-00-937-7323	9
Machine Gun, 7.62 MM, M60C	1005-00-973-0375	7
Machine Gun, 7.62 MM, M240	1005-01-025-8095	13
Machine Gun, 7.62 MM, M240C	1005-01-085-4758	13
Machine Gun, 7.62 MM, M60E3	1005-01-169-7019	2
Machine Gun, 7.62 MM, M240E1	1005-01-252-4288	13
Machine Gun, .30 Cal. M1919A6	1005-00-611-6005	5
Machine Gun, .30 Cal, M1919A6	1005-00-672-1649	5
Machine Gun, .30 Cal, M1919A4	1005-00-714-2393	5
Machine Gun, .30 Cal. M1919A4E1	1005-00-716-2922	5
Machine Gun, .30 Cal, M37	1005-00-716-2946	5
Machine Gun. .30 Cal, M37	1005-00-856-7528	5
Machine Gun, .50 Cal, M2	1005-00-013-6944	6
Machine Gun, .50 Cal, M2	1005-00-077-1658	6
Machine Gun, .50 Cal, M213	1005-00179-6526	-
Machine Gun, .50 Cal, M2	1005-00-322-9715	6
Machine Gun, .50 Cal, M2	1005-00-602-2105	6
Machine Gun, .50 Cal, M2	1005-00-606-8412	6
Machine Gun. .50 Cal, M85	1005-00-690-2790	8
Machine Gun, .50 Cal, M2	1005-00-690-3854	6
Machine Gun, .50 Cal, M2	1005-00-726-5636	6
Machine Gun, .50 Cal, M2	1005-00-957-3893	6
Automatic Gun, 20 MM, M195	1005-00-133-8215	-
Automatic Gun, 20 MM, M197	1005-00-369-0915	17 or 18
Cannon, 20 MM, Air Def, M168	1005-00-895-3726	11, 12, 21, 22
Automatic Gun, 20 MM, M139	1005-00-999-0896	10
Automatic Gun, 25 MM, M242	1005-01-086-1400	3
Automatic Gun, 30 MM, M140E2	1005-00169-6944	-
Automatic Gun, 30 MM, M230	1005-01-219-7599	19
Cannon. 40 MM, Auto Gun, M2A1	1010-00-730-5371	20 & 23
Machine Gun, 40 MM, MK19 Mod 3	1010-00-126-9063	14

(6) The lot of guns shall be rejected if the number of major defects exceeds the acceptance number of major defects allowed in Table II-A of MIL-STD-105 for the appropriate sample size. and an AQL of 1.5 and/or if the number of minor defects exceeds II-A of MIL-STD-105 for the appropriate sample acceptance number of minor defects allowed in Table size and an AQL of 4.0.

(7) A defective gun shall remain defective until it is repaired, or replaced. The defective gun may be dispositioned to "use as is" by the local Material Review Board (MRB).

D-4. Report and Reporting. The report and reporting shall be in accordance with paragraph 2-9.

By Order of the Secretary of the Army:

Official:

R. L. DILWORTH

Brigadier General, United States Army

The Adjutant General

CARL E. VUONO

General, United States Army

Chief of Staff

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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



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