SUPPLIER/SELLER SHIPPING INSTRUCTIONS

For Shipments to Buyer, Subcontractor, or Buyer's Non-U.S. Government Customers
or for Direct Shipment to a "Designated Recipient" on a Commercial Packing Sheet

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1.0 GENERAL

1.1 Scope – These instructions supplement the Purchase Order ("PO") of which this document is a part and establish the packaging, packing, marking, handling, transportability and shipping instructions for shipments or drop shipments by Seller and shipments by Seller's subtiers at all tiers, to FORT WORTH, MARIETTA or PALMDALE or other Lockheed Martin (LM) facilities or to a third-party logistics provider (3PL), or other Lockheed Martin (LM) Customers as directed by Buyer, or other Supplier (other than Seller), or subcontractor, or Buyer's non-U.S. Government Customers on a commercial packing sheet. Seller shall ensure that each of its subtiers making any such shipment to other than Seller shall comply with PM-5010G as though it were Seller hereunder. The term PO is interchangeable with the word "Contract" as may be used elsewhere in this PO. The term "Buyer" is interchangeable with the term "LOCKHEED MARTIN" as may be used elsewhere in this PO.

1.2 Communication – Seller shall submit all communications, data, drawings, messages and correspondence in the English language. Seller shall submit all standards and cost in U.S. units of measure. Seller shall submit all Packaging drawings dimensioned in inches.

1.3 Shipment Routing – Seller shall utilize the Lockheed Martin Aeronautics Transportation Management System (TMS) to route all onboarded PO line items upon being on-boarded by the TMS project team. For Sellers and PO Line items that have not been onboarded to TMS - the Seller shall continue utilizing the Carrier Selection Guide until the Seller or PO Line item is on-boarded onto the TMS application.

- TMS is accessible via Exostar. As of date hereof, the URL is: https://portal.exostar.com
- The Carrier Selection Guide is accessible via the Lockheed Martin Aeronautics Supply Chain Management home page on the Internet World Wide Web. As of the date hereof, the URL is: http://www.lockheedmartin.com/aeronautics/materialmanagement/index.html

1.4 Supply Chain Security – The Buyer supports the U.S. Customs and Border Protection (CBP) Customs-Trade Partnership Against Terrorism (C-TPAT) initiative. The C-TPAT program is a joint effort between CBP and the trade community to reduce the threat of terrorism by means of protecting the integrity of cargo imported into the United States. To the extent that the Seller is a foreign supplier of imported goods, it agrees to scrutinize, based on risk, appropriate security measures to be implemented and maintained throughout the supply chain such as transportation, conveyance, warehouse, broker, consolidators or other elements. The Seller agrees to work with business partners to ensure that pertinent security measures are in place and adhered to and, where necessary, develop sufficient security measures within its own supply chain.

The Seller shall ensure the following processes are in place to assist the Buyer in supporting the U.S. C-TPAT) initiative. The following instructions pertain to the Seller's exporting, shipments to the United States.

A. The shipping papers shall contain accurate weight, piece count of the number of boxes shipped and value of goods in U.S. dollars as stated on the PO.

B. The Seller shall ensure that shipments of ocean containers are secured with high security mechanical seals. Seals must be affixed at the manufacturer point of origin (loading) and shall meet or exceed the ISO guideline for high security seals ISO 17712, Freight Containers – Mechanical Seals. The Seller shall record seal numbers on the shipping paperwork.

C. The physical integrity of the ocean container structure shall be verified prior to loading, to include the reliability of the locking mechanisms of the doors. The following seven-point inspection process is recommended for all containers:

1. Front wall
2. Left side
3. Right side
4. Floor
5. Ceiling/Roof
6. Inside/Outside doors
7. Outside/Undercarriage

D. The Seller shall store ocean containers in a secure area to prevent unauthorized access and/or manipulation.

2.0 APPLICABLE DOCUMENTS

The following documents in effect at the time of shipment shall form a part of this shipping instruction to the extent specified herein:

2.1 Specifications/Standards

- A-A-55057 – Panels, Wood/Wood Based; Construction and Decorative
- A-A-59736 – Boxes, Shipping, Reusable with Cushioning
- ASTM D4727 – Standard Specification for Corrugated and Solid Fiberboard Sheet
- Stock (Container Grade) and Cut Shapes
- ASTM D5118 – Standard Practice for Fabrication of Fiberboard Shipping Boxes
- ASTM D3951 – Standard Practice for Commercial Packaging
- ISO 17712 – Freight Containers – Mechanical Seals
- Tool Manufacturing Specification – Material Control – 002 (TMS-MC-002)
- Tool Manufacturing Specification – Material Control – 015 (TMS-MC-015)
- MIL-STD-129P, Change 3, dated 29 October 2004
- MIL-STD-2073-ID
- National Industrial Security Program Operating Manual (NISPOM), Sections 5-408 and 5-409
- NSA Industrial COMSEC Manual (NSA Manual 90-1, Section 6 – latest version)
- Incoterms – Uniform International Rules for Trade Terms

3.0 DEFINITIONS

Buyer's Packaging Engineering Address:

Lockheed Martin Aeronautics Company – Fort Worth
P.O. Box 748
Fort Worth, TX 76101
Attn: Packaging Engineering
Mail Zone: 6888

Lockheed Martin Aeronautics Company – Marietta
86 South Cobb Drive
Marietta, GA 30063
Attn: Packaging Engineering
Mail Zone: 0664

Lockheed Martin Aeronautics Company – Palmdale
15 Street E. & Avenue P
Palmdale, CA 93550
Attn: General Receiving
Site 8, Bldg. 870

Lockheed Martin Aeronautics Company – Palmdale
1011 Lockheed Way
Palmdale, CA 93599
Attn: Hazardous Materials Receiving
Plant 10, Bldg. 644

Drop Shipment	A drop shipment is Lockheed Martin owned material the supplier delivers to a destination other than LM Aero.
LM Catalog Orders:	Any purchase order that is 12 characters in length and begins with the letters "EC". An example would be "EC0000000256".
Case	An exterior container within a palletized unit load or an individual shipping container.
Item (plural Items):	Refers to the supplies to be shipped in connection with the PO. "Item" and its plural, "Items", are interchangeable with the defined word "Work" as may be used elsewhere in the PO.
Passive Radio Frequency Identification (RFID) Tag	A RFID device which modulates and reflects a carrier signal from an interrogator. Passive RFID tags operate without a separate external power source and obtain operating power generated from the reader.

Palletized Unit Load	The process of arranging cases or packages on a pallet, secured, strapped or fastened to the pallet so the whole palletized load is handled as a single unit.
Piece Part Packaging:	The process of encasing, boxing, enclosing or wrapping an individual part numbered assembly or a grouping (contained in a fiberboard box, bag, etc.) of identical consumable Items such as screws, rivets, etc. Piece part packaging can be the final packaging which is used in the shipping of said assemblies or groupings and/or it can be the package which contains said assemblies or groupings for the purposes of warehouse/supply storage and/or it can be the package which is aggregated with other such packages inside a consolidation container / crate / fiberboard boxes in accordance with ASTM-D5118 for shipping purposes.
Radio Frequency Identification (RFID)	An automatic identification and data capture technology comprising one or more reader/interrogators and one or more RF transponders in which data transfer is achieved by means of suitably modulated inductive or radiating electromagnetic carriers.
Repairable Item	An Item which, by the application of engineering, economic, and other factors, could be reasonably restored to a serviceable condition through regular repair procedures.
Shall	The use of "shall" expresses a requirement that is binding on Seller or Buyer as the case may be.
Teammate Furnished Equipment (TFE)	Teammate Furnished Equipment (TFE) is planned Items procured by one teammate and delivered to another teammate. This includes Bill of Material (BOM) controlled Items to be delivered to Northrop Grumman Systems Corporation, Lockheed Martin Corporation, and BAE SYSTEMS.
Other Types of Teammate Furnished Hardware Items	Other types of Team Furnished Hardware Items include planned omission; traveled work, incomplete task log (ITL), flight test, mockups, test articles, tooling and contract deliverables.

4.0 PRESERVATION, PACKAGING, AND PACKING

4.1 General – This procedure establishes the requirements for effective preservation, packaging, packing and marking of all Buyer assets and those U.S. Government assets under the Buyer's control when no requirement exists to package to U.S. Government packaging specifications. Seller shall preserve, package and pack material and equipment in accordance with good commercial practice, and as noted herein, such as to afford the degree of protection necessary to prevent

deterioration or damage during shipment under normal environmental conditions and commercial modes of transportation.

