

<b>Hewlett Packard Customer Support-Supply Chain Packaging Standard Requirements</b>	Document Number: <b>A-5961-4800-1</b>
	Revision Release Date: <b>July 09, 2007</b>
Originator: <b>Chris Hambrick</b>	Document Description:  <b>Packaging Standard Requirements for HP GPSC Support Hardware</b>
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Approver: <b>Farai Melton</b>	

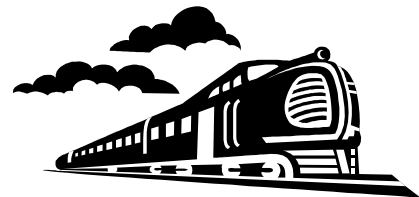
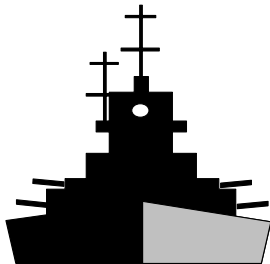
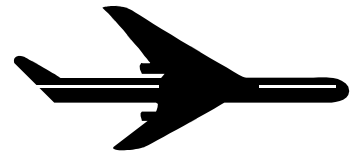
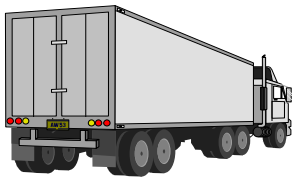
REV	REVISION HISTORY	DATE	INITIALS
A	Initial Release Per PCO GSL-xxx	5/13/99	xxxx
B	Updated Per PCO GSL-1027	6/01/01	RH/rpl
C	Revised Per PFQ-1344	3/26/02	RH/nb
D	Revised Per PFQ-1400	4/30/02	RH/rpl
E	Revised per PFQ-1874	2/05/03	RH/nb
E.1	Revised per PFQ-1874 Rev. B	2/10/03	RH/nb
F	Revised per PFQ-AGSO-129	6/02/03	RH/nb
G	Update per HX-00011-02	7/09/07	CH

<p><b>PURPOSE:</b>  This purpose of this document is to establish minimum standard requirements and expectations for the packaging of HP GPSC Support parts, assemblies and products that are received by HP.</p> <p><b>APPLICATION:</b>  This document is used by both internal and external suppliers who provide HP GPSC Support parts, assemblies and products.  (This is an uncontrolled copy unless original official controller stamp is affixed in this area)</p>
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**PACKAGING STANDARD  
 REQUIREMENTS FOR HP GPSC SUPPORT  
 HARDWARE  
 A-5961-4800-1  
 Revision G  
 July 09, 2007**



**PACKAGING STANDARD REQUIREMENTS FOR HP GPSC SUPPORT HARDWARE  
 A-5961-4800-1**

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**Revision G**

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## 2.0 PURPOSE AND OBJECTIVES

The purpose of this document is to establish minimum standard requirements and expectations for the packaging of HP GPSC Support parts, assemblies and products. In addition to minimum standard requirements and expectations, general packaging guidelines are provided for all suppliers of support materials to HP.

In conforming to these minimum standard requirements, suppliers are expected to protect their parts, assemblies and products without compromising the electrical, mechanical and cosmetic integrity during preparation, handling, storage and shipping from supplier to HP, the final customer, and return to repair Depot at a minimum cost to HP.

### 2.1 SCOPE

This standard becomes part of any document in which it is referenced and may be exhibited to contracts, purchase orders, agreements, or other procurement or business arrangements with the approval of HP Packaging Engineering. The latest revision must be used at all times.

This standard does not specify all specific packaging materials and does not specify all aspects of government or military packaging. It will not take precedence over any requirements prescribed by interstate commerce regulations, uniform freight classification tariffs, official air transport regulations, National Motor Freight Classification rules, postal regulations, and other applicable rail, motor, air, parcel post, or express carrier regulations, including those for hazardous materials.

### 2.2 REQUIREMENTS AND DEVIATIONS

The general requirements identified herein are considered to be the minimum expectations for HP GPSC Support materials packaging, including but not limited to all support parts, assemblies, and products.

When individual part drawing or purchase order requirements conflict with those listed in this document, the former will take precedence, unless otherwise stipulated by the HP purchasing department concerned.

Any deviation from these standard requirements shall have the prior written approval of HP Regional Engineer and/or Product Logistics Manager (PLM) in conjunction with Packaging Engineering. Revision to this standard shall be the responsibility of the originator, HP GPSC Support Packaging Engineering.

Unless otherwise agreed between HP and the supplier, all HP GPSC support parts, assemblies, and products are required to be individually packaged in packaging suitable for shipment as a single unit worldwide. For ease of palletization, the individual boxes may be overpacked before placement on a pallet for shipment. Any exceptions must be documented and approved by HP prior to shipment.

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### 2.3 APPLICABLE DOCUMENTS

The following documents are applicable to requirements stipulated in this standard:

106372	“Specification, Appearance Quality Standard for OEM Service Spares”
106584	“Procedure, Printing, Label Thermal”
111146	“Specification, CSO Packaging”
131400	“Specification, Packaging, Finished Good Distribution”
137169	“Procedure, Country of Origin Encoding”
257877	“Specification, Wooden Products, Infest Mark
137062-001	“Pallet, 48”x40”, 4way”
137168-000	“Pallet, 1200x1000mm, Full Perimeter, Wooden Shipping Pallet”
A-GSL570-24	“Packaging Reuse Guidelines”
A-5951-1589-1	Workmanship Standards for ESD Control
N/A	HP OEM/ODM Packaging Requirements
109291	Test Specification Packaging of Compaq named Products
5971-3628	HP Packaging Test Manual
HX-00011-00	HP Standard 011-0 General Specification for the Environment
HX-00011-02	HP Standard 011-02 General Specification for the Environment – Packaging Requirements
HX-00011-02	HP Standard 011-02 General Specification for the Environment Packaging Revision “H” Addendum
EL-EN868-01	Test Procedures for Temperature and Relative Humidity
HP-00005-01	HP Standard 005-1 Environmental Criteria-Temperature and Relative Humidity

### 3.0 GENERAL REQUIREMENTS

All requirements stated in this document must be understood and agreed upon between purchaser and supplier. Bids or quotations must fully reflect all requirements herein unless mutually agreed to in writing by HP Purchasing, HP GPSC Packaging Engineering, and the supplier.

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Supplier name and logo shall not be printed on the top or sides of the individual part package. Other supplier markings not specifically required by this standard shall not appear on the top or sides of the individual part package. This requirement does not nullify the need for environmental, safety related or product fragility warnings or symbols.

