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## KIT PACKAGING – COLLECTION OR GROUPING OF ITEMS FOR INSTALLATION/ASSEMBLY

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### **1.0 SCOPE**

This standard provides for the kitting of multiple items required for the assembly, repair or refurbishing of a component or a top assembly, which for engineering/manufacturing/ordering purposes, requires separate identification and segregation of individual parts within the shipping package.

### **2.0 REFERENCES**

- 2.1 Lockheed Packaging Standard LPS 40-001
- 2.2 Lockheed Packaging Standards, Volume 3
- 2.3 NAS Packaging Standard 3428

### **3.0 REQUIREMENTS**

#### **3.1 GENERAL**

- 3.1.1 Unless otherwise specified by the procurement document, the unit quantity shall be one (1) kit.
- 3.1.2 Identical items within each kit shall be packaged and identified separately from other kit items. Unless otherwise specified unit package quantity shall be consistent with kit assembly requirements. Hardware of the same part number, e.g., nuts, screws, washers, rivets, etc., may be collectively packaged within the same bag, box or package.
- 3.1.3 Unless otherwise specified, preservation and packaging of kits shall provide adequate protection from deterioration and damage during handling, shipment, or storage for a period of 90 days.
- 3.1.4 Items susceptible to damage from shock/vibration induced by transportation and handling environments, shall be properly protected with suitable cushioning, dunnage, containers, etc., to assure safe delivery at destination.
- 3.1.5 Critical areas/surfaces of an item shall be protected from abrasion by wrapping, interleaving, sleeving, capping, etc.
- 3.1.6 Electrical connectors, receptacles, etc., with exposed pins, contacts, shall be protected with proper size caps/covers (Ref Paragraph 5.3). Openings/vents critical to the function of an item shall be sealed or plugged to prevent entry of moisture or other contaminants.
- 3.1.7 Exposed silver or silver-plated parts shall be protected with tarnish inhibitor material. Minimum surface area of the tarnish inhibitor shall be twice the area of the silver surface of the items.

**NOTE:** The treated side of the inhibitor material must be facing the items.

**CAUTION:** ITEMS HAVING ANY SURFACES INCOMPATIBLE WITH THE TARNISH INHIBITOR SHALL BE COMPLETELY WRAPPED WITH A NEUTRAL MATERIAL PRIOR TO APPLICATION.

- 3.1.8 Tarnish inhibitor may be adjacent to but shall not be allowed to come in contact with chemically finished surfaces such as anodize, iridite, chromate coating and other nonferrous metals (e.g., cadmium, copper and brass).
- 3.1.9 The use of skin (plastic film) type group packaging on a noncorrosive backing board is permissible for those items compatible with the process, providing that proper protection and identification is maintained in accordance with this standard.
- 3.1.10 Unless otherwise specified, when preservatives are required for protection, e.g., antifriction bearings, bare metal, etc., the preservative/wraps shall be proper for the item, e.g., compliance with MIL-B-197 (Bearings, Antifriction Packaging of) is MANDATORY.
- 3.1.11 Items of dissimilar metals subject to damage from electrolytic action shall be protected by preservatives, coating, desiccant, etc., as required.

- 3.1.12 Hazardous materials, e.g., chemicals, toxic compounds, explosives, poisons, flammable, etc., included in the kit **SHALL NOT** be packaged and shipped in the same packages/containers with nonhazardous items. Shipments of hazardous materials shall be properly identified, packaged and marked in compliance with applicable carrier/state/federal regulations.

**NOTE:** Packaging of explosives shall be in accordance with LPS P-111 (latest revision). Packaging of other hazardous materials shall be in accordance with LPS P-41 (latest revision).

- 3.1.13 AGE control items, e.g., O-rings, gaskets, seals, etc., shall be individually packaged and marked in accordance with LPS P-39 (latest revision).
- 3.1.14 Each container/package shall be of minimum weight and cube consistent with standard commercial practices.
- 3.1.15 A list of all items in each kit shall be provided and included with every kit. The list (Figure 4) shall contain the item(s), part number, description, quantity, supplier identity and applicable purchase order number, etc. Hazardous items shall be identified with the proper shipping name (refer to Department of Transportation Hazardous Materials Regulations/Carrier Regulations, as applicable), appropriate warning label, flashpoint, other restrictive information as necessary.