4.2 Packaging and Packing

4.2.1 Packaging Standards – Seller shall prepare Item packaging in accordance with ASTM D3951-98 Standard Practice for Commercial Packaging (except as modified herein) for shipment and storage for a minimum of one (1) year from the time of receipt at destination. Unless otherwise directed by the PO, Seller shall prepare Quantity per Unit Pack (QUP) in accordance with ASTM D3951-98. If the packages of this standard will not provide the protection required for the type of material being shipped, Seller shall use other materials, containers, or processes provided that they meet or exceed the applicable container requirements as specified in ASTM D3951-98.

4.2.2 Packaging of Line Items – Seller shall individually enclose each line Item (Part Number) in a carton. Seller shall affix appropriate bar code label as required by paragraph 5.7 to the outside of each carton. Seller shall consolidate multiple cartons (including multiple POs) into a single shipping container. Seller shall mark the consolidation shipping container "Contains multiple bar coded Line items inside box". Seller shall place packing sheet for each individual Line Item on the outside of the consolidation box, see appendix.

4.2.3 Hardware Packaging – Seller shall package hardware type Items, including O-rings, gaskets and seals in bulk in their normal quantity of unit package (which for O-rings, for example, is 1 each). Seller shall then package units in intermediate packages of 25, 50 or 100 per box, depending upon the size of the parts. Seller shall mark each intermediate container depicting the quantity inside and the Buyer part number. Seller shall package rivets and other parts that have a unit of measure of pounds in one-pound packages. Any package quantities already established between Buyer and Seller shall continue unless a change in quantities is incorporated into the PO. Seller shall not exceed container weight limits. When shipping small, heavy, hardware type parts, Seller shall use appropriate packaging material and containers to protect the hardware and prevent distortion and splitting of carton sides. Whenever multiple pieces make up one part, e.g. a resistor, a washer and a nut, Seller shall package assembly into one bag/carton. Seller shall accumulate bags/cartons into multiples of 25 if the quantity is 50 or more. If the quantity is less than 25 Seller shall accumulate into one container.

4.2.4 Electrostatic Discharge (ESD) Sensitive Items Packaging – Seller shall package electronic hardware which is sensitive to ESD so as to protect sensitive Items during shipment and storage. Seller shall individually package each Item. Seller shall cover external connectors on equipment containing ESD sensitive hardware with conductive caps. The caps Seller provides shall be black and have a maximum surface resistivity of 10E5 OHMS per square. Metal caps are also acceptable. Seller shall mark part number and serial number on the outside of each package.

4.2.4.1 Additional information on ESD. Information on static control procedures and materials and how to eliminate and reduce generation, dissipate and neutralize charges, or protect sensitive products from ESD can be found in the Electrostatic Discharge Association website. As of the date hereof, the URL is: http://www.esda.org/

4.2.5 Age Control Items Packaging – Seller shall clearly identify the delivery limitations, marking, special handling, and specialized equipment requirements for age control Items on the interior and exterior containers. Markings shall include the manufacturer, part number, serial number, cured, assembled or packed date (apply one date), and the expiration or inspect/test date. Seller shall notify Buyer prior to shipment where precautionary measures are required. Seller shall not pack together age control Items. Seller, for example, shall not pack O-rings having a first-quarter 2005 expiration with O-rings having a fourth-quarter 2005 expiration date.

4.2.6 Hazardous Materials/Dangerous Goods Packaging – Seller shall package, pack and mark hazardous materials and dangerous goods for the most restrictive mode of transportation. Seller shall pack dangerous goods per United Nation (UN) performance-tested specification packaging. Below are specifications/standards/publications to determine the packaging requirements for dangerous goods depending on mode of transportation:

- International Air Transport Association's Dangerous Goods Regulations (IATA)
- United Nation's Recommendation on the Transport of Dangerous Goods
- International Maritime Organization's International Maritime Dangerous Goods Code (IMDG)
- International Civil Aviation Organization's Technical Instructions for the Safe Transport of Dangerous Goods by Air (ICAO)
- Code of Federal Regulations Title 49 – Transportation

4.2.6.1 Tests/Closure Instructions – Seller shall forward tests and closure instructions to the "Buyer's Packaging Engineering Address" to be retained on file. This includes tests and closure instructions from third-party packaging distributors. Seller shall provide closure instructions that shall include instructions for inner packaging and receptacles, a description of the types and dimensions of closures and any other significant information.

4.2.6.2 Certification/Permits – Seller shall forward all certifications of exemptions to Department of Transportation (DOT) Regulations to the "Buyer's Packaging Engineering Address" to be retained on file.

4.2.6.3 Classification – For explosives or other dangerous Items which require Bureau of Explosives or DOT review and approval, Seller shall submit to the "Buyer's Packaging Engineering Address" data setting forth the proper explosive and dangerous articles classification.

4.2.7 Raw Stock Packaging – Seller shall oil raw material sheet stock in accordance with the requirements of the Aluminum Association Standard, Protective Oil for Aluminum, or equivalent protective oil for steel, titanium and other sheet stock. Seller shall place a protective wrapping between the bottom sheet of sheet stock and the supporting skid to protect material from corrosion. The balance of packaging requirements is found in Appendix V. Seller shall ensure material does not extend beyond the edge of the skid.

4.2.8 Buyer Procured Tooling Packaging – Seller shall comply with the shipping and packaging requirements specified in TMS-MC-002 and TMS-MC-015.

4.2.9 Composite Part Packaging – Seller shall protect composite edges from bending or delaminating. Seller shall individually enclose each Line Item (Part Number) in a carton segregating it from other Line Items. Seller shall place appropriate bar code label on the outside of carton. Consolidation of these cartons for shipment purposes is acceptable. Further, Seller shall mark the consolidation box "Contains multiple bar coded Line Items inside box". Seller shall place packing sheet for each individual Line Item on the outside of the consolidation box.

4.2.10 Critical Supplier/Seller Parts Packaging – Seller shall protect machined parts with chevron, beveled, pointed and/or sharp edges. Appendix VII shows examples of preferred packaging. Seller shall individually enclose each Line Item (Part) in a carton segregating it from other Line Items. Seller shall place appropriate bar code label on the outside of each carton. Consolidation of these cartons for shipment purposes is acceptable. Further, the Seller shall mark the consolidation box "Contains multiple bar coded Line Items inside box". Place paperwork (packing list) for each individual Line Item on the outside of the consolidation box.

4.2.11 F35 Packaging – Seller shall package all F35 assets in accordance with Commercial Standard ASTM D3951 or a recognized equivalent commercial packaging standard such as BS1133 (British Standard-Commercial). If Seller determines a Commercial Packaging Standard cannot meet the known distribution and environment requirements associated with the delivery, storage and end-use, Seller shall pack in accordance with MIL-STD-2073-1D or Def Stan 81-41.

4.2.12 F22 Non-Production Packaging – Seller shall package F22 consumable and hardware Items in accordance with Commercial standards. Seller shall package Repairable / Spares in accordance with MIL-STD-2073-1D.

4.3 Shipping Containers – Seller shall provide containers constructed to provide for handling and shall afford the Item protection. Seller shall utilize shipping containers uniform in size whenever possible. Seller shall utilize containers of minimum tare weight and size consistent with the protection required. Seller shall utilize containers that meet the minimum packaging requirements of the common carriers (if so shipped) for acceptance for safe transportation at the lowest rate applicable. Disassembly of Items to conserve size is desirable when reassembly can be done by unskilled labor using common hand tools and at no risk to the finish or function of the part. Seller shall make maximum use of corrugated fiberboard containers which meet or exceed those specifications of ASTM D 5118, and which shall be closed by taping or banding so they may be opened without damaging the packaged Item. Seller shall not use metal staples to close fiberboard containers. If Seller determines the capacity of fiberboard containers is exceeded, Seller shall use wood packaging material "WPM", crates/pallets/skids/etc. that comply with the requirements listed in 4.3.1 and 4.3.2. Closure by use of removable fasteners such as "Klimps" or steel banding is desirable unless other means are required for Item protection. Seller shall install all inner bracing on wooden crates with Philips head wood screws.

