

4.6 Special Design Protective Equipment Recommendation Data

5.0 MARKING

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APPENDIX IX F35 General Packaging Information (Repairable Items Only)

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-5010F 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 – For routing guidelines see the Carrier Selection Guide accessible via the Lockheed Martin Aeronautics Material Management home page on the Internet World Wide Web. As of the date hereof, the URL is: <http://www.lmaeronautics.com/material-management/>
- 1.4 Supply Chain Security – 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 Seller is a TJEustownSsecuritc

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Drop Shipment	A drop shipment is Lockheed Martin owned material the supplier delivers to a destination other than LM Aero.
LM eCat 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 <u>or</u> 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 <u>and/or</u> it can be the package which contains said assemblies or groupings for the purposes of warehouse/supply storage <u>and/or</u> 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 e presassetyer'aTd(test articles, tark)Tj/TT1 l yer asse48EMC /Pv/TT0 1 Tf-0.0

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

- 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 VI. 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

- 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.

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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 1234567YYYYYY.) 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

- 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)

5.7.3 LM eCat Marking – The LM eCat 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 eCat 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 IV for examples.

5.7.4 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 V for examples.

5.7.5 Bar code data elements for F35 LRIP and Beyond Purchase Orders:

- A. NATO/National Stock Number (Barcode)
- B. Description/Nomenclature
- C. Prime Cage Code (Barcode)
- D. F35 Part Number (Barcode)

- E. Contract No.
- F. Method of Preservation Code
- G. Date of Preservation/Packaging
- H. Weight
- I. Quantity/Unit of Issue
- J. Shelf Life
- K. Serial No. (if applicable) – (Barcode)
- L. PO Number
- M. PO Line Item Number
- N. Mfr CAGE Code
- O. Lot/Batch No. (if applicable)

Notes:

If the Receiving PO number is 1234567890, then Seller shall display only 1234567890 on the bar code; and shall not fill in the remaining field with any leading and/or trailing characters, such as XX1234567890 or 1234567890YY.) See Appendix II for example. Seller shall use a Code 39 Linear barcode (3 x 9) on specified data elements. Seller shall use Mil-Std 129P Change 3, dated 29 October 2004 and Def-Stan 81-41 for additional guidance on all other applicable package marking.

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 supplier 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 eCat 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 may 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.

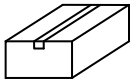
7.1 7.1f0 Tc 0 140.6 refBT/P s

Appendix I

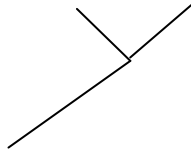
Standard PO Label Example

LMC Receiving PO
*1234567
1234567
Receiving PO Line Number
0001
0001
Packing Sheet Number
123456789
123456788
Line Item Quantity in Shipment
50
50
Total Cartons
2
2
MSDS Number
Shipment Indicator

LMC Receiving PO
*1234567
1234567
Receiving PO Line Number
0002
0002
Packing Sheet Number
123456789
123456789
Line Item Quantity in Shipment
60
60
Total Cartons
3
3
MSDS Number
Shipment Indicator



Qty: 25
2 of 2



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.

Appendix IV

LM eCAT Label Example

Direct Delivery

LM eCAT Order Number

EC123456789

Packing Sheet Number

1234567890

1234567890

Deliver To Address

00050186

00050186J

User: Joe

Telephone 817-555-1234

Building 5

Floo 1

Colum 86

n

Appendix V

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 VI

Appendix VII

Special Marking

High Risk Shipments

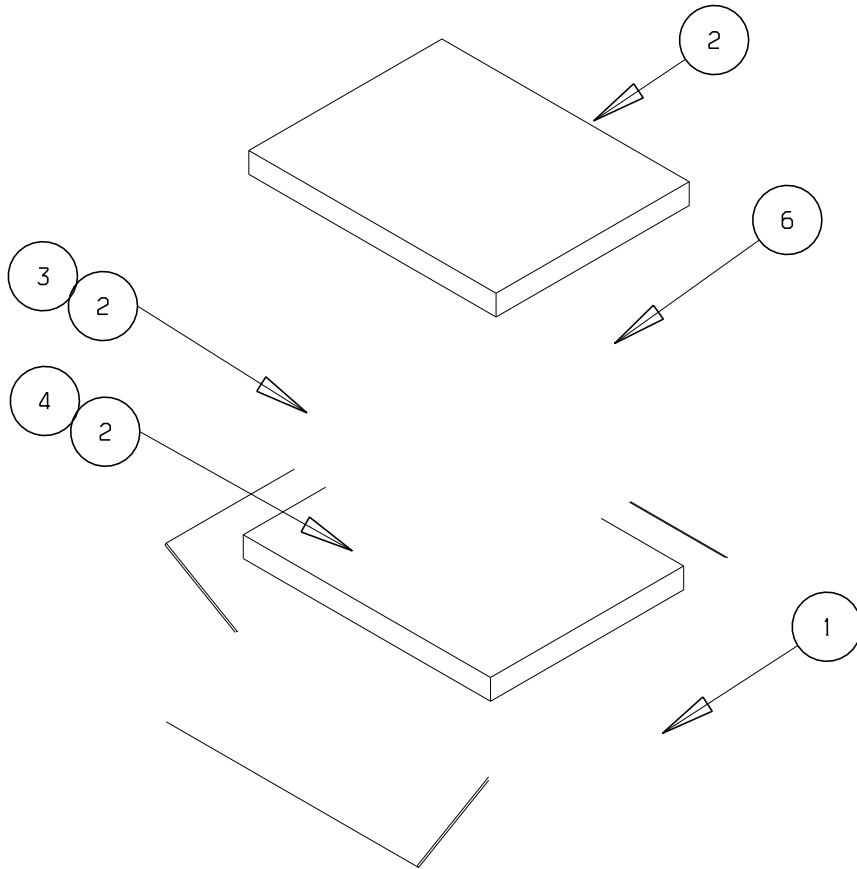
High Risk shipments are defined as Items where the shipping container requires specialized handling, loading techniques and devices, which are required to protect the Item during shipment, storage, installation, or removal.

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.

Appendix VIII (Continued)

EXAMPLE #2



Appendix VIII (Continued)

EXAMPLE # 3

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APPENDIX IX

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 SUSCEPTABLE TO ESD DAMAGE? YES _____ NO _____

IS ITEM SUSCEPTABLE 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