### 3.2 UNIT PACKAGING

- 3.2.1 The unit package shall consist of an individual wrap/bag/container/package protecting an identical part(s) within a kit assembly. Each package shall provide intimate protection for the item(s) prior to consolidation within a shipping container (see Figure 1 and Figure 2 for some examples). See Lockheed Packaging Standards Volume 3 for other acceptable examples.
- 3.2.2 Selection of a unit package is optional (for exception see Paragraph 3.1.9), providing that the general requirements of this standard are met.

### 3.3 INTERMEDIATE PACKAGING – (Consolidation of Unit Packages, when applicable)

- 3.3.1 Unit packages consisting of a barrier/bag (unacceptable by common carrier) shall be overpacked in an exterior container for shipment.
- 3.3.2 Unless otherwise specified, the number of unit packages per intermediate container (containing identical parts) shall be limited to the dimensions and gross weight provisions of the container specification (Ref Carrier Regulations).
- 3.3.3 Pack any number of unit packages uniformly in appropriate containers.
- 3.3.4 Fill all voids with suitable dunnage, blocking, or bracing to prevent damage during handling/shipment.

### 3.4 PACKING

- 3.4.1 Pack any number of intermediate containers uniformly into each shipping container.
- 3.4.2 Shipping containers as packed, shall protect each item and package during ordinary handling and shipping and shall meet the minimum requirements of the common carriers for acceptance for safe transportation at the lowest rate to the point of delivery.
- 3.4.3 Intermediate containers which meet the requirements of Paragraph 3.4.2 may be used as shipping containers.
- 3.4.4 Enclose or attach a copy of packing slip to the shipping container.

### 3.5 MARKING

#### 3.5.1 Unit Package Marking

Label or mark each package with the part number, quantity, special marks as applicable, and supplier identity. Packages containing tarnish inhibitor shall be marked/labeled: “Protected with Tarnish Inhibitor – Do Not Open Until Ready for Use or Inspection.”

#### 3.5.2 Intermediate Packaging Marking (when applicable)

Label or mark each container with the part number, quantity, special marks as applicable and supplier identity.

3.5.3 Shipping Container Marking

Label or mark each container to show kit number per contracting document, the LMSC contracting document number, supplier, destination and quantity.

3.5.4 Special, precautionary, and handling markings shall be applied as required.

**4.0 QUALITY ASSURANCE**

4.1 Packaging shall be accomplished in such a manner as to prevent physical damage to, or degradation of, the packaged items during delivery to the using activity. It shall be the prerogative of LMSC to return damaged items, at supplier's expense, when such damage is attributable to improper or inadequate protection.

**5.0 NOTES**

5.1 The following information is intended as a guide or aid to suppliers in meeting the requirements of this specification.

5.2 DEFINITION – Unprotected Silver Surfaces. All metallic silver surfaces (having stringent reflectivity or conductivity requirements, close tolerance finishes and/or dimensions, without supplementary tarnish-resistant treatment), the deterioration of which may result in premature failure or malfunction of the item or equipment having such surfaces.

5.3 REFERENCES

Federal Specification QQ-S-365, "Silver Plating, Electrodeposited; General Requirements for"