4.3.1 Shipping Containers made from Regulated WPM – Seller shall process or treat coniferous and non-coniferous raw wood in accordance with current version of

International Standard for Phytosanitary Measures (ISPM) 15 – "Guidelines for Regulating Wood Packaging Material in International Trade", document can be found at: https://www.ippc.int/IPP/En/default.htm. In conjunction with ISPM 15, Seller shall obtain certification from an accredited agency recognized by the Seller's National Plant Protection Organization "NPPO". (United States – Animal and Plant Health Inspection Service "APHIS" – http://www.aphis.usda.gov/ppq/wpm/).

4.3.2 Shipping Containers made from Non-Regulated WPM – Plywood, particle board, oriented strand board or veneers are exempt from 4.3.1.

4.3.3 Reusable Containers – Seller shall utilize reusable containers when cost effective. Container accountability, return, and maintenance for reuse shall be at Seller's expense, unless prior agreement exists with Buyer. Ownership of the containers shall be vested in Buyer as of the conclusion or termination, if any, of the PO.

4.3.4 Standard Containers – Seller shall make maximum use of carrier's standard containers in lieu of special design containers where possible and cost effective.

4.3.5 Special Containers – Containers fabricated from ferrous, non-ferrous, or thermoplastic materials, or combinations thereof requiring engineering drawings for control of materials, dimensional tolerances, form fabrication and assembly. These will be used only when necessary to protect the component and when cost justifiable.

4.3.6 Dual Function and Reusable Containers for F35 LRIP assets – Seller shall provide a Dual Function or reusable container when delineated in this PO. Seller shall be responsible for the maintenance of the reusable or dual function container. Seller shall use a reusable container for all repairable Items, e.g. Fast-Pack (A-A-59736).

4.4 Waterproof Barriers – Items suitable for shipment in open crates or without over box will not require protection against moisture. However, for those Items that require such protection a suitable shroud will be used. Seller shall place shrouds to avoid formation of water pockets and to permit free circulation of air. Seller shall cushion sharp points of contact between the Item and the shroud to prevent rupture or chafing.

4.5 Prohibited Packaging Materials – Seller shall not use materials that endanger the product by corrosion, static damage or contamination. Seller shall not apply to the product being shipped any preservative which, when removed from such product using a standard removal technique, would cause damage to such product. Seller shall not use metal staples to secure polyethylene wrapped or bagged Items. Seller shall not use newsprint, styrene "chips", "peanuts," "popcorn" or shredded paper for wrapping or cushioning. Seller shall use Cosmoline only when required, such as for tooling. Seller shall hermetically seal small oil saturated parts such as pumps and valves in a barrier bag that will contain the oil, or for larger parts, Seller shall ship the Items in wood boxes to prevent container saturation and degradation. Seller shall not use metal staples to close fiberboard/cardboard containers.

4.6 Special Design Protective Equipment Recommendation Data – Seller shall submit all Special Design Protective Equipment ("SDPE") recommendation data to the Buyer's Packaging Engineering Address. Seller's format for such data is acceptable.

5.0 MARKING

5.1 Container Marking – Seller shall mark all shipping containers in accordance with ASTM D 3951-98 with permanent type ink or paint. Seller shall add pictorial markings on packages or containers in accordance with ASTM D5445 "Standard Practice for Pictorial Markings for Handling of Goods" when conditions warrant special handling during the unloading process. For example, Seller shall apply the pictorial marking when the center of balance is uneven on the container, or if the container is top heavy and may tip over easily. Seller shall apply two (2) person lift labels on four sides and top and include the gross weight of the contents when shipping containers weigh more than 50 pounds and less than 100 pounds. Seller shall apply a skid to facilitate the safe material handling on containers weighing more than 100 pounds and mark the total packaged weight on three sides with 1" high letters. Seller shall include markings required by paragraph 5.7 as well as Buyer's part number, serial number, and individual carton number (i.e. 2 of 3) and any special markings as required by carrier rules and regulations that apply. Seller shall bar code any Items packaged individually inside a consolidated shipment container per paragraph 5.7. Seller shall apply a unique mark, as described in Appendix VI, to any shipping container that requires specialized handling, caging and loading techniques and devices, which are required to protect the Item during shipment, storage, installation, or removal. Seller shall use hand-written black or red ink marks that measure at least 4 inches high. Seller shall mark magnetic Items that identify the Item as being magnetic. The markings shall indicate in milligauss, at a fifteen-foot distance, the magnetic field strength of the unpackaged component. Seller shall mark or tag hydraulic, fuel, and oil units including accessories indicating the internal flushing, filling, or calibrating fluid used. Seller shall clearly identify the delivery limitations and handling requirements for age control Items on the interior and exterior containers in accordance with section 4.2.5 of this document.

5.2 Material Safety Data Sheet ("MSDS") Information – Seller shall reference Buyer's approved MSDS number on the bar code label below the "Total Cartons per Line Item" bar code on all hazardous materials packaging. See paragraph 5.7.

5.3 Electrostatic Discharge ("ESD") Sensitive Labels – Seller shall apply proper ESD labels on interior and exterior containers, i.e. 2x2 labels on interior and 4x4 labels on exterior containers.

5.4 Marking for Buyer Procured Tooling – Seller shall clearly mark all domestic and overseas shipping containers with instructions for freight forwarding and receiving parties to preserve the integrity of the tools and container by stenciling the following three (3) statements on all four (4) sides and top of the shipping container with the same size lettering:

1. "NOT FOR OUTSIDE STORAGE"
2. "CONTAINER MUST BE COVERED AT ALL TIMES DURING SHIPPING"
3. "CONTAINER IS NOT WATER TIGHT"

Note: Tooling shipping and storage containers are neither designed to be, nor intended to be water tight.

5.5 Warning Labels – Seller shall label shipping and storage containers for cadmium, cadmium compounds, cadmium containing materials or articles (such as cadmium plated mechanical fasteners) that are capable of releasing cadmium during Buyer's manufacturing processes as required by the Occupational Safety & Health Administration regulations found in 29CFR1910.1027. As a minimum, these warning labels shall include the following information:

Danger, Contains Cadmium, Cancer Hazard, Avoid Creating Dust, Can Cause Lung and Kidney Disease.

5.6 Special Labels or Markings – Seller shall affix special labels or markings to the exterior of the shipping containers in accordance with Buyer's request. Special labels or markings may be used to identify program, shortages, etc. Detailed instructions will be provided from time to time by Buyer as required.

5.7 Bar Code Markings – Seller shall bar code all containers. Appendix I shows example of properly bar coded shipments made against Standard Purchase Orders. Appendix II shows example of the additional bar code marking for F-16 Block 60 – Shipments Direct to UAE or CONUS Inventory Accumulation (Non-Production Support) shipments. Appendix III shows an example of a bar code shipment made against an LM Catalog Order received by the Seller via Exostar. Appendix IV shows an example of properly bar coded shipments made against Teammate Furnished Equipment. See definitions (Section 3.0) to determine if the order being shipped against is a normal PO or an LM Catalog order. Simple bar code programs that conform to this specification are available at:

https://embastion.external.lmco.com/bar-coding/

Seller shall construct bar codes and apply markings as follows:

5.7.1 Bar code data elements for Standard Purchase Orders (PO):

A. Receiving PO
B. Receiving PO Line Item Number
C. Packing Sheet Number (maximum 12 character limit)
D. Line Item Quantity in shipment
E. Total cartons
F. MSDS Number (only if hazardous)
G. Shipment Indicator (required for Classified parts shipment only)

Note: If the PO number is 1234567, then Seller shall display only 1234567 on the bar code and shall not fill in remaining field with any leading and/or trailing characters, such as XXXXX1234567 or 1234567YYYYY.) See Appendix I for examples.

Requirements:

a. Seller shall print elements in the order shown (A through G above) and all fields must be filled.
b. Data elements will be in a stacked array. Use of MSDS bar code is not required or value "N/A" (per instructions on LM provided bar code application) is acceptable if shipment is non-hazardous.
c. Bar codes must be readable commercial Code 3 of 9.
d. Bar codes will be applied by means of labels.
e. Bar codes will be a vertical "picket fence" with minimum height of 0.25 inches.
f. Bar codes will apply to the total quantity of a given Line Item regardless of the number of cartons required to contain that Line Item.

g. If multiple cartons are required for one Line Item, only the first carton must be bar coded. The remaining cartons shall have the following information marked in human readable form:

Carton number (e.g., 2 of 3, 3 of 3, etc.)
PO number
Line Item number
Quantity PER BOX

Bar coded containers may not contain more than one Line Item. Seller may consolidate different bar coded containers containing different line items for shipping/handling purposes. Seller shall mark the consolidation box "Contains multiple bar coded Line Items inside box."

h. Seller shall affix a packing sheet to the outside of the shipping container. For consolidation shipments, Seller shall affix all the packing sheets to the outside of the consolidation container. Seller shall include a copy of a packing sheet inside each carton. Seller shall limit the packing sheet number to a maximum of 12 characters.

i. If material is "non-markable" (i.e., oily raw stock, etc.), Seller may place the bar codes with the packing sheet. Seller may use separate labels for each bar code in lieu of all bar codes being on one label as long as the correct order is maintained.

