# DEPARTMENT OF THE ARMY SUPPLY BULLETIN

Storage Serviceability Standard for USAECOM Materiel

# POWER SUPPLIES (FSC 5805)

Headquarters, Department of the Army, Washington, D.C. 20 January 1970

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	SECTION I.		
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<sup>1.</sup> Purpose. This bulletin provides a storage serviceability standard which establishes uniform criteria for determining the acceptability of the items designated herein for continued storage and/or issue on the condition that all specifications and requirements applicable to the items have previously been met at the time of receipt from new procurement, or

after repair, overhaul, or rebuild by a CONUS depot maintenance shop.

2. Scope. This bulletin applies to all activities engaged in the receipt, storage, and issue of USAECOM power supplies (FSC 5805) listed in appendix B with the applicable Federal stock numbers.

- 3. General. It is the Army's objective to attain and maintain a constant materiel readiness status for materiel in depot stocks. The scope of such an objective is of such magnitude that only general guidelines are provided by chapter 3, section VIII of TM 743-200-1 for the quality evaluation of materiel in the custody of supply and storage activities. This standard supplements TM 743-200-1 by providing a systematic procedure for storage cyclic inspection of the power supplies specified in paragraph 2 and indicates the limiting degree of deterioration, damage, unsatisfactory storage practices, and other characteristics which are acceptable. It also establishes the basis for identifying material requiring segregation, remedial care and preservation, or reclassification action. Applicable requirements of the standard may be used for performing receipt and preshipment quality control inspections.
- 4. Definitions. a. Definitions for the majority of specialized terms used can be found in MIL-STD-109A.
  - b. Definitions for other specialized terms

are as follows:

- (1) Storage serviceability standard. A written procedure providing storage methods and standards and prescribing the necessary requirements for the surveillance of materiel in storage.
- (2) Storage quality level (SQL). That quality level applicable to storage sampling inspection expressed in terms of percent defective or defects per 100 units, whichever is applicable, specified for a given group of defects of a product. It is the maximum allowable accidental departure from specification requirements which can be tolerated.
- 5. R e p o r t i n g of Supply Bulletin Improvements. Reporting of errors, omissions, and recommendations for improving this publication by the individual user is encouraged. Reports should be submitted on Form 2028 (Recommended Changes to DA Publications) and forwarded direct to Commanding General, U. S. Army Electronics Command, ATTN: AMSEL-ME-NMP-EM, Fort Monmouth, N. J. 07703.

#### SECTION II.

## STORAGE AND SPECIAL INSTRUCTIONS

- 6. Preservation, Packaging, and Packing. Preservation, packaging, and packing will be in accordance with the requirements listed in appendix C. Items designated by 17-digit code shall be preserved and packaged in accordance with MIL-STD-726C; packing shall conform to the requirements specified in MIL-1'-55585 (EL). Items designated by military specifications shall be preserved, packaged, and packed in accordance with the requirements in the cited specification. Items designated by an asterisk (\*) shall be preserved, packaged, and packed in accordance with the special instructions cited for the item.
- 7. Marking. Marking will be in accordance with MIL-STD-129D.
- 8. Storage. *a. Type.* Controlled humidity warehouse or heated warehouse.
- b. Age Control. Power supplies will be issued on a first-in-first-out (FIFO) basis by date of manufacture, or date of rebuild.
- c. Shelf Life. Power supplies are subject to deterioration during storage and are required to be inspected and tested as specified in appendix D.

#### APPENDIX A

#### **REFERENCES**

MIL-T-10623	Terminal, Telephone AN/TCC-7.
MIL-P-55224	Power Supply PP-1209( )/FG.
MIL-P-55585 (EL)	Packing and Marking Requirements for Southeast Asia and Stratcom and Preparation for Delivery Requirements of Electronics Equipment and Components.
MIL-STD-109A	Quality Assurance Terms and Definitions.
MIL-STD-129D	Marking for Shipment and Storage.
MIL-STD-726C	Packaging Requirements Code.
TM 743-200-1	Storage and Materials Handling.

