



Cummins Inc.

# **Aftermarket New & ReCon Parts Packaging Standards**





# Cummins Packaging Standards

## About These Standards

This document specifies packaging practices and standards for both International and Domestic service parts packaging requirements. These Standards are the foundation for Suppliers to develop their packaging specifications. There may be specific requirements within these standards that some of the Cummins Distribution Centers may have with regard to unique lot size requirements for components shipped to them, such as bulk pack, carton pack, size limitations, lot size/quantity per carton/pack etc. Suppliers shall submit their packaging proposal for approval via the Packaging Data Management System (PDMS) Portal - See Appendix 3. The receiving Packaging Engineer will send approvals or changes through the portal.

The Cummins Global Packaging Standard-New and ReCon Parts, hereinafter “the Standard” has been created with the goal to standardize packaging, reduce waste, and improve quality and packaging sustainability while providing parts at the lowest total cost. Packaging is a key element in the supply chain which can impact safety, environment, quality, order quantities, inventory levels, freight utilization and customer satisfaction.

Packaging designs shall focus on environmental impact and safety including consideration to ergonomics and unit load stability in transit through point of use. Specific guidance on acceptable materials and methods are outlined throughout the Standard.

This document specifies packaging practices and standards for all suppliers of New and Recon parts to any and all Cummins New and ReCon parts facilities. These Standards are the foundation for Suppliers to develop their part specific packaging specifications and ensure that all incoming component(s) are adequately protected at the lowest total cost with due consideration of sustainability and the entire supply chain flow. Supplier packaging shall preserve part quality through the entire distribution chain up to and including the point of use regardless of the freight terms or mode of transport.

The Global Packaging Standard- New & ReCon Parts may be accessed through [supplier.cummins.com](http://supplier.cummins.com) - “Standards & Processes” section. Any questions regarding these Packaging Standards can be sent to the Aftermarket Packaging Engineer or Corporate Packaging Leader below.

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# PART ONE: PACKAGING STANDARDS

## 1. Introduction

### 1.1. Mission

Each Cummins Aftermarket Part, regardless of where produced or packaged will be packaged according to a specific set of criteria for that part. The criteria will be developed and approved to meet the customer's need regarding functionality, image and efficiency as defined by Packaging Engineering.

### 1.2. Supplier Compliance

Cummins will randomly inspect incoming packaging to determine compliance per the Standard. Where additional regulatory or other packaging requirements exist, or are not covered in this Standard, the supplier is responsible to obtain and assure compliance.

- In the event of noncompliance to the specifications within this document, Cummins reserves the right to:
  - Issue a Material Non-Conformance (MNC) to document the non-conformance to notify the supplier of corrective action required.
  - Issue a Supplier Corrective Action Report (SCAR) to document and drive corrective action through a Supplier Quality Improvement Engineer (SQIE) led 7-Step process.
  - Reject and request a Return Material Authorization (RMA) to return any shipment(s) received that are improperly packaged and/or identified at the supplier's expense.
  - Charge the supplier for any cost due to non-compliance to the Standard. (e.g., may include the cost of material and/or labor for any repackaging, sorting, rework, or replacement of damaged parts, etc.).
  - Consider removing the supplier as a supplier to Cummins.

### 1.3. Cummins Delivery System

The Cummins Delivery System (CDS) was introduced in 1994 to provide the direction for attaining functional excellence in all areas of product delivery. One of the functional excellence requirements in CDS is packaging. These same basic principles are true today in the Cummins Operating Systems (COS) which has replaced what was known as Cummins Production Systems (CPS).

Done correctly, packaging can significantly impact the value of a service part. The key elements are:

- **Functionality:** The package protects, preserves, and identifies the part for warehousing and distribution.
- **Image:** The package provides visual information to confirm that the customer is purchasing a high-quality "Genuine Cummins Part."
- **Efficiency:** The package integrates the part into the customer's business operation – making it easy to purchase, use and dispose.

This specifies the requirements for packaging service parts sold in the Aftermarket. All suppliers (internal Cummins suppliers as well as external suppliers) of packaged parts to the Aftermarket business are

required to conform to these standards when shipping service parts to any location in the Cummins distribution network.