5.7.2 Bar code data elements for a Standard PO routing through TMS

A. Receiving ASN
B. Receiving PO
C. Receiving PO Line Item Number
D. Packing Sheet Number (maximum 12 character limit)
E. Line Item Quantity in Shipment
F. Total Cartons
G. MSDS Number (only if hazardous)
H. Inspection Lot Number (only if inspected at source)
I. Shipment Indicator (required for Classified part shipments only)

Requirements

a. Seller shall print the bar code(s) from the TMS application
b. Bar codes will be applied by means of labels

Bar coded containers may not contain more than one Line Item. Seller may consolidate different bar coded containers containing different line items for shipping/handling purposes. Seller shall mark the consolidation THU “Contains multiple bar coded Line Items inside box” and affix the ASN bar code label.

c. Seller shall affix a packing sheet to the outside of the shipping container THU. For consolidated shipments, Seller shall affix all the packing sheets to the outside of the consolidated container THU. Seller shall include a copy of a packing sheet inside each carton. Seller shall limit the packing sheet number to a maximum of 12 characters.

d. If material is “non-markable” (i.e., oily raw stock, etc.), Seller may place the bar codes with the packing sheet. Seller may use separate labels for each bar code in lieu of all bar codes being on one label as long as the correct order is maintained.

5.7.3 Additional Bar Code Data Elements for F-16 Block 60 – Shipments Direct to UAE or CONUS Inventory Accumulation (Non-Production Support) Shipments – Seller shall bar code the

container unless deviation is granted by the Buyer. See Appendix II for an example. Seller shall construct these bar codes as follows:

A. Part number
B. Concatenated Bar Code containing the following:
   i. CAGE Code
   ii. Alphanumeric Identifier – 1 character (used to identify type of serial number, e.g., CFE, Vendor Assigned, Locally Assigned, etc.)
   iii. Serial Number
      a. Date of Manufacture
         (Year/Julian date; example: 09022 = 2009 January 22)

5.7.4 LM Catalog Marking – The LM Catalog labels must include the following data elements both bar coded and human readable. For each of the three bar code data elements below, Seller shall specify the bar code description to the left of the bar code. On the top of the label, Seller shall indicate "**Direct Delivery**" in bold letters.

Bar Codes:
1. Order Number (LM Catalog Purchase Order Number)
2. Packing List Number (maximum 12 character limit)
3. Deliver to (building, floor and column)

Note: For any additional human readable data, Seller shall include User Name and Phone Number and on separate line, the deliver to: **Building**, **Floor** and **Column** in bold letters. See Appendix III for examples.

5.7.5 Bar code data elements for Team Furnished Equipment Purchase Orders:

A. Receiving PO
B. Receiving PO Line Item Number
C. Packing Sheet Number
D. Line Item Quantity in Shipment
E. Total PC
F. MSDS Number (only if hazardous material)
G. LM Part Number
H. Procuring PO & Line Number

Note: If the PO number is 1234567, then Seller shall display only 1234567 on the bar code and shall not fill in remaining field with any leading and/or trailing characters, such as XXXXX1234567 or 1234567YYYYY.) See Appendix IV for examples.

5.8 Radio Frequency Identification (RFID) Requirements for F35 Low Rate Initial Production (LRIP) Items. Seller shall affix passive RFID tags to all shipments of UID Item packages, cases, and pallets containing F35 LRIP Items. Seller shall reference the current versions of MIL-STD-129 and DFARS 252.211-7006 Radio Frequency Identification for guidance on RFID tag placement, data construct standards, and submittal of Advance Shipment Notices (ASN).

5.8.1 RFID Tags – Seller shall prepare passive tags to be EPC Class 1 RFID tags that meet the EPC global Class 1 Generation 2 specification. Passive tags are categorized into 2 Classes: EPC Class 0 and Class 1. Seller shall use any one of the following RFID tags to meet F35 LRIP Item requirements:

a. Class 0 tags
- Class 0 64-bit read-only
- Class 0 96-bit read-only
- Class 0 64-bit writable
- Class 0 96-bit writable

b. Class 1 tags
- Class 1 64-bit write-once read-many
- Class 1 96-bit write-once read-many

5.8.2 Construct Standards – All RFID tags will have encoded data impregnated into RFID tag. Both the Department of Defense (DOD) and Electronic Product Code (EPC) global have developed construct standards for encoding RFID tags. Construct data consists of the supplier's CAGE (Commercial and Government Entity) code, asset serial number, type of EPC Class tag (0 or 1), etc. Seller shall assure each RFID tag is unique for each shipment and can validate the tags have been encoded based on DOD or EPC global specifications.

5.8.3 Advance Ship Notice (ASN) Requirements – Per the DOD RFID Policy, when shipping a package to a government facility, the Seller shall send the RFID information via an ASN to government system Wide Area Workflow (WAWF) in advance of the shipment in accordance with the procedures at: http://www.acq.osd.mil/log/rfid/advance_shipment_ntc.htm.

5.9 Material Review Board (MRB) Items – Seller shall mark all container(s) identified as a MRB item as follows:

MRB ITEM
Box No. _____ of _____
Deliver to: Receiving Dock
MRB Crib

Seller shall clearly identify the outside of the shipping container(s) with 1/2" high lettering on contrasting background and on all four sides. The prescribed marking is a Buyer control mechanism to prevent suspect or non-conforming Items from comingling with productions parts.
When specified by a SQAR disposition, secure a completed Supplier Open Rejection tag to each part and securely fasten a Supplier Open Rejection tag to the outside of each side of the shipping container. Seller shall place rejection tags in a weather proof jacket prior to fastening to the shipping container or completely covered with transparent tape. If the part is to be shipped to a sub tier suppler for additional processing prior to shipment to LM Aero. Seller shall provide instructions for the sub tier supplier to maintain or replace the Supplier Open Rejection tags on the part and the shipping container.

6.0 SHIPMENT DOCUMENTATION

6.1 Packing Sheets – With the exception of LM Catalog Orders received via Exostar, whether Seller ships material to Fort Worth, Marietta or Palmdale or other LM facilities as directed by Buyer, or

other Supplier (other than Seller), or subcontractor, or Buyer's non-U.S. Government Customers. Seller shall ensure that all materials shipped shall be accompanied by a standard commercial packing sheet. Seller's packing sheet number shall not exceed 12 characters. Seller shall include the following information on the packing sheet:

PO Number
PO Line Item Number
Ship Quantity
Number of Cartons
Part Number
Part Name
Traceability Data (i.e. serial number, date code/production lot#,)

Seller shall affix one packing sheet to the outside of each individual Line Item carton. For consolidation shipments, Seller shall affix all the packing sheets to the outside of the consolidation box. Seller shall include copy of Packing Sheet inside container.

7.0 CLASSIFIED AND COMSEC SHIPMENTS

7.1 Classified Shipments – Seller shall follow the shipping requirements stipulated in this document for all classified shipments. Seller shall place all paperwork (packing sheet, etc) on the outside of the box. Seller shall bar code the box per Section 5.7. Per the NISPOM, section 5-408 and 5-409, the bar code shall include a line below the MSDS line that stipulates whether the part is Constant Surveillance Service ("CSS") or Protective Security Service ("PSS"). Further, Seller shall mark the Bill of Lading or other applicable DOT document PSS or CSS. Seller shall not mark or otherwise indicate on the outside of the box the classification of the part.

7.2 COMSEC Shipments – Seller shall follow the shipping requirements stipulated in this document for all COMSEC shipments. Seller shall place all paperwork (packing sheet, etc) on the outside of the box. Seller shall bar code the box per Section 5.7. Per the NSA Industrial COMSEC Manual, NSA Manual 90-1, the bar code shall include a line below the MSDS line that stipulates the part is CCI. Further, Seller shall mark the Bill of Lading, or other applicable DOT document as CCI.