# APPENDIX B

# FEDERAL STOCK NUMBERS AND TEST REQUIREMENTS

Туре	FSN	Publication	Test requirements
PP-826/U	5805-500-4370"	TM 11-2139-35, C4	Para 180, 181, 182, and 187 Para 179 and 186 Chapter 5 (DIS) Para 68, 69 and 70 Para 38, 39, 40 and 41
PP-827/U	5805-500-4436	TM 11-2139-35, C4	
PP-1209/FG	5805-340-3559	TM 11-5805-239-35	
PP-1886/GT	5805-578-6441	TM 11-5805-203-15	
PP-2855/GT	5805-753-1970	TM 11-5805-314-35	

# APPENDIX C

# PRESERVATION, PACKAGING, AND PACKING

Type	Requirements			
PP-826/U	MIL-T-10623			
PP-827/U	MIL-T-10623			
PP-1209/FG PP-1886/GT*	MIL-P-55224			

4Q-1-1-00-00-JJ-X-ED-0-00-A PP-2855/GT

- 1. Preservation and Packaging. Preservation and packaging shall be level A or C, as specified.
  - a. Level A.
- (1) Cleaning. Cleaning shall be accomplished in accordance with process C-1 of MIL-P-116.
- (2) Drying. Drying shall be accomplished in accordance with the applicable procedure of MIL-P-116.
- (3) Preservation application. None required.
- (4) Unit packaging. Unit packaging shall be in accordance with the methods pres-

<sup>\*</sup>Use special packaging instructions (para 1, 2, and 3 above).

cribed in MIL-P-116 and as specified in this appendix.

- (a) Technical literature. Each technical literature shall be packaged method 1C-1.
- (b) Packaging development. Each power supply shall be packaged individually in accordance with method IIb of MIL-P-116. Packaging shall be developed in accordance with method IIb, using kinds and types of materials which, when applied, will afford adequate protection against corrosion, deterioration, and damage during worldwide shipment, handling, and storage. The outer container of a method IIb package shall conform to the requirements of PPP-B-636, type CF, class weather-resistant. Closure shall be in accordance with the appendix of the box specification.
- b. Level C. Each power supply shall be preserved and packaged in a way that will afford adequate protection against corrosion, deterioration, and damage during shipment from the supply source to the first receiving activity.
- 2. Packing. Packing shall be level A, B, or C, as specified.
  - a. Level A.
- (1) Each power supply, packaged as specified in paragraph 1, shall be packed in close-fitting boxes conforming to PPP-B-621, class 2, or box cleated plywood PPP-B-601 overseas type. Place the technical literature,

- packaged as specified in paragraph 1a(4) (a), on top of the packaged unit directly under the lid of the container.
- (2) Closure shall be in accordance with the applicable container specification or appendix thereto.
- (3) Metal strapping, conforming to QQ-S-781, type 1, class B, shall be applied to wood and wood-cleated shipping containers in accordance with the requirements of the applicable box specification or appendix thereto. Fiberboard shipping containers shall be reinforced by pressure-sensitive filament tape banding, or nonmetallic strapping conforming to PPP-T-97, type IV, and PPP-S-760, type II, respectively; selection of the material and application shall be in accordance with the appendix of the applicable box specification.
- b. Level B. Each power supply, packaged as specified in paragraph 1, shall be packed as specified in paragraph 2a, except that the nailed wood box shall conform to PPP-B-621, class 1 or PPP-B-601 class domestic.
- c. Level C. Each power supply shall be packed in shipping containers in a way that will afford adequate protection against damage to the package and its contents during shipment from the supply source to the first receiving activity. Shipping containers shall comply with the rules and regulations of the common carrier as applicable to the mode of transportation.
- 3. Inspection. Inspection of military packaging shall be in accordance with MIL-P-116.

### APPENDIX D

#### STORAGE QUALITY ASSURANCE PROVISIONS

- 1. Index Number. The four-digit index number of this storage quality assurance provision (SQAP) (reserved for future use in automatic data processing) is to be assigned.
- 2. Federal Stock Number. Each item listed in appendix B, with its Federal stock number, is subject to the provisions of this SQAP.
- 3. Definitions. Special terms used in this SQAP are defined as follows:
- a. Acceptance Quality Level (AQL). The nominal value expressed in terms of percent defective or defects per 100 units, whichever is applicable, specified for a given group of defects of a product. It is the maximum allowable accidental departure from specification requirements which can be tolerated.
- b. Storage Quality Level (SQL). That quality level applicable to storage sampling inspection expressed in terms of percent defective or defects per 100 units, whichever

is applicable, specified for a given group of defects of a product. It is the maximum allowable accidental departure from specification requirements which can be tolerated.