#### **1.4. Packaging Specification Approval Process**

Internal and external Suppliers shall follow the process below in order to ensure that their packaging meets the Standard and the site-specific packaging requirements.

Expendable packaging price per unit shall be defined as a separate line item in all piece part price quotations to Cummins Purchasing and in the Packaging Data Management System (PSDS) referenced in Appendix 3: Packaging Data Management System

- 1.4.1.** Site Packaging Representatives are responsible for establishing their specific receiving site packaging parameters for the Supplier. For example:
  - Footprint restrictions
  - Weight & Height limitations
  - Quantity per container limits
  - Special Quality requirements
  - Line side presentation orientation requirements
- 1.4.2.** Suppliers shall contact the Packaging Representative from each specific Cummins receiving site to inquire about specific site related packaging parameters. A limited number of Cummins receiving sites have identified and documented their site-specific packaging requirements that shall be included in Supplier's packaging proposal(s). Suppliers may find the Cummins Site Specific Packaging Requirements document published in the Cummins Supplier Portal. For any questions regarding site-specific requirements, please contact the site Packaging Representative.
- 1.4.3.** Supplier shall develop their packaging proposal based on the Standard and the Cummins receiving site specific requirements and submit to Cummins Sourcing Manager using the Packaging Data Sheet located on the Supplier Portal (supplier.cummins.com). An example is shown in Appendix 3: Packaging Data Sheet.
- 1.4.4.** Where a part is used in both production and aftermarket/service applications the PDS approval process is required for all Cummins manufacturing sites and PDC's.
- 1.4.5.** Each receiving site shall review the Suppliers proposed packaging from the Packaging Data Sheets and route internally for approval.
- 1.4.6.** All individual part packaging specifications and related costs shall be defined prior to shipment of parts to a Cummins receiving site. No changes shall be made except those authorized by the Cummins receiving site Packaging Representative.

**Supplier packaging changes on current (legacy) parts must also be approved by the receiving plant/PDC's packaging rep. via the PSDS (Packaging Data Management System) process.**

## 2. Functionality \_\_\_\_\_

### 2.1. Protection

#### 2.1.1. Discussion

The most important function of a service part's package is to protect it from damage during warehousing and distribution.

Supplier is responsible for packaging quality to assure proper component protection while in shipment from point of origin through point of use with consideration of all carrier modes used to transport freight.

Many component parts that are sold in Cummins Aftermarket are relatively small and light weight and will be consolidated with other similar parts in an over pack container suitable for shipping. For these parts, a variety of packaging methods and materials are approved for use.

Likewise, there are several other types of packages approved for heavier components that may be shipped without additional over packing. Parts packages that weigh more than 50 pounds or are large in size must provide an access for forklift entry. Parts weighing more than 20 pounds must be packed in a container that conforms to ASTM (American Society for Testing and Materials) specifications regarding air shipments, free fall tests and vibration tests. These containers must also meet all service part packaging requirements.

In either case, the choice of which type of approved packaging method to use belongs to the supplier.

Cummins Internal (PDC to PDC) and PDC to Customer Shipments - Engine Down (ED) shipments/orders are not required to be individually packed in Cummins branded cartons for Cummins internal (PDC to PDC) or external customer shipments/orders. Exceptions may be approved for external customers by the site packaging representation.

#### 2.1.2. Approved Packaging Styles

The primary styles of service parts packaging are:

- Corrugated cartons
- Solid fiberboard cartons
- Corrugated pads
- Plastic polybags (standard sizes)
- Envelopes (standard sizes)
- Anti-Static Bags
- Polyethylene sleeve (polytube) (regular or VCI-impregnated)
- Shrink-wrap (with or without corrugated backing pad or VCI type film)
- Vacuum skin pack (hot or cold seal, with backing pad or VCI type film)
- Corrugated sleeve crate (with solid ends)
- Wooden crate (only for very large / heavy parts, or other special circumstances)
- Heavy Parts Packaging. (See Heavy Parts Packaging Guidelines in Section 6 of these standards on page 47 for details)

There are many choices of these types of packaging already specified in standard sizes. Wherever possible, it is desirable to utilize these specifications for the sake of consistency. To obtain more detailed information on existing specifications, contact PDC Packaging Engineer or representative.