All pre-printed packaging instructions on package are to be printed on the inside of top flap to prevent instructions from being covered with labels utilized during transportation of packaging. In those instances where package does not have a top flap the instructions are to be printed on side of package not utilized for labels.

### 3.1 CONFORMANCE AND QUALITY ASSURANCE

All packaging shall meet or exceed these standard requirements for HP support hardware. Parts, assemblies and products packaged in a method that does not conform to these requirements may be returned "as-is" at the supplier's expense or repackaged by HP and the supplier debited with the labor, material, and associated expenses. These expenses may include any costs associated with correcting the nonconforming packaging at HP for immediate shipment or storage of the parts. Proactive communication to HP of supplier process changes affecting packaging is expected.

- 3.1.1 Results of packaging material usage and process controls shall be made available to HP at any time for any of HP's part-types or assembly-types, upon request.
- 3.1.2 Information must be provided by a supplier to HP Purchasing, Regional Engineer, PLM, and Quality Assurance in support of a proposed process or material change.
- 3.1.3 **SUPPLIER CORRECTIVE ACTION RESPONSE:** In the event material is received in an unacceptable condition, supplier nonconformance will be communicated through HP Purchasing using a Nonconforming Packaging Report or equivalent. HP requires a corrective action response from the supplier to HP Purchasing, Packaging Engineering, and Quality Assurance within ten (10) days.
  - 3.1.3.1 Supplier defect analysis results shall be required for all HP parts packaging, upon request, to include, as a minimum:
    - a) Raw data;
    - b) Pareto of defects by causes;
    - c) Corrective action plan for each cause (including request for HP documentation revision when appropriate);
    - d) Measurements of effectiveness of each corrective action;
    - e) Demonstration of manufacturer's ability to sustain production with a minimum of packaging process defects and to sustain defect-free shipments to HP;
    - f) Scrap report - analysis of types and causes of scrapped packaging materials.

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### 3.2 MATERIALS

All packaging materials used on HP GPSC Support parts and assemblies shall conform to HP requirements specified herein or in referenced documents.

- 3.2.1 All ESD packaging materials must be qualified per the HP "Supplier Qualification Process for ESD Materials" (HP drawing number A-5951-1687-1).
- 3.2.2 All Dangerous Goods must be properly packaged, for shipments per all appropriate regulations. Reference HP document HX-00011-02, General Specification for the Environment, Packaging Requirements.
- 3.2.3 The standard for HP corrugated container material is kraft. HP has discontinued bleached white corrugated fiberboard for both environmental and cost reasons.

### 3.3 ENVIRONMENTAL

- 3.3.1 Packaging materials covered by this document shall comply with all U.S. government regulations concerning the environment. Refer to "HP General Specification for the Environment Packaging Packaging Requirements" document number HX-00011-02.
- 3.3.2 To minimize the effects of discarded packaging materials on the environment, HP encourages the practice of:
  - a) Source reduction - minimize material requirements and usage;
  - b) Reuse - reuse packaging materials for as long as they are able to fulfill their original purpose; Refer to HPCS-SC Packaging Reuse Guidelines A-GSL570-24
  - c) Recycle - to the extent possible, use packaging materials that can be recycled for use in the manufacture of other new products (HP encourages the use of materials with recycled content that meet all applicable performance specifications);
  - d) Incineration – for residual materials which are not claimed in recycling programs, use materials that can benefit cleanly with high fuel efficiency (helps burn the organic wastes from other sources) and emit nontoxic gases: and
  - e) Safe landfills – avoid the use of toxic ingredients including heavy metals such as Cadmium, Mercury, Lead or Zinc which could contribute to air or groundwater pollution.

When this document is incorporated in the business operations of an HP entity outside the U.S., suppliers are expected to also comply with all applicable environmental regulations.

- 3.3.3 To support Environmental Data Reporting for several European countries, the following will need to be reported for each piece of packaging material:

- 3.3.3.1 Part ID with material type/identification along with gram weight of each component.

- 3.3.3.2 The PLM will add this data into the HP Environmental system at the kit level detailing

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each part ID. Updates will be performed monthly.

.3.4 Environmental Packaging Logo's and Marking's: This requirement in this standard apply globally to all packaging used for selling or shipping HP products. The standard applies globally to HP business units and HP suppliers. This standard is a component of *HP Standard 011-0 General Specification for the Environment (GSE), A-5951-1745-1*. The restrictions specified in this section apply to all packaging materials purchased by or on behalf of HP.

3.3.4.1 General Material Coding: Where the following materials are used in packaging, the applicable coding is required to be embossed or marked on all components. The symbol, not including the lettering, must be between 0.5 in (1.27 cm) and 1 in (2.54 cm) in height. The symbol and the lettering must be molded or embossed into the base of a component or labeled. It must be durable, clearly visible, and easily legible when the packaging is opened. The abbreviations must appear in capital letters.



**Material Codes:**

Material	Abbreviation	Number
Polyethylene Terephthalate	PET	1
High Density Polyethylene	HDPE	2
Polyvinyl Chloride	PVC	3
Low Density Polyethylene	LDPE	4
Polypropylene	PP	5
Polystyrene	PS	6
Corrugated fiberboard	PAP	20
Non-corrugated fiberboard	PAP	21
Paper	PAP	22

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<b>Material</b>	<b>Abbreviation</b>	<b>Number</b>
Steel	FE	40
Aluminum	ALU	41
Wood	FOR	50
Cork	FOR	51
Cotton	TEX	60
Jute	TEX	61
Glass clear	GL	70
Glass green	GL	71
Glass brown	GL	72
Paper and cardboard/miscellaneous metals	*	80
Paper and cardboard/plastic		81
Paper and cardboard/aluminum		82
Paper and cardboard/tinplate		83
Paper/cardboard/plastic/aluminum		84
Paper and cardboard/plastic/aluminum/tinplate		85
Plastic/aluminum		90
Plastic/tinplate		91
Plastic/miscellaneous metals		92
Glass/plastic		95
Glass/aluminum		96
Glass/tinplate		97
Glass/miscellaneous metals		98
*For composites, the material abbreviation is "C/" plus the abbreviation for the predominant material; for example,. C/PAP for a composite that is predominantly paper.		

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3.3.4.2 Paper Packaging Material Codes: This specification applies to packaging materials used to pack finished goods manufactured on or after March 1 2007 and placed for sale in China. For paper based packaging materials used for HP branded finished goods for distribution and sale in PRC the following requirements must be met.

Pack materials requiring identification marking include: shipping container, bulk pack boxes, individual product packages such as folding cartons, blister cards and printed paper based inserts for clamshells and corrugated, paperboard, cardboard fiberboard and molded pulp internal packaging components that are marked or printed with other information.