Tarnish Inhibitor Source – "Silver-Saver," Daubert Chemical Co., Oakbrook, IL

Protective Caps, MS 25177, 25178, 9036, NAS 813, 820

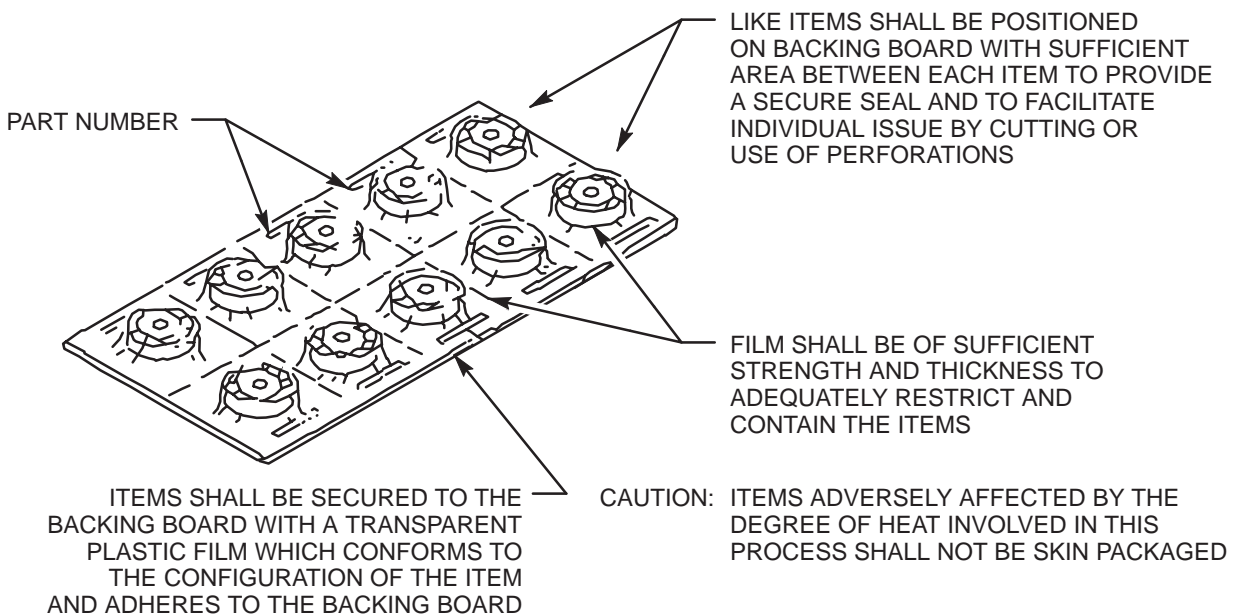


Figure 1. Skin Package (Unit Package)