### 2.1.3. Packaging Design and Material Selection

The supplier shall consider the following general practices in establishing packaging design and material selection.

- The supplier shall utilize materials of sufficient strength and integrity to provide for the safe transport of quality parts to the point of use.
- The supplier shall apply proper packaging principles in container and dunnage design with considerations for both static and dynamic conditions.
- The supplier shall apply proper packaging principles in palletization and unit load securement.
  - Recyclable Polyester strapping is preferred.
  - Metal strapping shall not be used without express written permission from the Cummins Receiving Site Packaging Representative.
- Containers are to be sized such that solid foundational support is derived from the pallet (no pallet overhang).
- Use of corner posts and angle board are acceptable means of enhancing unit-load performance as required.

### 2.1.4. Interior Cushioning and Dunnage

Another important consideration having to do with protection is the interior cushioning or dunnage. This element of the package serves several purposes – it immobilizes the part inside the exterior container, insulates it from vibration and shock during transit, protects the container walls from protrusions on the part, and fills the voids in the container for a more solid pack.

Various methods are available, depending on the application. Examples include:

- Dunnage (kraft or tissue) paper
- Corrugated pads – filler pads or die-cut inserts
- Specially designed inserts or trays (“nest” the part)
- Foam – pads, bagged foam peanuts or foam-in-place (note that foam methods should only be used when no other suitable method can be found due to disposal problems)
- Bubble wrap
- Expandos

The selection of the best method should be based on performance (past experiences and test results) and cost. The final choice is subject to the same approval process outlined in the discussion above. Contact PDC Packaging Engineer or Rep. for assistance.

### 2.1.5. Environmental Impact

The supplier is responsible to comply with Cummins initiatives to continually reduce our waste, disposal cost and to increase our recycling efforts.

Packaging must be created with consideration of all governmental regulations and environmental impact from packaging material selection through the end-of-life cycle.

Acceptable packaging materials include, but are not limited to:

- Wooden pallets/boxes/crates:
  - Note 1: Must comply with International Standards for Phytosanitary Measures (ISPM 15) as required.
  - Note 2: Any wood packaging materials that have been treated with Methyl Bromide are forbidden. This includes pallets, crates or dunnage that is solid wood and falls within the ISPM 15 guidelines. Only heat-treated wood is acceptable.
  - Note 3: Manufactured wood packaging materials must comply with Cummins exposure limits of 0.016 ppm [0.02 mg/m<sup>3</sup> of formaldehyde per cubic meter of air (mg/m<sup>3</sup>)] as a 8 hour total weighted average and 0.1 ppm (0.15 mg/m<sup>3</sup>) as a ceiling concentration determined in any 15 minute sampling.
- Clean corrugated/fiberboard
- Molded pulp
- Clean Kraft Paper
- Paper (VCI treated)
- Polyethylene materials (VCI treated), (HDPE, LDPE, LLDPE) other than foam
- Polyethylene bags (clear only), PE Terephthalate (PET, PETE, PETG, RPET)
- Polypropylene materials (PP) other than foam
- Bubble wrap (clear only)
- Stretch wrap (clear only)
- Steel

Allowable packaging materials with Cummins PDC approval:

- Biodegradable and commercially compostable materials are preferred whenever possible.
- Single Use plastics (e.g., partitions, layer trays and pads)
- Foams (Ethylene, Propylene, Styrene, Urethane, etc.)
- Polyvinyl Chloride (PVC)
- Microfoam Laminated Corrugated

Prohibited packaging materials include:

- Hazardous materials except those allowed and regulated by World Health Organization standards.
- Soiled Corrugated (oil soaked).
- Wax or poly-coated corrugated (these are non-recyclable).

Where practicable, all polymer resin material must have the recycling resin code visible and legible. (See Appendix 5 for applicable codes)



## 2.1.6. Recommended Corrugated Strength for Individual Part Packaging

Below are recommended corrugated specs using standard virgin or industry standard virgin with recycled content of ~28% or less for individual part packaging.

- 200 lb. Burst B-flute: Used for anything under 10 lbs. with no one dimension (L, W or H) greater than 12”.
- 200 lb. Burst C-flute: Used for anything up to 25 lbs. with no one dim greater than 24”.
- 275 lb. Burst C-flute: Used for anything up to 50 lbs. with no dim greater than 48”.
- 275 lb. Burst B/C flute: Used for anything larger than 50 lbs. or large cubic volumes.