8.0 TRANSPORTABILITY

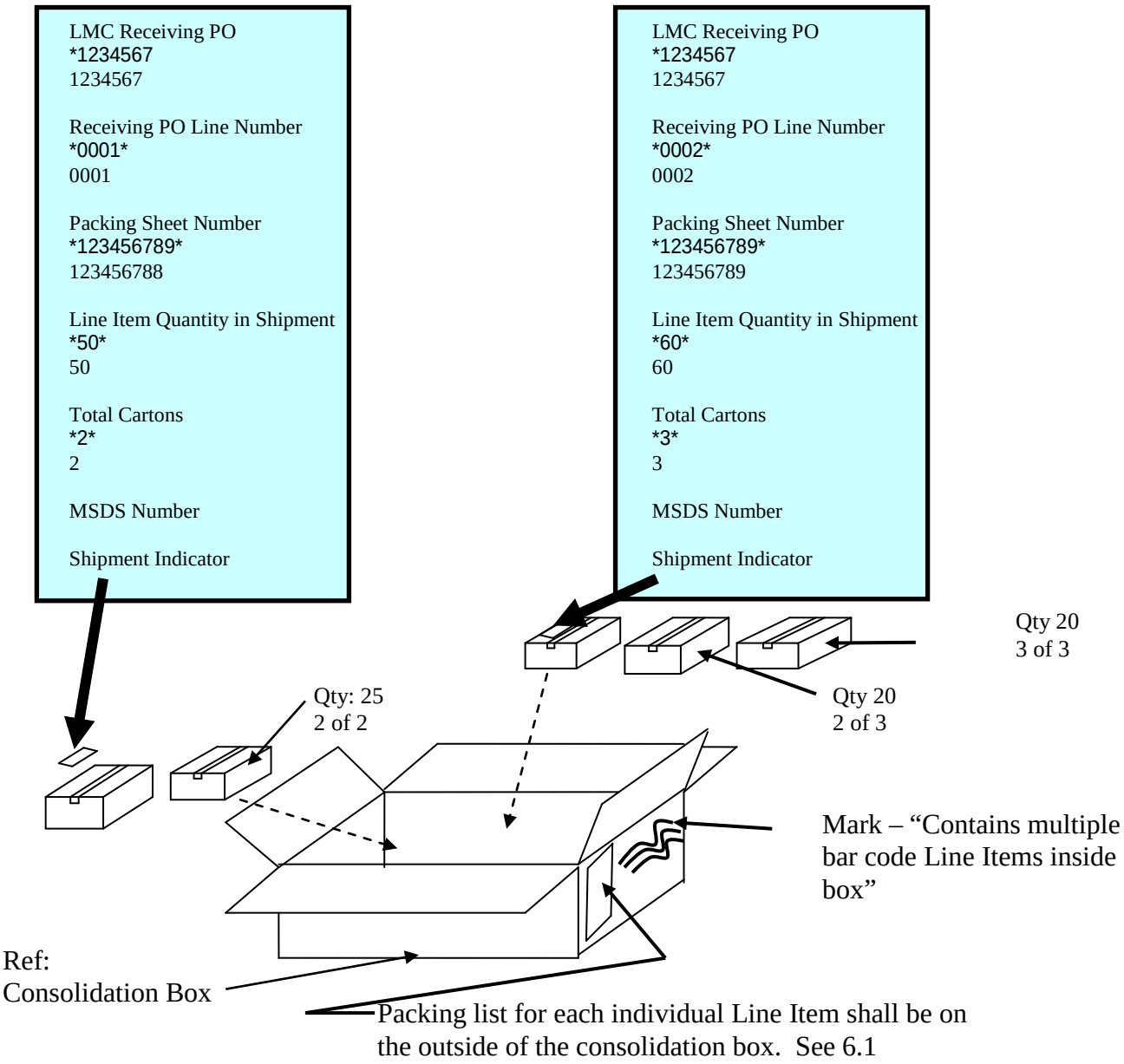
8.1 Transportability Criteria – When long Items are to be trucked, such as long skids of raw stock, Seller shall utilize flat bed trucks if at all possible to facilitate safe unloading. When special design analysis is required, then, except when TMS manuals give specific directions for tooling shipments, Seller shall submit to Buyer, for Buyer's prior approval, a complete breakdown of the packaging procedures proposed by Seller. For the purpose of this specification, specialized analysis is required when the following conditions exist.

8.1.1 Physical Characteristics of End Items

A. Dimensions exceed 8 feet in height, 8 feet in width, 32 feet in length, and/or gross weight is in excess of 11,200 pounds (domestic)
B. Dimensions exceed 7 feet in height, 6.5 feet in width, 18.5 feet in length, gross weight is in excess of 10,000 pounds (international)

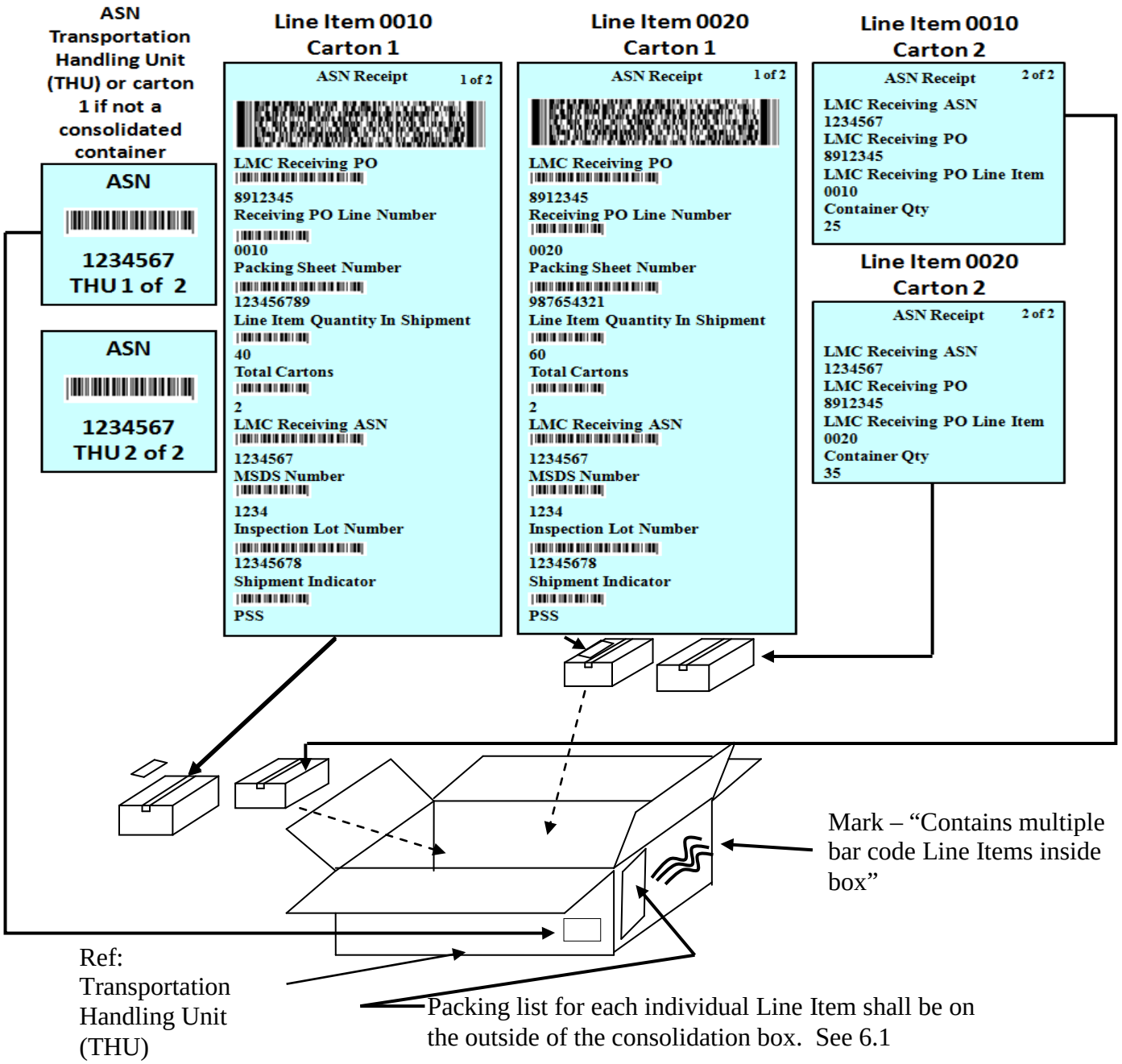
C. Item requires temperature, pressure, shock, or vibration isolation in containers and fixtures
D. Unusual and/or abnormal Item configuration

Appendix I
Standard PO Label Example



Shipment consists of 2 Line Items and 5 cartons total. Line Item one has 2 cartons with a quantity of 25 in each carton with the lead carton bar coded. Remaining carton is marked with a piece number (i.e. 2 of 2), PO#, Line Item # and the quantity per carton. Line Item two has 3 cartons with a quantity of 20 in each carton with the lead carton bar coded. The remaining cartons are marked with a piece number (i.e. 2 of 3, 3 of 3), PO#, Line Item# and the quantity per carton. The shipment is consolidated and marked "Contains multiple bar code Line Items inside box". Packing list is affix to the consolidation box.