**Paper Packaging Material Codes**

<b>Paper Packaging Material Description</b>	<b>China Initials</b>	<b>Guidance</b>
Corrugated Fiberboard	CFB	Shipping cartons, Overpacks Retail,packs
Corrugated Fiberboard	CFB	Layer pads dividers inserts
Non-Corrugated Solid FiberBoard	NCFB	Stiffeners, corner boards edge guards
Paper	WPP	Pad-pack, newsprint, tissue, molded pulp
Paperboard	PB	Chipboard cartons, dividers

Components of the China Mark: The China mark for paper consists of the chasing arrows triangle with the appropriate alpha designators centered below the arrow per the example. Placing the alpha designators inside the triangle is also acceptable. The mark size is to be 40 x 40mm. For especially large or small package component sizes the mark may be appropriately enlarged or reduced.



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Please refer to the following documents for additional information to these requirements: *HP Standard 011-0 General Specification for the Environment (GSE), A-5951-1745-1*  
<http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/gse.pdf>

HP Standard 011-2, General Specification for the Environment (GSE) –Packaging Revision H 19-July-2005  
<http://www.hp.com/hpinfo/globalcitizenship/environment/pdf/gse.pdf>

- 3.3.5 California Perchlorate Notification: This section is applicable to parts or products that contain CR-type lithium batteries.

Effective July 1, 2006 the following statement must be included on a label conspicuously applied on the exterior of all outer shipping packages and on consumer packages, or on a packaging insert, or on an MSDS accompanying the part or product:

See: [http://www.dtsc.ca.gov/LawsRegsPolicies/Title22/OEARA\\_REG\\_Title22\\_Ch33.cfm](http://www.dtsc.ca.gov/LawsRegsPolicies/Title22/OEARA_REG_Title22_Ch33.cfm)

“Perchlorate Material – special handling may apply, See [www.dtsc.ca.gov/hazardouswaste/perchlorate](http://www.dtsc.ca.gov/hazardouswaste/perchlorate).”

If necessary, refer to the local HP coordinator for hazardous materials and the HP Corporate Hazardous Materials Transportation Manager for further information.

### 3.4 INDIVIDUAL PART PACKAGING

- 3.4.1 Unless otherwise agreed between HP and the supplier, all parts are to be individually packaged in packaging suitable for shipment of the individual product as a single unit worldwide.
- 3.4.2 Packaging utilized for repairable/exchange materials are expected to be reused per criteria established in A-GSL570-24, HPCS-SC, Packaging Reuse Guidelines.
- 3.4.3 Processors, drives, power supplies and whole return units typically require extended packaging development, thus it is highly recommended that the option packaging be utilized for these items, rather than develop new packaging.
- 3.4.4 System boards due to their physical size, component sizes and processor cages, are particularly susceptible to board flexure, thus special packaging is required. Vibration and flexure are of particular concerns for PCA’s with BGA-type devices or for PCA’s with large, freestanding components.
- 3.4.5 Adequate cushioning must be used for vibration and impact resistance on all six faces of the part package as well as on all eight corners of the package to prevent part damage throughout the distribution environment. Package Engineering is available for consulting purposes through your PLM. The part/product knowledge resident at the originating HP Division should be leveraged to determine the exact amount of cost effective packaging that each part requires to arrive at a customer's site undamaged.

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### 3.5 MECHANICAL PROTECTION

3.5.1 Part containers, shipping containers, and cushioning materials shall prevent damage to form, fit, and function of HP GPSC Support parts from supplier to ultimate customer, including electrical performance and cosmetics. Refer to 5971-3628, "HP Packaging Test Requirements for Suppliers and Original Equipment Manufacturers" for further details on mechanical protection and package testing.

3.5.2 HP parts suppliers shall utilize packaging materials which have been designed and developed to provide sufficient protection to each part being supplied to or for HP through the normal handling and physical distribution processes worldwide.

3.5.3 Parts shall be packaged to withstand without damage, as a minimum, the following hazards and environments associated with roadway, airway, railway, and sea transport:

- a) Vibration during transit;
- b) Acceleration and deceleration during braking;
- c) Impact due to handling, dropping, loading/unloading and transit;
- d) Tilting during handling and forklift operations;
- e) Air temperature changes;
- f) Air pressure changes;
- g) Stacking; and
- h) Moisture
- i) Dust

3.5.4 Parts Storage: For storage and powered off conditions, the table below provides recommended temperature and relative humidity requirements for HP equipment subject to the following environmental conditions:

- Removed from the original shipping container and installed in the typical environment
- In shipment or in storage (in shipping material or container)

Part of a product's lifetime may include periods in shipment or in storage (where it may be exposed to extremes of temperature or humidity, and where shipping material protection may or may not be available), or in the operating environment but powered-off. Although ASHRAE recommends general protection limits for these conditions; HP may prefer to deviate from these norms based on the experience documented by its Central Direct Procurement Packaging group. These deviations are summarized in table below.

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Product Power-Off Storage and Shipping Technical Requirements							
Type of product	Storage			Powered Off (installed)			HP-recommended Shipping
	Temp (°C, dry bulb [regular ambient temp.])	Rel Hum %; Noncondensing	Dew point (max)	Temp (°C, dry bulb [regular ambient temp.])	Rel Hum %; Noncondensing	Dew point (max)	
<b>All classes</b>	-40 to 60	8 to 95	32	5 to 45	8 to 95	29	Refer to <a href="http://packaging.corp.hp.com/tech/technical.asp">http://packaging.corp.hp.com/tech/technical.asp</a> for detailed information and specifications.
<b>Special (or Contract)</b>	Refer to contract or industry requirements.						

**Note:** The values shown above meet or exceed all ASHRAE specifications. (American Society of Heating, Refrigeration, and Airconditioning Engineers) TG9 HDEC: Facility and Equipment Thermal Guidelines for Data Center and other Data processing Environments.

The recommended values represent target facility design and operational ranges, and the allowable values represent equipment design extremes for that environment. Decisions regarding development cost, and return on investment may require different engineering and design specifications for these values.

Special (or Contract) specifications require adherence to industry or contractual requirements.

In conforming to these minimum standard requirements, suppliers are expected to protect their parts, assemblies and products without compromising the electrical and mechanical integrity during storage and shipping from supplier to HP, the final customer, and return to repair Depot at a minimum cost to HP.

### 3.6 ELECTROSTATIC DISCHARGE (ESD) PROTECTION

3.6.1 Suppliers of ESD sensitive parts must have an ESD control program equivalent to that called out in HP drawing number A-5951-1589-1. This standard may change as understanding of ESD advances.