- c. Defect, Any nonconformance of the unit of product with specified requirements.
- d. Defective Unit. A unit of product which contains one or more defects.
- e. Critical Defect. A defect that judgement and experience indicate is likely to result in hazardous or unsafe conditions for individuals using, maintaining, or depending on the product performance of the tactical function of a major end item, such as a ship, aircraft, tank, missile, or space vehicle.
- f. Major Defect. A defect other than critical that could result in failure, or materially reduce the usability of the product for its intended purpose.
  - a. Minor Defect. A defect that does not

materially reduce the usability of the unit of product for its intended purpose, or is a departure from established standards having little bearing on the effective use or operation of the unit.

- h. Mechanical-Visual Inspection. An inspection by visual means to observe the item and/or its packaging and packing to detect deficiencies. Mechanical-visual inspection may require disassembly.
- i. Technical Inspection, A complete functional inspection, including disassembly, where required, and performance testing and /or laboratory testing.
- 4. Specifications, Technical Manuals, and O the r Documents. The following documents of the latest issue in effect, contain inspection and testing information, data, and instructions applicable to these quality assurance provisions:

١.	Minor Defect.	А	derect	เทลเ	does not	VISIOTIS.
	Publication				Title	
	DA Pam 310-4					al Manuals, Technical Bulletins, Supply Manuals (types 7, 8, / Bulletins, and Lubrication Orders.
	DA Pam 310-7				U.S. Army Equip	ment Index of Modification Work Orders.
	AR 725-50				Requisitioning, Re	eceipt, and Issue System.
	MIL-P-116E				Preservation, Met	hods of.
	MIL-P-11268F				Parts, Materials a	nd Processes Used in Electronic Communication Equipment.
	MIL-M-13231A				Marking of Electr	onic Items.
	MIL-STD-105D				Sampling Proced	ures and Tables for Inspection by Attributes.
	MIL-STD-109A				Quality Assurance	e Terms and Definitions.
	MIL-STD-129D				Marking for Shipn	nent and Storage.
	MIL-STD-130C				Identification Ma	rking of U.S. Military Property.
	MIL-STD-252A				Wired Equipment	, Classification of Visual and Mechanical Defects.
	MIL-STD-726				Packaging Require	ements Code.
	TB SIG 355-1				Depot Inspection	Standard for Repaired Signal Equipment.
	TB SIG 355-2				Depot Inspection	Standard for Refinishing Repaired Signal Equipment.
	TB SIG 355-3					Standard for Moisture and Fungus Resistant Treatment.
	TB 750-236				Calibration Requi	rements for the Maintenance of Army Materiel.
	TM 11-2139-35				DS, GS, and Dep Tool Lists: Te	ot Maintenance Manual Including Repair Parts and Special rminals, Telephone AN/TCC-7 and AN/TCC-50.
	TM 11-5805-203-15				Telephone Sig	zational, Field and Depot Maintenance Manual: Converter, nal CV-566/GT.
	TM 11-5805-239-35				DS, GS, and Dep 1209A/FG, PP	ot Maintenance Manual: Power Supplies PP-1209/FG, PP- P-1209B/FG and PP-1209C/FG.
	TM 11-5805-314-35				Field and Depot No. Telephone Sig	Maintenance Repair Parts and Special Tool Lists: Converters, and CV-870/GT and CV-884/GT.
	TM 38-750				Army Equipment	Record Procedures.

5. Other Directives.

Publication
AR 795-17
General Policies and Principles for Furnishing Army Materiel on a Grant Aid Basis.
AR 795-204
General Policies and Principles for Furnishing Defense Articles and Services on a Sale or Loan Basis.

- 6. Inspection Criteria. a. Lot Criteria.
- (1) Lot definition. A lot is defined as a group of like items from which a sample is to be drawn and inspected to determine conformance with the acceptability criteria. The following are examples:
- (a) A group of like items in storage which were received in a shipment with the following identical markings:
  - 1. Purchase order number.
  - 2, Date packaged or packed.
  - 3. Depot certification stamp and date.
- (b) A group of like items repaired or rebuilt by the Maintenance Division in one production run.
- (2) Lot formation. The items shall be assembled into identifiable lots. Each lot shall, as far as practicable, consist of units of product of a single type, grade, class, size, and composition manufactured, repaired, or rebuilt at the same time and stored under the same conditions.
- (3) Lot size. The lot size is the total number of individual like items in the lot that is to be inspected.