Standard PO Label for TMS Shipments

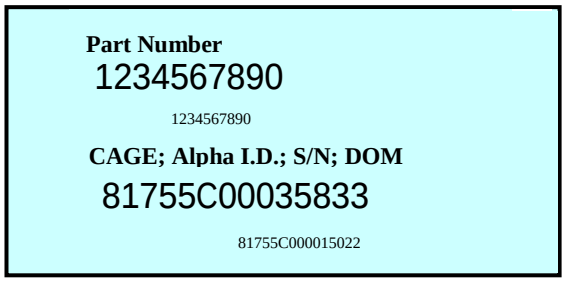


Shipment consists of 2 Line Items, 1 THU, and 4 cartons total. Line Item 0010 has 2 cartons with a quantity of 15 and 25 in each carton with the lead carton bar coded. Remaining carton is marked with a piece number (i.e. 2 of 2), ASN #, PO #, Line Item #, and the quantity per carton. Line Item 0020 has 2 cartons with a quantity of 25 and 35 in each carton with the lead carton bar coded. The remaining cartons are marked with a piece number (i.e. 2 of 2),

ASN #, PO#, Line Item #, and the quantity per carton. The shipment is consolidated and marked “Contains multiple bar code Line Items inside box”. Packing list is affix to the THU. The THU is marked with the ASN bar code. If there is no THU then the ASN bar code goes on the lead carton. If a shipment encompasses multiple THU’s then the THU 2 of 2 label is affix to the second THU.

Note: TMS will create all these labels and attach them to you shipment in the application.

Appendix II
Additional Label for F-16 Block 60 –
Shipments Direct To UAE Or Conus Inventory Accumulation (Non-Production Support) Example



Part Number: The part number may be up to 20 characters long. If the part number is less than 20 characters long the remainder of the field will be blank. If the part number is greater than 20 characters only the first 20 characters will be utilized.

CAGE Code: Seller shall use the 5-digit Commercial and Government Entity code.

Alpha ID: The identifier designates who assigned the serial number that follows. Serialized Items should use a capital "C" for this field. This designates that the Supplier/Seller provided the serial number. For all non-serialized Items, a capital "N" will be used; which will indicate no serial number is available.

Serial Number: This is a 5-digit serial number field. If an Item is not serialized, the serial number field shall be zero filled (00000) by the Seller. For repair and return shipment, the serial number MUST be present-for both outbound and inbound shipments.

Date of Manufacture (DOM): This is a four digit Julian date. This is the Item's actual date of manufacture, if known. Seller shall provide the date of manufacture if it can be determined. However, if the date of manufacture is unknown, seller shall complete the field with the date packaged/ shipped. For repair and return shipments, the DOM should be the date packaged/shipped.

Note: For F-16 Block 60 – Shipments Direct to UAE or CONUS Inventory Accumulation (Non-Production Support) shipments, the bar code labels identified in **both** Appendixes I and Appendix III apply. If a consolidation box is used, the bar code labels specified in Appendix III should be on the outside of the consolidation box. Each individual container inside the consolidation box shall have the appropriate III bar code label attached by the Seller.

Appendix III

LM Catalog Label Example

Direct Delivery

LM Catalog Order Number

EC123456789

Packing Sheet Number

1234567890

1234567890

Deliver To Address

00050186

00050186J

User Joe

Telephone 817-555-1234

Building 5

Floor 1

Column 86

Appendix IV
Team Furnished Equipment Label Example

Team Furnished Equipment

Receiving PO
1234567890
1234567890

Receiving PO Line Number
0001
0001

Packing Sheet Number
1234567890
1234567890

Line Item Quantity in Shipment
100
12

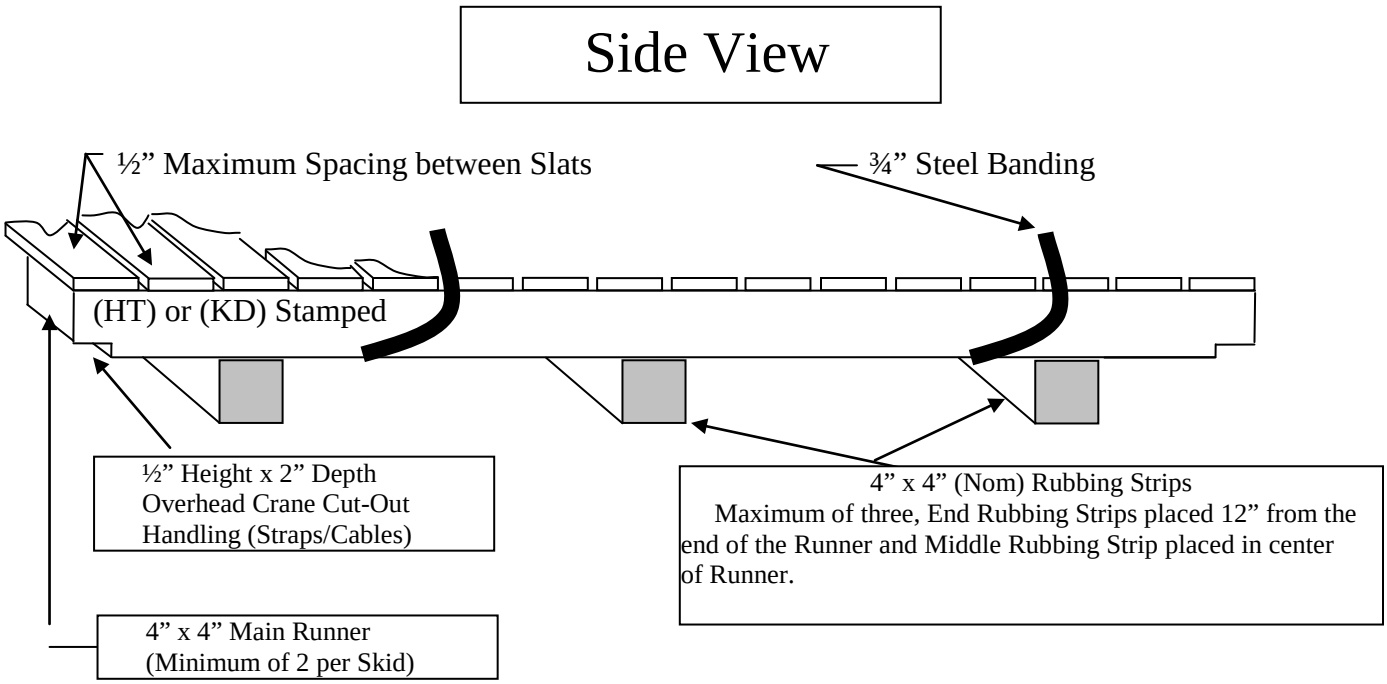
Total PC
5
5

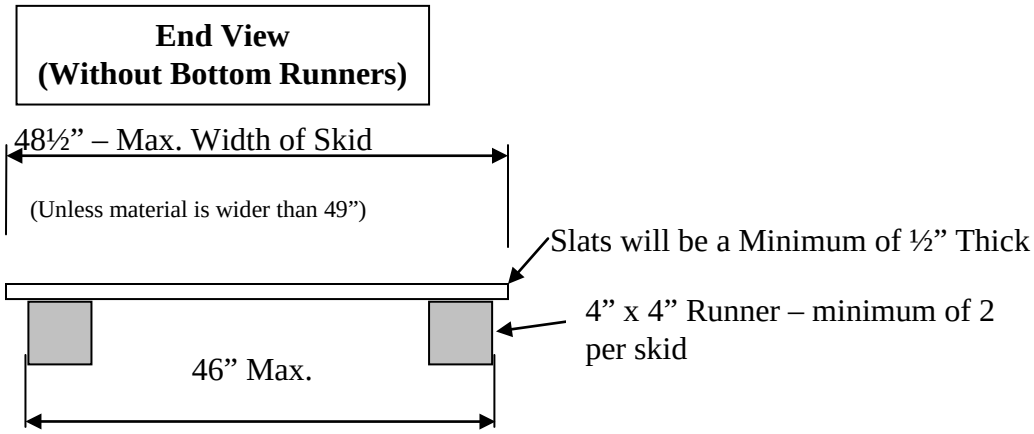
MSDS Number
442678
442678

LM Part Number
567890123
567890123

Procuring PO & Line Number
1234560789012
1234560789012

Appendix V
Raw Stock Packaging





46" – Maximum Spread of Runners Measured from the Outside of One Runner to the Outside of the Next