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3.6.2 ESD sensitive parts must be placed in an Static Shielding ESD bag or pouch prior to placing into packaging.

3.6.3 Packaging which contains ESD sensitive parts must be properly labeled.

ESD Susceptibility Symbol  
(a yellow or orange background is recommended,  
reference HP document 131403-001)



### 3.7 COSMETIC PROTECTION

All packaging shall prevent cosmetic damage to HP GPSC Support parts from supplier to ultimate customer. Parts must arrive to the customer in "ready to use" condition.

3.7.1 Packaging must prevent the accumulation of dirt, dust, paper fibers, plastic or foam particles, and other debris on the surfaces of HP GPSC Support parts during handling and physical distribution worldwide.

3.7.2 Packaging also must prevent dents, scratches, abrasions, cracks, punctures, stains, corrosion, or other residues or disturbances to the originally designed appearance of any part, assembly or product during handling and physical distribution worldwide.

3.7.3 Painted surfaces in particular must be protected within the package. Paper or antistatic foam or plastic film or wrap may be used to surround the parts or to separate parts. Paper or plastic sheeting attached to the part with adhesive for protection during manufacturing must be removed before shipping to avoid cosmetic damage to part surfaces during distribution.

### 3.8 BULK PACKAGING

All HP GPSC support parts, assemblies, and products, unless otherwise specified, are required to be individually packaged in containers suitable for individual shipment worldwide. Any exceptions must be documented and approved by HP prior to shipment.

3.8.1 All bulk packaged parts need to be shipped with sufficient cushioning or dunnage to assure that no parts receive damage in handling and shipping.

3.8.2 Bulk packed parts should be shipped in order quantities unless otherwise specified by HP.

3.8.3 When PCA's are shipped in bulk, approval of the PLM is required so that the receiving facility may do the packout. Please reference HP document 101484, Procedure, Packaging for PCB, Assemblies.

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3.8.4 Additional Considerations for Bulk packs

**SIZES**

There are three sizes of "JETPAQ" padded mailers:

111161-001; 8.50 x 14.50

111161-002; 9.50 x 13.50 (most commonly used)

111161-003; 10.50 x 15.00

**NOTE:**

An acceptable alternate for JETPAQ is the Express Carrier Padded Pouch.

3.8.5 JETPAQ USES

JETPAQ is used for those items considered durable enough for direct shipment to a customer. The item(s), as shipped within a JETPAQ, must be durable enough so as to sustain a 40-pound package being dropped onto it without damage. JETPAQ is mainly for single part numbers. It may also be used for multiple part numbers which can be consolidated easily by use of a bag or JETPAQ.

**Examples:** ICs can not be JETPAQ'd (failed shock and vibration tests).

Manuals can be JETPAQ'd, except for those manuals that have ringed binders (raised corners get nicked).

Cables can be JETPAQ'd, except for some of the pre-formed ribbon, or "flex" type of cables (special bends and ends are too fragile).

Screws, tools, brackets, paper products, and plastic items can be JETPAQ'd, except those items that can be bent or damaged by a slight folding of the JETPAQ during shipment (if plastic item has raised shoulders, these shoulders were often broken off).

Logos can be JETPAQ'd, except for the metal type logo (can be too easily bent).

Batteries, software, and items that are too large or bulky cannot be JETPAQ'd.

Multiple part numbers can be JETPAQ'd if they can be consolidated by a bubble bag or plain bag; i.e., a quantity of screws, two different durable cables.

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**3.9 LABELS and MARKING**

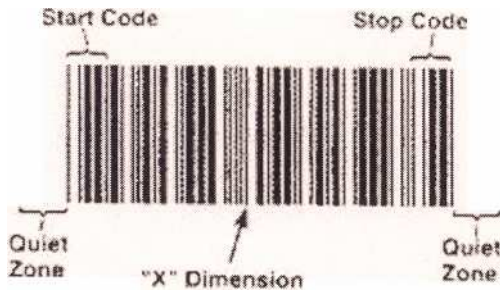
3.9.1 For detailed information concerning label materials, sizes and formats refer to document 106584

3.9.2 Label Bar Code Criteria  
Provided for reference only. Refer to document 106584.

Parameter	Requirement	Symbology
"X" Dimension (Narrow bar width)		39
Specified .005	.005 inch = x = .009 inch	
Specified .010	.010 inch = x = .013 inch	
Specified .015 (see note)	.014 inch = x = .017 inch	
Specified .020	.018 inch = x = .025 inch	
Wide/Narrow Ratio (N)	$2.5 < N < 3.0$	39
Magnification	= 100%	UPC/JAN
Percent Decode	$\geq 80\%$	39
Quiet Zone	$\geq 10x$ and $\geq .25$ inch	39
Print Contrast	$\geq 80\%$	39
Defects	$\leq 25\%$	39
Print Quality Grade	"C" or Better	39

Note: When a .015" narrow bar width is specified from a 300 DPI printer, it is recommended that a .0167" narrow bar width and a wide/narrow ratio of 2.5 be used.

**X Dimension** -The dimension of the narrowest element (bar or space) in a bar code symbol. The X-dimension is important to readability. Most rejected boxes are due to an incorrect X-dimension.



3.9.3 Minimal artwork would include warning and/or safety markings, and special handling notations such as ISO 780, Packaging – Pictorial marking for handling of goods ("FRAGILE", "THIS SIDE UP", "KEEP DRY", etc.) are required, including all governmental regulations for marking hazardous material containers and shipments. Individual and palletized caseloads must arrive with the container oriented according to any markings that indicate which side should be up.

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Here are some useful labels:

<u>Label P/N</u>	<u>Description</u>	<u>Label P/N</u>	<u>Description</u>
282187-001	Label, Handling Symbols – Horiz	7121-4653	Label ESD warning
282187-002	Label, Handling Symbols – Vert	5182-7421	Label “ Glass Handle w/ Care” 1.5 x 4
36-50819-04	HP logo Label – 3.5 x 2.5"	5184-2879L	Label, “Fragile” (International symbol) 2 x 3
36-50819-05	HP logo Label – 5.6 x 4.0"	5184-5384L	Label “This Side Up, Fragile” 6 x 7
36-50819-06	HP logo Label - 10.0 x 6.75	7121-5782	Label Up arrows’
32166-001	HP logo Label – 24.50 x 14		
7121-5778	Label handling symbols 4 x 4		
7121-7181	Label, “HEAVY” 2 x 8		

3.9.4 Additional Markings may include identifying when a battery is on a board or part of a product, identifying magnetized materials, or identifying a Return Package Kit for in use product (refurbished). Battery Warning Labels, 247933-001 to –004, for heavy metal batteries as well as EU non-directive material batteries. Magnetized Material Labels are available under part number 308679-002. Refurbished Product label are available under part number 332974-001.