High recycled content corrugated - Use higher burst strength to compare performance. Example: a 200 lb. Burst C-flute virgin box may be as strong as a 250 lb. B/C flute recycled box. You must increase Burst spec. or increase flute sizing to compensate.

Note - There is no exact formula to increase burst or flute strength when comparing virgin vs recycled corrugated. Performance testing should be completed to validate if the box will adequately protect the part.

The recommendation above should cover most shipments moving through a freight and small parcel network. However, the box is only as strong as the internal packaging/cushioning. This is always the key component to consider. Contact the receiving site Packaging Representative for more information.

## 2.2. Preservation (Parts and Engines)

### 2.2.1. Discussion

Certain parts require preservation from destructive elements in the atmosphere. Cummins parts and engines are sold worldwide and must be preserved and packaged to maintain part quality in all customers' environment. Preservation of the components and engines must be capable of **protecting the part from corrosion for a minimum of 18 months** (unless otherwise specified) from the time Cummins takes possession of the components. Therefore, the packaging for these parts and engines must meet these preservation requirements to ensure long term protection from corrosion (See Appendix 4 for more details).

### 2.2.2. Metal Corrosion Preparation

The most common cause of corrosion is contamination. Parts that are contaminated will corrode no matter what type of inhibitors or VCI materials are used. Causes of contamination can be attributed to:

- Part not being cleaned.
- Bacteria in manufacturing process (coolant).
- Parts not being neutralized after acid bath.
- Water filters not changed enough (chlorine in system).
- Chemicals not changed enough.
- Soap from cleaning process not thoroughly removed.
- Operators handling parts without gloves.
- Placing hot parts in a bag before the part cools.

It is extremely important that the manufacturer has strict quality measures in place that ensures the part is clean and free of contamination prior to packaging (See Appendix 4 for more detail).

### 2.2.3. Metal Corrosion Prevention

Recommended Aftermarket Corrosion Prevention Method:

- a. Parts are free of soil containment.
- b. Parts are coated via dip or spray at the recommended dilution rate with an approved liquid rust preventative (RP) recommended by the RP manufacturer that guarantee's corrosion protection for 6 to 12 months.
- c. Parts are then properly packaged, corrosion free in a sealed (Heat, Tape, Zip tie, Zip lock or Staple) environment, with a 4 mil VCI bag or mix of VCI bag and chips that allows adequate circulation of the VCI to prevent corrosion for a minimum of 18 months.
- d. Use of desiccants and/or VCI emitters to augment the corrosion protection is recommended as required.

When preserving a part, it is important that the correct inhibitors and VCI are used to ensure that all materials in the product are adequately protected. The most commonly used methods of corrosion prevention on metal parts include:

- Rust / Corrosion Inhibitors (long term) applied to parts.
- VCI Paper or Bubble Wrap
- VCI impregnated polyethylene bags / sheeting.
- VCI chips in sealed bags (without air holes).
- Special VCI coatings on pads and carton interiors

When using corrosion inhibiting lubricants, they should be a product that will protect the part long term, not require cleaning before using part, and must have a dry finish (sticky residue is OK). Inhibitors that are absorbed by the packaging materials will degrade the package's strength and the corrosion protection.

### 2.2.4. Rubber and Gasket Preservation

In general, the use of approved packaging styles listed above has proven to provide adequate protection of rubber and gasket materials against premature breakage and bending. Gaskets should be packaged flat to eliminate breakage. An exception can be made if the gasket is pliable and meets product engineering approval.

## 2.3. Identification

The ability to readily identify loose and packaged materials, not only upon receipt, but also in tiered storage is important. Consequently, the following requirements **shall be mandatory** for proper identification of production/service parts delivered to Cummins, Inc. by internal and external suppliers.

These requirements pertain to all New & ReCon parts and materials including samples. It is recommended that all Suppliers use the Standard Packing Slip required information below. These requirements do not cover the content identification, which may be required by governing tariffs, special handling instructions or the labeling of hazardous materials.

