LMSSC PACKAGING STANDARD

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ONE PART CLEANED/PACKAGED TO SPECIFIC REQUIREMENTS

1.0 SCOPE

- 1.1 This standard provides a method for packaging of contamination controlled parts, components, lines, etc., assuring retention of the cleanliness level specified for the item.
- 1.2 Should there be a conflict between this packaging standard and program documentation regarding contamination (i.e., the contamination control plan, drawing or subcontract) the requirements in program documentation shall take precedence.

2.0 REFERENCES

- 2.1 Lockheed Packaging Standard LPS 40-001
- 2.2 NAS Packaging Standard 3447

3.0 REQUIREMENTS

- 3.1 GENERAL
 - 3.1.1 The quantity per unit package shall be one (1) each.
 - 3.1.2 The item shall be cleaned to the level of cleanliness specified in the applicable item drawing/specification.
 - 3.1.3 Environment controlled work area, cleaning processes and materials shall be in conformance with standards invoked by the applicable environmental controlled document.
 - 3.1.4 Special attention shall be given to the handling of clean hardware prior to packaging, to ensure that extraneous particulate contamination is not introduced into cleaned hardware before packaging.
 - 3.1.5 All materials/devices in intimate contact with a significant surface or sealed within an intimate barrier shall be as clean as required for item. The material in direct contact with the item shall not deposit contaminants on the item to an extent greater than that permitted by the applicable cleanliness requirement.
 - 3.1.6 Unless otherwise specified <u>external</u> threaded fittings/ports shall be sealed with proper size nonshedding, nonabrading caps of acetal polymers (Delrin or Celon), or by sealing with Capran 980 Nylon 6 plastic film.
 - 3.1.7 Unless otherwise specified, <u>internal</u> plugs or push-on type caps <u>shall not be used</u>. Internal ports/openings shall be sealed with Capran 980 Nylon 6 plastic film.
 - 3.1.8 Pressure-sensitive tape may be used to secure wraps over ports/fittings, etc., but the tape <u>shall not</u> contact critical surface areas.
 - 3.1.9 Unless otherwise specified, <u>halogenated</u> plastics (materials containing elements of fluorine, chlorine, bromine or iodine) <u>shall not</u> be used for any clean room packaging application.
 - 3.1.10 Any conflict between the use of packaging materials or methods specified in this standard and the item specification requirements, the requirements of the item specification shall take precedence.

3.2 UNIT PACKAGING

- 3.2.1 Unless otherwise specified, the cleaned item shall be placed in a transparent Capran 980 Nylon 6 bag, minimum .002-inch thick. Expel excess air from bag and close by heat sealing. Allow sufficient material to permit at least one additional heat seal.
 - a. Place bagged item into a second bag made from transparent polyethylene, minimum .004-inch thick. Expel air and heat-seal bag per Paragraph 3.2.1.
 - b. Each bagged item (with the exception of long irregularly formed lines) shall be individually over packaged/immobilized into a folding, setup or corrugated container.

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- c. Irregularly formed or long length lines may be collectively packaged/immobilized into a corrugated container(s) of appropriate size. Packaged lines shall be adequately immobilized in container to prevent damage during handling/shipment.
- d. Dunnage used to immobilize clean packaged items shall provide adequate protection to the item or bag to prevent damage during handling/shipment (Ref Paragraph 5.2).

3.3 INTERMEDIATE PACKAGING (Consolidation of Unit Packages)

- 3.3.1 Pack unit packages containing identical items uniformly into paperboard/fiberboard containers. Gross weight/dimensions of each container shall not exceed its design specification.
- 3.3.2 Fill all voids with suitable dunnage, blocking or bracing as required.

3.4 PACKING

- 3.4.1 Pack 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 <u>Unit Packaging Marking</u> - Unless otherwise specified, label or mark each package to show the part number per contracting document, supplier identity, and the following:

 CAUTION:
 HANDLE WITH CARE. OPEN ONLY FOR INSTALLATION OR STATISTICAL INSPECTION IN A CONTROLLED AREA COMPATIBLE WITH PART REQUIREMENTS.

 CLEANED PER SPECIFICATION (enter applicable number)
 CLASS (enter applicable level of cleanliness)

 LOT NUMBER/SERIAL NUMBER (enter if applicable)
 DATE OF PACKAGING

 SHELF LIFE OF PART ____________MONTHS
 OPENED FOR LMSC STATISTICAL INSPECTION DATE _________

 BY
 Intermediate Packaging Marking - Label or mark each container to show at least part number per

- 3.5.2 <u>Intermediate Packaging Marking</u> Label or mark each container to show at least part number per contracting document, supplier and quantity of parts.
- 3.5.3 <u>Shipping Container Marking</u> Label or mark each container to show part number per contracting document, the LMSSC contracting document number, supplier, destination and quantity of parts.
- 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 LMSSC 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.

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5.3 MATERIAL/PROCESS SPECIFICATIONS

<u>Material</u>

Box, Fiberboard

Box, Closing Cushioning, Polyurethane (Flexible) Capran 980 Nylon 6 (Flexible) Plastic Sheet/Strip (Polyethylene) Protective Caps

Specification

ASTM D5118, Type CF, Class Domestic, SW, Style RSC, Grade 44 ect or 200 Mullen ASTM D1974 MIL-PRF-26514, Type I, Class 2, Grade C Commercial Polyamide (Heat Sealable) A-A-3174, Type I, Class I MS 25177, NAS 813, NAS 820, SAE-AS85049/138

Process/Document

Cleanliness/Clean Room Requirement Cleanliness Control - Fluid Sys/Components Cleanliness Control - Thrust Vector Control Contamination Control Environmental Control Environmental Control

Standard/Specification

IEST-STD-CC1246D WS 3737 (MSD) WS 8179 (MSD) MAP-211025 MAP-211026 OD 14379 (MSD)