### 3.10 PRODUCT BOX LABELS

Part information required by this standard or by other specifications or purchase orders shall be clearly, prominently, permanently and correctly marked. The Part No. and Serial No. (if applicable) on the product box label must reflect the physical part inside the package.

Any internal routing labels, stock location labels or other extraneous labels located on individual part container are to be removed or covered using brown kraft tape prior to shipment of material.

#### 3.10.1 INDIVIDUAL PART CONTAINER LABELS

This requirement is for any individually packaged and labeled part whose quantity equals one (1)

- 3.10.1.1 To facilitate reuse of containers, whenever possible, labels shall be applied in a manner that allows overlay. Each label shall be applied in a neat and orderly manner so that it may be covered later by another label if necessary
- 3.10.1.2 The variety of package sizes and configurations utilized by HP GPSC requires numerous label sizes. The actual label size will be dependent upon package size. As a minimum the following information must be on all individual part container labels irrespective of label size.
  - a) Part/Product description (human readable)
  - b) Revision level, if applicable, of the part/product or current EDC, Engineering Date Code (human readable)
  - c) HP Part No (human readable and barcoded) text begins with “Part No.”
  - d) Serial No., if applicable (human readable and barcoded) text begins

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- with "Serial No."
- e) Country of Origin Code (human readable and barcoded) 2 digit ISO country name (ie:US)
- f) Country of origin information (human readable) text begin with "Product Of (country name)"
- g) Qty (human readable)

The following label examples are presented for information purposes only

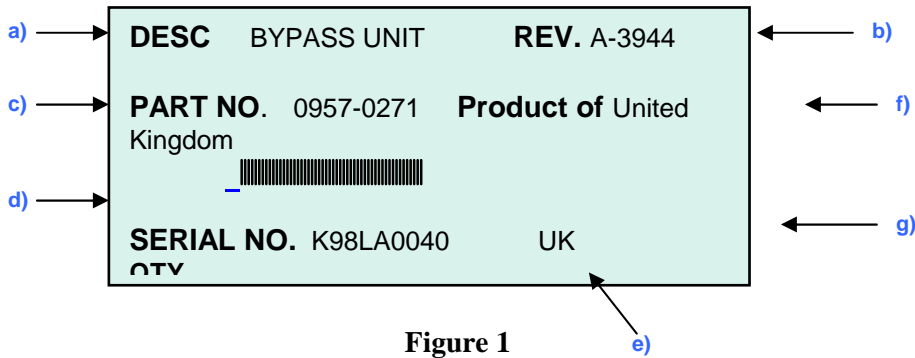



Figure 1

<b>SPS PRODUCT DESCRIPTION OF KIT</b>		
		
SERIAL NO.      D108FSB1L573		
		
PART NO.      193706-001		
		
US PRODUCT OF USA (INCLUDES FOREIGN CONTENT)		VENDOR 05-26-02
		<b>SPS PRODUCT DESCRIPTION OF KIT</b>  05-26-02 PART NO. 193706-001 S/N: 4GXXXXXXXXXX

**Figure 2**  
(Ref Doc 106584 Fig 18 Table 18)  
Spare Kit (Service) Label  
Label Stock 106128-009, 3.15 x 6"

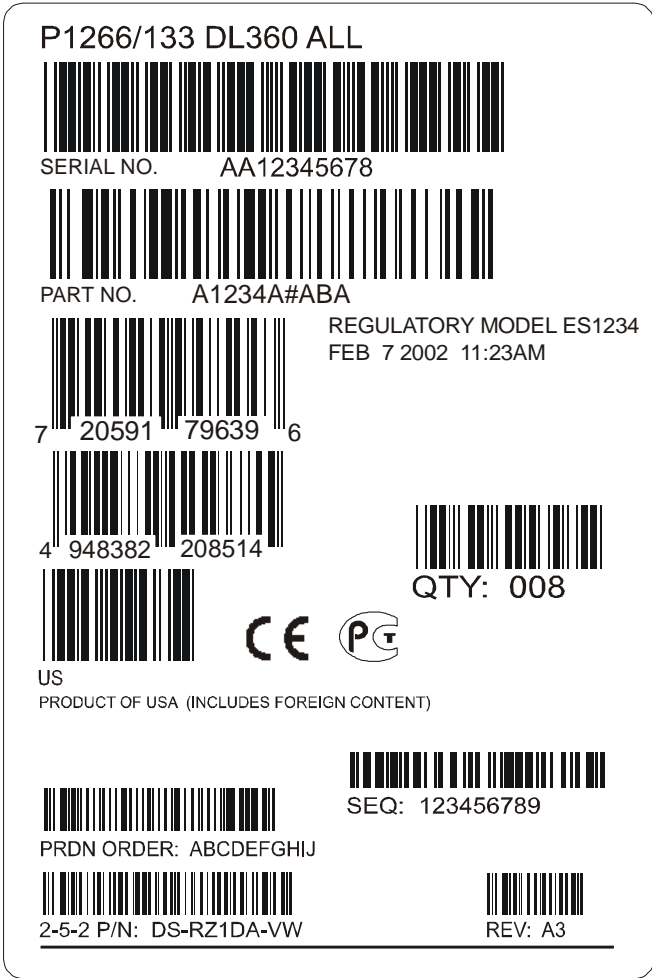
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3.10.2 PALLETIZED & BULK SHIPMENT LABELS

This requirement is for parts which are already individually packaged and labeled and then packaged in multiple quantities in a bulk shipping container.

3.10.2.1 This label applies only to parts which are of the same part number. A separate label is required for each different order number for each bulk shipping container case, pallet).

**The following label examples are presented for information purposes only**



**Figure 3**  
(Ref Doc 106584 Fig 39 Table 39)  
Option Universal Label, 4 x 6" Version A  
Label Stock 106128-011

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**Figure 4**

(Ref Doc 106584 Fig 39 Table 39)

Version B - Example showing shorter label may be used if some data fields are not needed

### 3.10.3 SHIP TO LABELING AND MARKING

Shipping information required by this standard or by other specifications or purchase orders shall be clearly, prominently, permanently and correctly marked. Marking of containers of individual parts and multiple quantities of parts shall be bar coded.