# b. Sampling Procedure.

- (1) Sample selection. Select samples of materiel in a way which will assure that each unit in the lot has an equal chance of being selected. Biased methods, such as selecting items from the same position in a container, pallets, or stacks; taking items all from one location; or selecting items that appear defective, will not be used.
- (2) Sample size. Use table 1 of MIL-STD-105D, General Inspection Level II, to obtain the sample size code letter, and table Z-A of MIL-STD-105D to obtain the sample size using the storage quality levels shown in (3) below.
  - (3) Storage quality levels (SQL).
- (a) Mechanical-visual inspection: Critical SQL 1.0 percent; major SQL 2.5 percent; minor SQL 10 percent.
- (b) Electrical: Critical SQL 1.0 percent; major SQL 2.5 percent.
- (c) Preservation, packaging, packing, and marking: major SQL 4.0 percent; minor SQL 10 percent.
  - (d) The acceptance or reject number for

- the above SQL shall be the same as those shown for comparable acceptance quality levels (AQL) in table 2-A of MIL-STD-105D.
- c. *Inspection Requirements*. The following mechanical-visual inspections shall be performed:
- (1) Inspect case for physical damage, condition, and finish.
- (2) Inspect all controls and switches for proper operation and loose or missing hardware.
- (3) Inspect all connectors, plugs, and cord receptacles for condition and damage.
- (4) Inspect assembly for physical damage, condition, missing parts, foreign objects, and finish.
- (5) Inspect cabling and wiring for potential short circuits, cuts, breaks, fraying, deterioration, kinks, and strain.
- (6) Inspect solder connections for missing solder, cold solder, insufficient solder, excessive solder, and improper wrap.
- (7) Inspect for illegible, incorrect, or missing markings.
- (8) Inspect for corrosion, dirt, moisture, and fungus.
- (9) Inspect all parts and hardware for damage and rendition.
- d. Test Requirements. Perform those tests that are specified for each power supply listed in appendix B.
  - e. Defect Classification.
    - (1) Mechanical-Visual.
- (a) Critical. Refer to the definition of a critical defect.
  - (b) Major.
- 1. Damage due to handling or storage (crushed, deformed, or broken).
- 2. Soldering: defects as listed in MIL-STD-252A.
- 3. Solderless connectors: defects as listed in MIL-STD-252A.
- 4. Cabling and wiring: defects assisted in MIL-STD-252A.
- 5. Hardware: defects as listed in MIL-STD-252A.
- 6. Foreign objects: defects as listed in MIL-STD-252A.

- 7. Potential short circuits: defects as listed in MIL-STD-252A.
- 8. Finish: defects as listed in MIL-STD-252A.
- 9. Marking: defects as listed in MIL-STD-252A.
- 10. Parts: defects as listed in MIL-STD-252A.
- 11. Contacts: defects as listed in MIL-STD-252A.
  - 12. Plating, painting, or MFP missing.
- 13. Dimensional: a dimensional defect which directly affects interchangeability, assembly, or operation.
  - (c) Minor.
- 1. Soldering: defects as listed in MIL-STD-252A.
- 2. Solderless connectors: defects as listed in MIL-STD-252A.
- 3. Cabling and wiring: defects as listed in MIL-STD-252A.
- 4. Hardware: defects as listed in MIL-STD-252A.
- 5. Finish: defects as listed in MIL-STD-252A.
- 6. Marking: defects as listed in MIL-STD-252A.
- 7. Parts: defects as listed in MIL-STD-252A.
- 8. Contacts: defects as listed in MIL-STD-252A.
  - (2) Electrical.
- (a) Critical. Refer to the definition of a critical defect.
- (b) Major. Any electrical defect, other than critical, that does not meet the requirements specified for each item shall be considered a major defect.
- (c) Minor. None. All electrical defects shall be considered critical or major, as applicable.
  - (3) Packaging and marking-major.
- (a) Use of improper or defective material.
- (b) Quantity in unit package not as specified.
  - (c) Incorrect packaging method applied.