Appendix V (Continued)

Seller's External Packaging Requirements:

- Steel banding to be placed against the runners between top slats
- Steel banding shall be a minimum of ¾" wide
- Steel banding shall be tensioned adequately to prevent damage and/or shifting of contents
- Solid wood products shall be Heat Treated (HT) or Kiln Dried (KD)
- All packing lists, text reports, etc. must be securely attached to the skid/material.
- Cut shapes to be stacked so the heat lot and purchase order number are visible from the outside without cutting the retaining bands
- Legible skid identification on each end to include, at a minimum, the following:

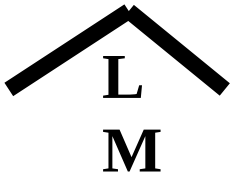
LOCKHEED MARTIN P.O. _____
LOCKHEED MARTIN P.O. LINE ITEM _____
LOCKHEED MARTIN P/N _____
QTY_____ UOM_____
PACKING SLIP NUMBER NO._____

Appendix VI
Special Marking
High Risk Shipments

High Risk shipments are defined as Items where the shipping container requires specialized handling, loading techniques and devices, which are required to protect the Item during shipment, storage, installation, or removal.

Remarks: Seller shall place the High Risk Shipment mark shown below on four sides of package so it is in visible range of receiving personnel.

Dimensions: Make the mark at least 4 inches high and in red or black ink.



Examples When to Use:

- **Shipping container requires more than one standard rated forklift truck (3,000lbs capacity) to safely perform the unloading process**

- **Shipping container is top heavy and could tip over easily if not properly handled**

Appendix VII
Critical Supplier/Seller Parts Packaging

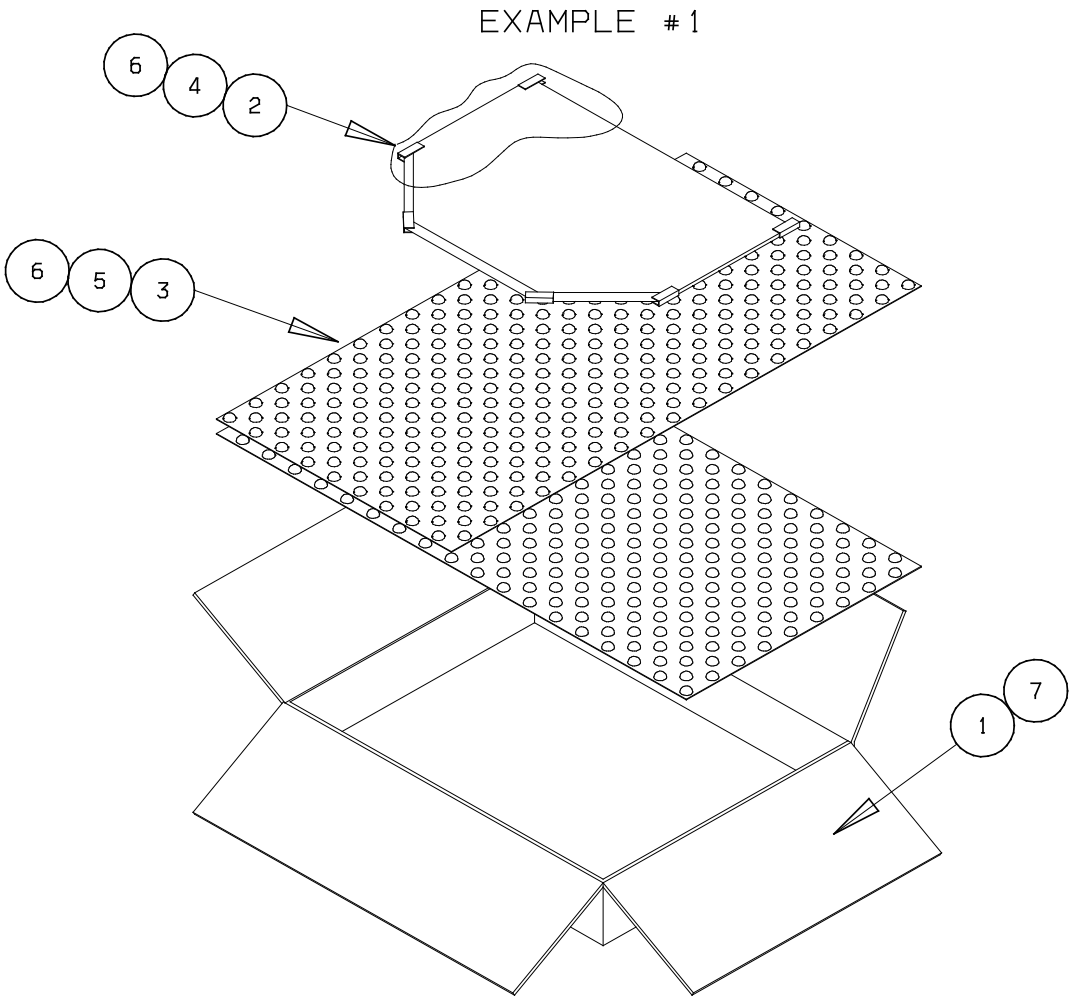
Packaging Requirements:

1. **Seller shall ensure that all Items will have polyethylene tubing or polyurethane foam or pipe insulation to cover bevel, sharp, or chevron edges. Material used will extend a ½" minimum past the part. Not required for Example Two shipments. Seller shall use the following Grainger materials: Red Tubing (Grainger P/N 8PR03) or Blue foam (Grainger P/N SF49423).**
2. **Parts will then be wrapped with a 6 mil polyethylene sheeting material.**
3. **All parts will be surrounded by a minimum of two inches of approved cushioning material. See Table below and proceeding pages for examples of acceptable packaging solutions.**
4. **Packaging should prevent the part from moving or shifting vertically or laterally within the container.**
5. **Container construction / selection will be in accordance with section 4.3.**
6. **Seller shall individually enclose each Line Item (Part) in a carton segregating it from other Line Items. Consolidation of these cartons for shipment purposes is acceptable.**

Example	Description	Specification
One	Bubble Wrap	PPP-C-795C , Class 1 or equivalent
Two	Polyethylene Foam	A-A-59136, Class 1, Grade A, Type 1
Three	Semi-Flexible Foam-In- Place	Semi-Flexible, 1.0 lb density, i.e., Sealed Air Instapak

See following pages (26, 27, and 28) for examples of acceptable packaging solutions.