3.10.3.1 The packing list shall contain the following information, as a minimum, with each shipment of HP GPSC Support parts (for the purposes of this document, a shipment is defined as the contents of each shipping container or palletized load):

- a) HP receiving location's name and address
- b) Purchase Order or Internal Order number(s)
- c) Shipper's name, address, and plant or entity number
- d) Shipper's reference number or packing list number
- e) Carrier

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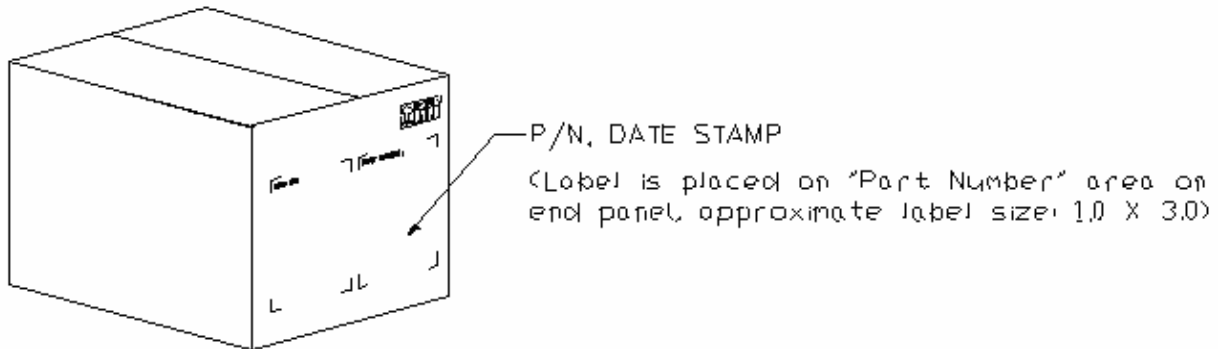
- f) Ship date
- g) Shipment contents - each line item shall identify:
  1. Order line number;
  2. Units of measure
  3. HP part/product number AND manufacturer's part number;
  4. Part/product description;
  5. Quantity
  6. Serial number, when component or assembly is serialized;
  7. Box or container number or identification;

3.10.3.2 The packing list must be computer generated or typed. Preprinted forms are not acceptable. Handwritten elements are not permitted. Part/product numbers should be listed in sequence whenever possible. Partial and incomplete deliveries shall be marked as such (difference between quantity ordered and quantity delivered).

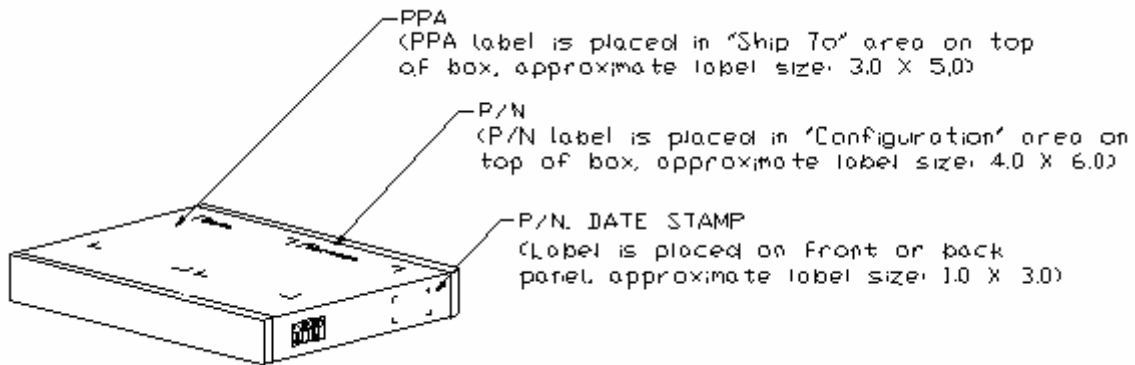
3.10.3.3 For all shipments, an appropriate "PACKING LIST ENCLOSED" envelope label containing the packing list must be affixed to each shipping container or palletized load. For international shipments, one packing list per box is required due to customs inspection. All related shipping papers must be enclosed in this clear polyethylene envelope. For palletized loads, the packing list must be secured to the stretch film. Each packing list shall include only the items shipped in that particular container or on that particular pallet.

3.10.3.4 Packing lists and labels shall be located on container surfaces facing the outside of the pallet load for most boxes (Fig 5).