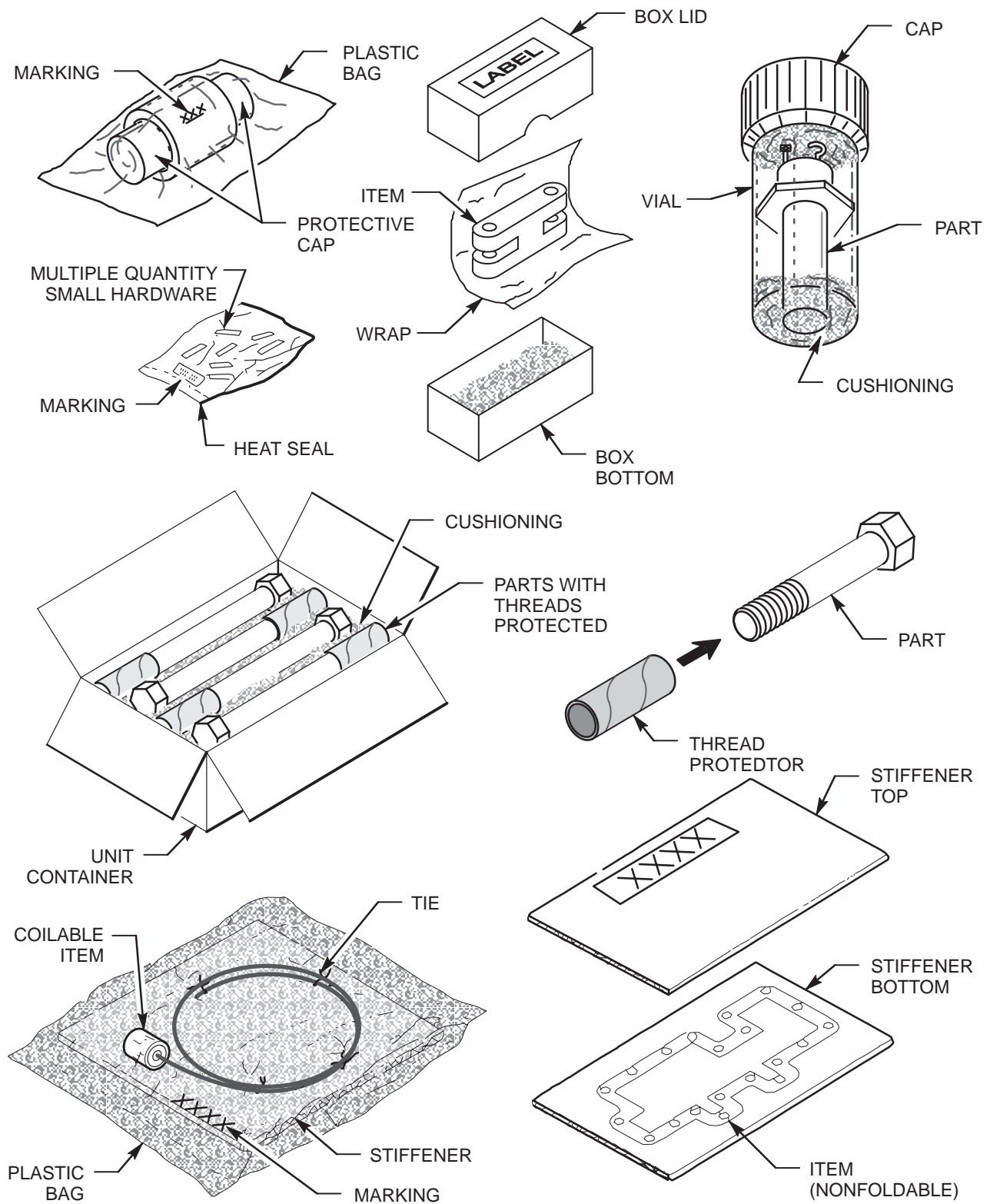


Figure 2. Unit Packages (Examples)

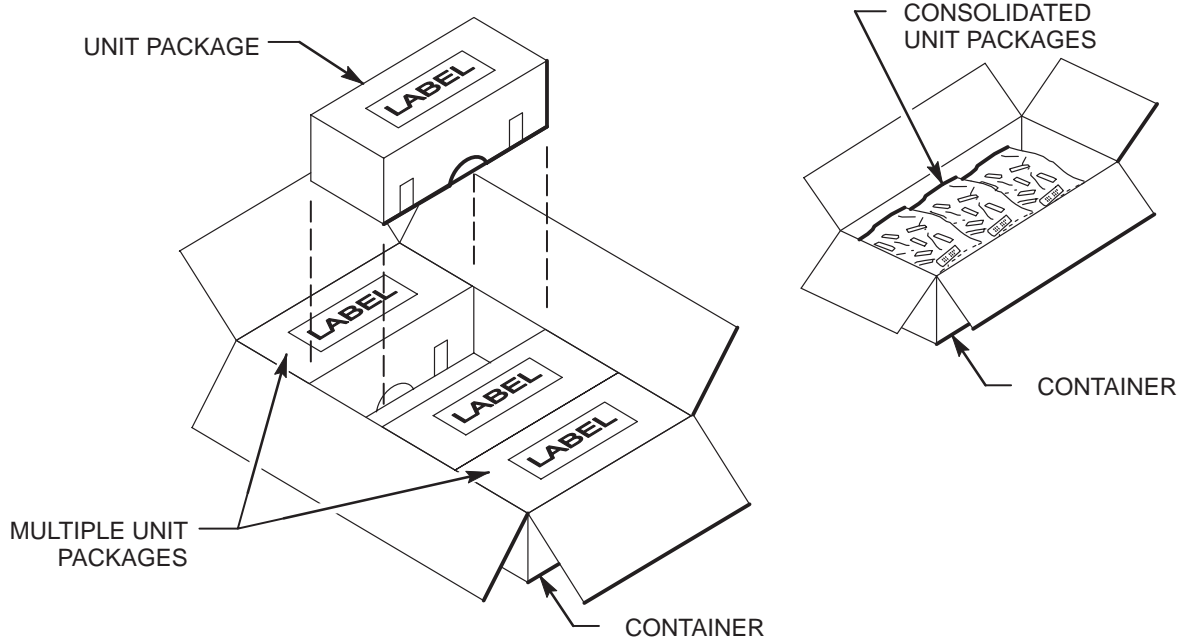


Figure 3. Intermediate Packaging

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KIT CONTENTS LIST					Page _____ of _____
Kit Assy Part Number		Description	Suppliiir/ P.O. Number		Date
XXXXXX-501		Motor Repair Kit	XXXXXX		XXX
Item NBR	Part No.	Description (Noun) (Remarks)	Kit Qty	Qty/ Pkg	Type Pkg (Vial, Bag, ect.)
1	9999-9	Bellows	24	1	Poly Bag
2	9998-X	Screw	100	100	Skin Pk
3	9997-Y	Resistor	25	1	Blister
4	9996-Z	O-ring	10	1	P-39A
5	A-991	Sealant - Flam Liquid NOS F.P.60 Deg F.C.C. Dot Red Flam Liquid Label	1 Pt	1	Can

NOTE: Above parts (Items 1 - 4) are packed in box #1 of 2.  
Items 5 is packed in box #2 of 2

Figure 4. Kit Contents List (Example)

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