- (d) Cushioning or padding omitted.
- (e) Cushioning or padding inadequate for the protection of the barrier material from projections, sharp edges, or other similar features of the item.
- (f) Cushioning inadequate for the physical and mechanical protection of the item.
- (g) Unsealed, punctured, or improperly sealed barrier bag, wrap, or envelope.
- (h) Stock number omitted, incorrect, or illegible.
- (i) Nomenclature omitted, incorrect, or illegible.
- (j) Marking of quantity of items in package omitted, incorrect, or illegible.
- (k) Different stock numbered items in the same unit package.
  - (4) Packaging and marking-minor.
- (a) Item not properly blocked or braced within the unit package to prevent movement.
  - (b) Packaging material damaged.
- (c) Conforming or cushioning wraps are not snug fitting and contain voids.
- (d) Air not expelled from barrier before sealing.
- (e) Any item of marking information, other than (3)(h), (i), and (j) above listed under major defects, omitted., incorrect, or illegible.
  - (5) Packing and marking-major.
- (a) Use of improper or defective material.
  - (b) Quantity in pack not as specified.
- (c) Gross weight in excess of specified amount.
  - (d) Box closure not as specified.
- (e) Type, grade, class, and style of the shipping container not as specified.
  - (f) Strapping omitted (when required).
- (g) Strapping inadequate or incorrectly applied (when required).
- (h) Items not adequately blocked, braced, or cushioned within the shipping container to prevent movement or damage.
- (i) Shipping documents or packing list omitted.
  - (j) Stock number omitted, incorrect, or

illegible.

- (k) Nomenclature omitted, incorrect, or illegible.
- (I) Marking of quantities of items in pack omitted, incorrect, or illegible.
- (m) Destination marking omitted, incorrect, or illegible.
- (n) Special marking or labeling (when required) omitted, incorrect, or illegible.
- (o) Overseas code marking (when required) omitted, incorrect, or illegible.
  - (6) Packing and marking-minor.
    - (a) Unsealed carton.
    - (b) Defective taping or sealing of carton.
- (c) Any other box defect which may be considered minor by definition of MIL-STD-105.
- (d) Any item of required marking information, other than (5)(j) through (o) above, listed under major defects omitted, incorrect, or illegible.
- f. Calibration of Measuring and Test Equipment. All measuring and test equipment shall have been calibrated and certified within its prescribed period in accordance with TB 750-236 before use. Certification shall be affixed in such a way as to preclude any altering or tampering.

- g, Storage Inspection Records. Results of inspections and tests shall be recorded on data sheets and a copy attached to each unit.
- 7. Inspection Frequency.
- a. Controlled humidity warehouse: 60 months.
  - b. Heated warehouse: 36 months.
  - c. Unheated warehouse: 18 months.
- 8. Type of Storage. Controlled humidity warehouse or heated warehouse.
- 9. Other Instructions. a. Rejected Lots. Each rejected lot shall be tagged and reclassified into the proper condition code in accordance with AR 725-50. For other than new material, all defective units in a lot shall be repaired, or disposition requested in accordance with AMC and depot procedures.
- b. Repackaging of Samples Inspected. Restore the packaging of the samples inspected and accepted to the level of the lot from which the samples were drawn.
- 10. Special Requirements. If the subject items are allocated for Foreign Military Sales, Grant Aid, or Loan, the following additional requirements must be met:
  - a. Policies and Special Conditions.

Publication AR 795-17 Title

General Policies and Principles for Furnishing Army Materiel on a Grant Aid Basis.

AR 795-204

General Policies and Principles for Furnishing Defense Articles and Services on a Sale or Loan Basis.

DD Form 1513 Offer and Acceptance.

Note: Special terms, conditions, and agreements with the customer country and shown on the DD Form 1513 must be complied with as well as any special instructions from the responsible commodity command.

- b. Basic Issue List Items (BILI). BIL1 deck, normally furnished to the depots by USAECOM BILI Office, Lexington Blue Grass Army Depot, Lexington, Ky, office symbol AMSEL-ME-NMP-MR-L, shall be used.
- c. Level A Packaging and Packing. Level A packaging and packing is mandatory for

Foreign Military Sales and Grant Aid shipments.

d. Depot Documentation. Depot documentation of final acceptance shall be furnished the ECOM quality check team *before* ECOM inspection.

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

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