3.10.3.5 For pizza style boxes, the information shall be placed on the top surface (Fig 6).



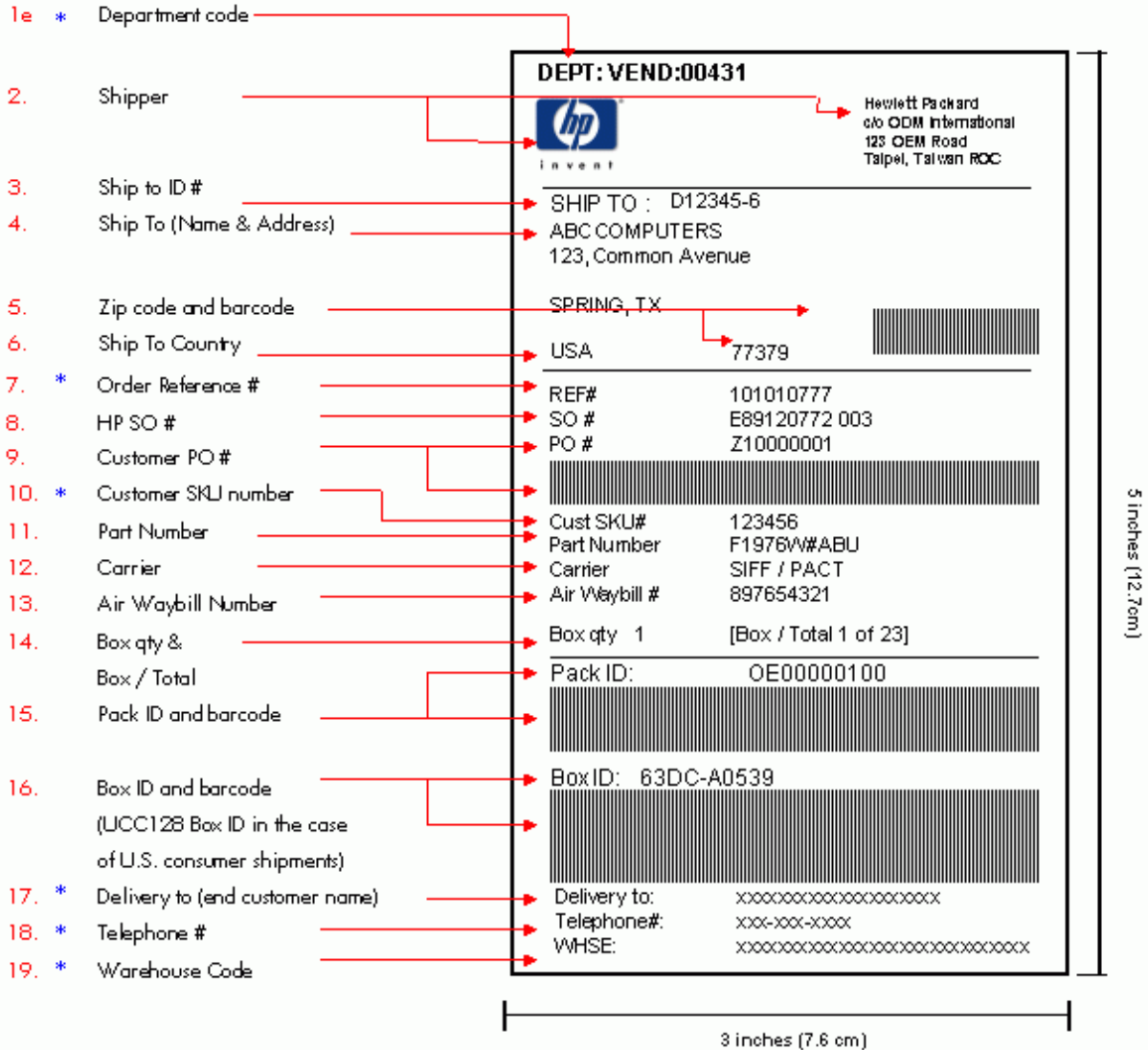
**Figure 5**



**Figure 6**

- 3.10.3.6 For identification in warehouse storage, packing lists and labels shall be located on the primary lifting end(s) of pallets or bulk containers so that they will be facing the aisle during storage. The packing lists and labels shall not be placed on or over any other required labels or information on any container.
- 3.10.3.7 The "box label" (ship to label Fig 7) shall be affixed to each box or carton in a shipment.

\* US Unique Requirements



**Figure 7**  
Shipping Label Diagram  
Label Stock 3 x 5"  
Use EDI Information

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### 3.11 ADDITIONAL REQUIREMENTS

#### 3.11.1 Safety and Hazardous Materials

- 3.11.1.1 When identifying kits, if a part exceeds twenty-five pounds in weight, it should not be packed as multiples within a container. A safe one-person guideline would be thirty-five pounds. A box weighing more should have a two person lift symbol on the box for communication. A box in excess of 75 pounds should have a heavy weight symbol identifying both pounds and kilograms for communication. A box weighing over 150 pounds is recommended for form factor palletization.
- 3.11.1.2 Protruding nails, staples, or insecure banding or anything that will pose a safety hazard shall not be acceptable.
- 3.11.1.3 Hazardous materials shall be packaged consistent with all regulations pertaining to hazardous materials. Shipments shall be in proper condition for transportation - packed, marked, labeled, described and certified as provided in the governing regulations. In addition to the standard information required for package marking and packing list, health and safe handling sheets shall be attached to the outside of the package. Material will not be accepted without the signed form certifying compliance when applicable. Criminal penalties may be imposed upon shippers for violating governmental regulations on hazardous materials.

If necessary, refer to the local HP coordinator for hazardous materials and the HP Corporate Hazardous Materials Transportation Manager for further information.

#### 3.11.2 Closures

- 3.11.2.1 Taped flap closures shall be of sufficient strength, adhesion, and size to maintain continuous closure of carton from supplier to HP to final customer throughout the normal worldwide handling and shipping processes. Tamper Evident Seal (e.g. logo tape,) shall be applied to all potential areas of a package that can be opened and it must be applied such that the TAMPER EVIDENT SEAL is visibly broken/disturbed when the bulk package is opened.
  - Examples of TAMPER EVIDENT SEAL would include HP clear logo tape 304049-001/002 and filament tape 304052-001/002.
  - Examples of Label TAMPER EVIDENT SEAL would be 305556-001/003 as well as 305558-001.
- 3.11.2.2 Tuck Top Style Boxes
  - Tuck-type boxes shall use 1-inch wide kraft filament backed tape, 304052-XXX, used to ensure the box remains closed. There will be a minimum of 1 inch of overlap of tape, as measured from the folded seam that is being sealed, in both

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directions as applied. There shall be one strip of tape for every 10 inches of continuous folded seam.

Examples:

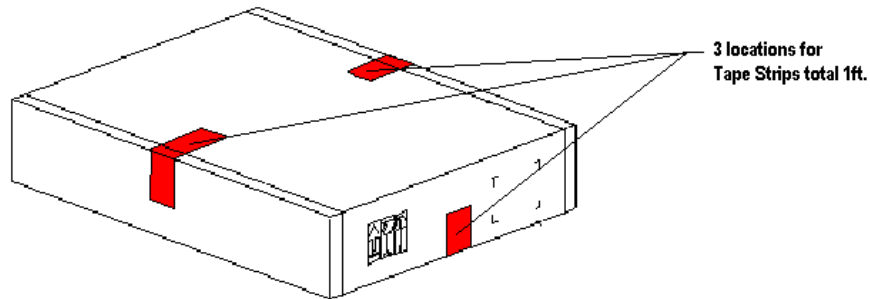
100412-001 box would have a single taped closure point applied.

(BOX, TT W/FM,11x7.63x1.25,HP)

137425-001 box would have two taped closure points applied

(BOX, TT W/FOAM,20 X 17.50 X 2.75",HP)

The preferred method of closure is to tape all 3 edges of the box secured especially high dollar value items such as memory and controller boards. Sheet metal and plastic kit may secure only the front folding edge. Alternate method of securing the box is to have a running length of tape along the box edge.



3.11.2.3 All Other Type Boxes All other types of boxes shall use HP logo tape, 304049-XXX to ensure that closure is suitable for shipment. The 3-inch wide tape shall be used unless otherwise specified. There will be a minimum of 3 inch leg onto the side of the boxes, as measured from BOTH ends of the folded seam that is being sealed. If applicable, tape is to be applied to the top and bottom of the box. Tape should be centered across seam being sealed.

3.11.3 Staples and adhesives shall not be used for closure of carton tops. Staples and adhesive shall be acceptable for bottom closures and side seams only.

3.11.4 Strapping is an acceptable form of closure for securing a container to a pallet and for reinforcing tape closures of bulky containers.

3.11.5 Wooden containers, when used, shall have covers secured with banding and screws. Nails or staples are unacceptable for securing the access panel(s) of wooden containers.

3.11.6 Metal containers, when used, shall have covers secured by positive retention means designed to maintain continuous closure of the container from supplier to HP to final customer though out

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the normal worldwide handling and shipping processes.