Appendix VII (Continued)

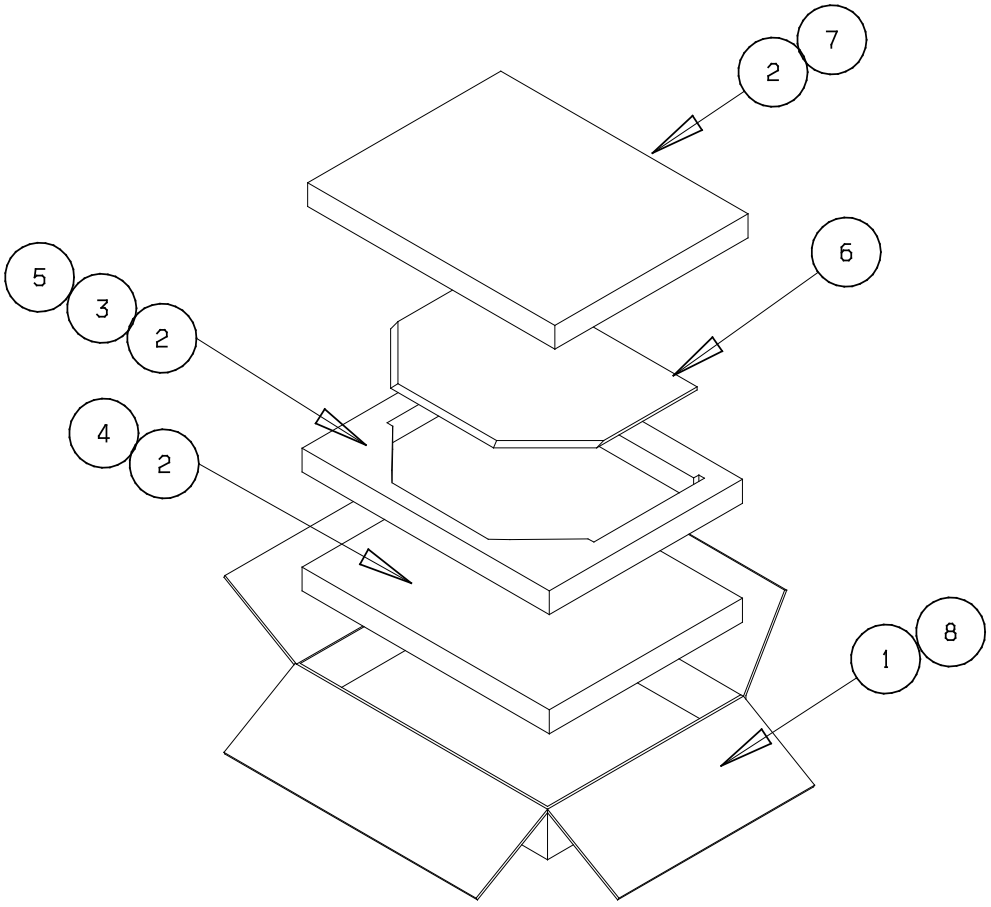


Packaging Steps / Instructions:

1. **Inside dimensions of container are calculated by measuring the part and adding 4 inches to each dimension.**
2. **Attach polyethylene tubing or polyurethane foam cushioning to part where necessary and cover with polyethylene wrap. (Note: tubing shown in illustration)**
3. **Drape 2 inches of bubble wrap over the sides, ends, and bottom.**
4. **Place part in container.**
5. **Place 2 inches of bubble on top of part.**
6. **Make sure part is secure in package. Use bubble wrap for any loose areas.**
7. **Close container and seal with tape.**

Appendix VII (Continued)

EXAMPLE #2
POLYETHYLENE FOAM



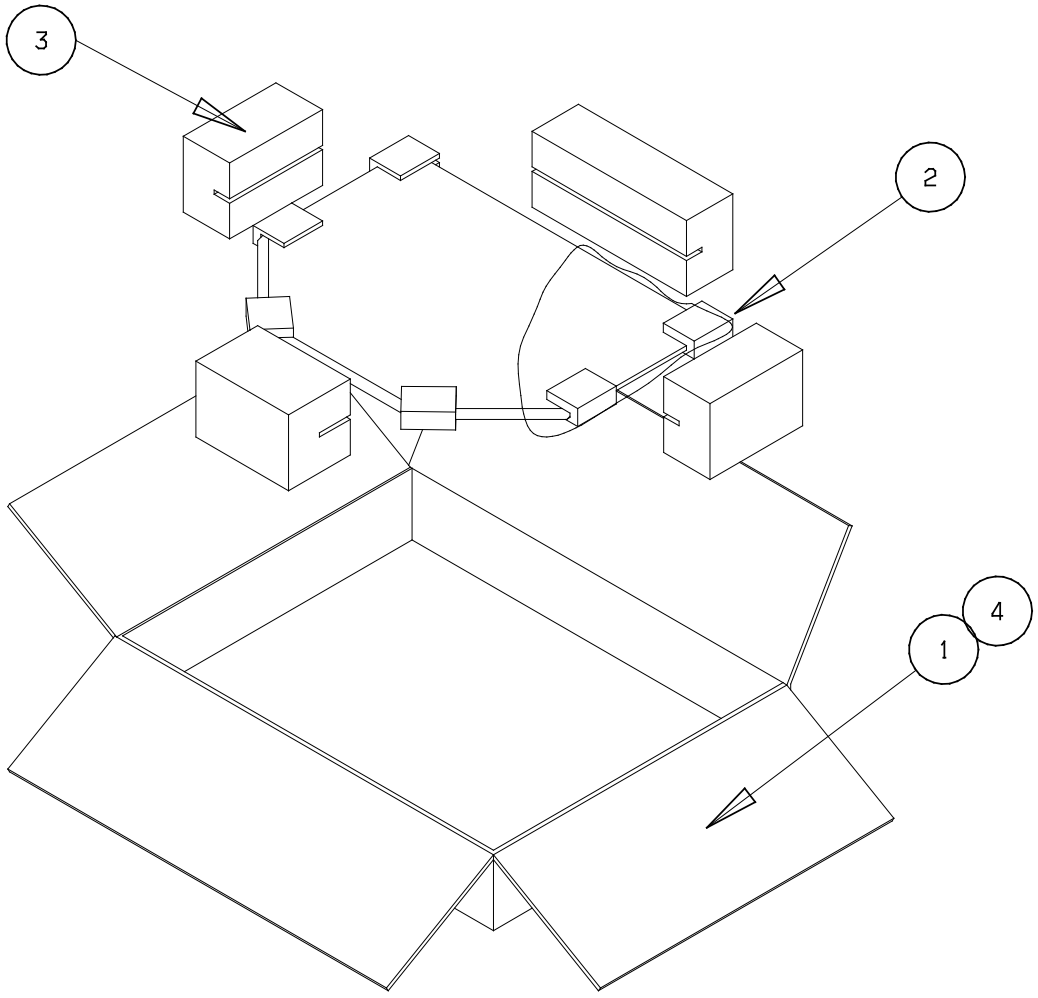
Packaging Steps / Instructions:

1. **Inside dimensions of container are calculated by measuring the part and adding 4 inches to each dimension (length, width, & depth).**
2. **Cut three 2 inch polyethylene foam cushions equaling the inside length and width dimensions of container.**
3. **Take one polyethylene cushion from Step 2, center the part on it, and scribe around part with a marker. Cut out traced pattern once completed. The goal is to have two solid pieces (top and bottom pads) and one cut-out piece to encase the part.**
4. **Place one untraced cushion in bottom of container.**
5. **Set traced cushion inside container.**
6. **Set part inside of traced cushion. Use small bubble wrap to fill any gaps.**
7. **Place other untraced cushion in container**
8. **Close container and seal with tape.**

Appendix VII (Continued)

EXAMPLE #3

SEMI-RIDGID FOAM-IN-PLACE



Packaging Steps / Instructions:

1. **Inside dimensions of container are determined by measuring the part and adding 4 inches to each dimension (length, width & depth).**
2. **Attach polyethylene tubing or polyurethane foam to part where necessary and cover with polyethylene wrap. (Note: Blue foam shown in illustration)**
3. **Center part in container and block with Foam-In-Place. Do not Foam-In-Place on any beveled, sharp or chevron edges.**
4. **Close container and seal with tape.**

APPENDIX VIII

F35
GENERAL PACKAGING INFORMATION
(REPAIRABLE ITEMS ONLY)

PART NUMBER _____

NATIONAL STOCK NUMBER (NSN) _____

NOMENCLATURE (DESCRIPTION) _____

CAGE (SUPPLIER/SELLER) _____

SQAR NUMBER _____

ITEM DIMENSIONS (INCHES)
LENGTH_____WIDTH_____HEIGHT_____

ITEM WEIGHT _____

ITEM FRAGILITY RANGE (SEE BELOW) _____

IS ITEM SUSCEPTIBLE TO ESD DAMAGE? YES _____ NO _____

IS ITEM SUSCEPTIBLE TO CORROSION? YES _____ NO _____

ARE THERE CRITICAL SURFACES ON ITEM? YES _____ NO _____

PRESERVATIVE REQUIREMENTS YES _____ NO _____

PACKAGED DIMENSIONS (INCHES)
LENGTH _____ WIDTH _____ HEIGHT_____

PACKAGED WEIGHT _____

- FRAGILITY RANGE DEFINITION – THE MAXIMUM ENERGY PERMITTED TO REACH THE ITEM DURING TRANSPORTATION AND HANDLING.
- NOTE: APPROXIMATE FRAGILITY FACTORS ARE LISTED IN MIL-STD-2073-1D, TABLE I