### 3.12 Palletizing

3.12.1 Shipping containers shall be palletized when:

- a) The cubic volume of the shipment weight is more than 150 pounds.
- b) The shipment has a minimum of one full layer of container.
- c) The individual or multiple quantity part container is bulky or awkward to handle safely

3.12.2 Reusable industry standard pallets (48 inches x 40 inches) or the European equivalent (1000 mm x 1200 mm) shall be used for shipment of all HP GPSC Support parts. HP pallet numbers 137062, 137168, 9211-8107, 9211-7192 and 5182-4179 (half pallet) are examples of recommended pallet styles. Pallets shall have provision for nonreversible four-way entry for lifting and shall be constructed with top and bottom slats. It is preferred that the lower slats be chamfered for ease of use with pallet jacks. All pallets shall comply with HP Specification, Wooden Products, Pest Free Marks, 257877-000.

3.12.3 The gross weight of palletized load shall not exceed 2,000 pounds (909 KG).

3.12.4 Packages shall not overhang pallet edges without prior written approval from Packaging Engineering.

3.12.5 Height of pallet load shall not exceed 54" for North America or 45" for rest of world.

3.12.6 If shipping to a HP hub, multiple containers of the same part number shall be shipped on the same pallet or clustered together on multiple pallets.

3.12.7 If shipping direct to the customer, multiple containers from the same HP order number shall be shipped on the same pallet or clustered together on multiple pallets.

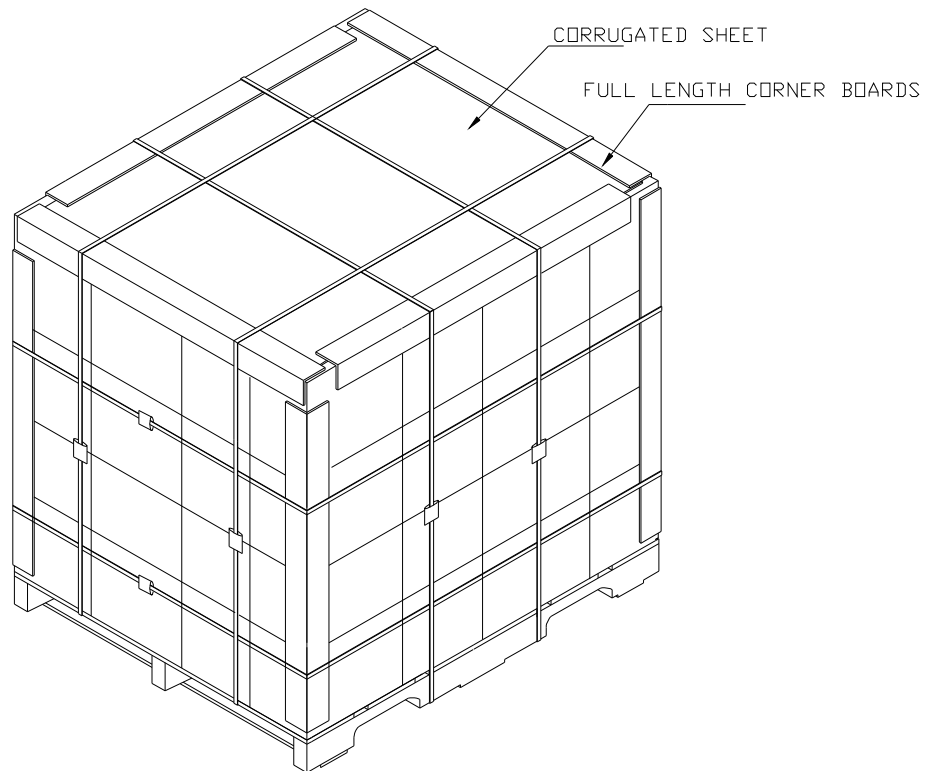
3.12.8 All palletized shipments shall be marked per the package marking and bar code labeling requirements of Sections 3.10.1, 2, & 3 of this standard.

3.12.9 Containers shall not be secured together using tape. Stretch film, strapping, or containment in a shipping container are acceptable means of securing cartons or containers together.

3.12.10 Any "dummy" cartons used as space fillers shall be clearly visible and shall be clearly identified as dummy or filler cartons containing no parts. Failure to abide by this requirement can cause miscounts and can result in financial losses to HP.

3.12.11 Pallet loads are to have stretch 3 layers of stretch wrap film in addition to two way banding. Stretch film wrapping is acceptable only if it prevents the load from shifting beyond the edges of the pallet for all layers of the load. The stretch film shall extend low enough on the pallet to adequately secure the load to the pallet. The use of corner boards or protectors shall be acceptable with the use of stretch film.

3.12.12 Containers for especially bulky or awkward loads shall be secured to the pallet with horizontal strapping. Containers which must not under any circumstances be shipped on other than a designated surface should also be strapped to the pallet. Edge protectors shall be used to prevent strapping from cutting into containers. Small Options may require additional banding and corner posts for secure shipments to HP



**Figure 8**

3.12.13 A barrier shall be used to protect the top surface of the pallet load from dirt. This barrier may be made of plastic film, corrugated paper, fiberboard, etc. and must prevent the accumulation of dirt on the part containers regardless of whether the barrier becomes torn. This will save HP the expense of time and materials to repack upper layer cartons due to excessive dirt accumulation.

3.12.14 Columnar" or "tower" stacking of containers on the pallet is preferred for maximum part and packaging protection. Interlocking can reduce stacking strength and is only acceptable where ability to prevent shipping damage is demonstrated.

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3.12.15 Palletized loads should be expected to be stacked one on top of another at least two high. Packaging should be typically designed to protect the parts and allow for long term pallet storage under these conditions.

Compression Strength Formula

Compressive strength calculated using parcel density of 10-lbs/cu ft in accordance to ASTM D4169

LTL formula

$$C = 10 \text{ lbs/cu ft} \times [(l \times w \times h)/1728 \text{ cu in/cu ft}] \times [(108 - h)/h] \times 7$$

Where;

C = Required compressive strength of box in pounds

(l x w x h) = Volume of shipping container in cubic inches

h = height of shipping container in inches

7 = Safety Factor for Assurance Level II, vehicle stacking.

**3.13 Dunnage**

3.13.1 Protection of support parts within the shipping container shall minimize the size of the package and the amount of dunnage materials within the container.

3.13.2 Dunnage materials shall be selected with consideration to the environmental stipulations of Section 3.3. Internal packaging shall prevent entanglement of parts such as cables.

RESTRICTED MATERIALS (DO NOT USE)

- Expanded Polystyrene and Starch-based "Peanuts" or "Popcorn"
- Newspapers
- Shredded Paper
- Sawdust
- Excelsior