## Information Required








### PACKING SLIP

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>● Cummins Part Number</li> <li>● Part Description</li> <li>● Quantity</li> <li>● Number of Cartons</li> </ul> | <ul style="list-style-type: none"> <li>● Cummins Purchase Order Number</li> <li>● Purchase Order Release Number</li> <li>● Receiving Location</li> <li>● Shipment ID (SID#) ASN ID*</li> <li>● Country of Origin</li> </ul> |
|--|---|

\* Note the following;

- a. All shipments must have a packing slip for each Receiving location (see example below). ASN# AND SHIPMENT IDENTIFICATION NUMBER (SID#) MUST MATCH EXACTLY IN ALL CASES.
- b. The ASN/SID number must be entered into the fields on the packing slip designated specifically for the ASN or SID as provided by you through EDI or Sterling Web-forms (e.g., Packing Slip, Labels, BOL's, ASN's etc.) NO ADDITIONAL DIGITS.
- c. Shipments with multiple pallet loads MUST have a packing slip on each individual pallet load which identifies/matches the contents of each pallet load to the packing slip. The part number and shipping quantity of each individual pallet load must be clearly identified on the packing slip.

### Sample Packing Slip

	Cummins     ctry_name wh_adrin1 wh_adrin2 wh_ctry_code Tracking Number: traknm	Supplier No : F01922000 ASN Number: 75501539 PRO Number: pronom	 						
<b>Ship to Address:</b>		<b>Bill to Address:</b>							
st_adrn1 st_adrn2 st_adrn3 st_adrcy st_state                             st_adrpsz st_ctry_name		bt_adrn1 bt_adrn2 bt_adrn3 bt_adrcy bt_state                             bt_adrpsz st_ctry_name							
<b>Customer No</b> stcust	<b>Carrier</b> carnam	<b>label_ship_host</b> ship_id	<b>Order Type</b> ordtyp						
<b>Notes:</b> notxt1									
Part No	Load Number	Description	Qty	COO	Bin Loc.	PO Line No	DLR PO No	Customer PO	Cust. Part No
3929777	CC06355173	NUT,HEXAGON FLANGE	110	US	10			26999	14094EZ40A
Order Line Notes: 2699990101									
3029820	CC06355174	SEAL,O RING	126	US	6			26999	15066EZ24C
Order Line Notes: Part 302982000 must be ordered in multi ples of 6. 2699990061									
3678873	CC06355174	PLUG,THREADED	102	US	7			26999	11019EZ40A
Order Line Notes: Part 367887300 must be ordered in multi ples of 2. 2699990071									
3900631	CC06355174	SCREW,HEX FLANGE HEAD,CAP	110	US	8			26999	12109EZ40A
Order Line Notes: 2699990081									
Packslip Number	Parts	Cartons	Pallets	Weight	Pkg. Dims	Pack Date			Packer
00075501539	11	4	4	94.840	LXWXH	09-OCT-2015			GL362

### 2.3.1. Discussion

The third primary function of a service parts package is to identify the part as it is handled throughout the distribution network. In today's modern distribution processes, proper identification is aided by a variety of shipping paperwork and electronic data interchange methods. But the most basic form of identification is the labeling of the package containing the part.

### 2.3.2. Pre-pack Label Standard

The pre-pack label shall include the following information:

- a. Part number
- b. Bar code of part number – 11 or 13-digit alphanumeric format
- c. Quantity in package
- d. Bar code of quantity in package – 3-digit numeric format
- e. Description of part – readable format in English, Spanish and French
- f. Country of origin - ISO Alpha-2 (two-letter abbreviation)
- g. (Optional) Bar Code of County of origin - 11 or 13-digit alphanumeric format
- h. Total Package weight (Part + Carton) – decimal weight to the nearest 0.1 (LB) and (KG)
- i. Date packaged – DD-MMM (Text Abbreviation)-YYYY format
- j. Packager – Supplier number or supplier name
- k. Part Serial / Lot Number - 11 or 13-digit alphanumeric format
- l. Bar Code of Part Serial / Lot Number - 11 or 13-digit alphanumeric format or 2D Barcode Matrix
- m. Optional 2D Bar Code Data Matrix Square of Part #, Quantity in package, Date Packaged, and Packager

\* Note the following;

- a. See label pictures on page 12 and 13 for 1D and 2D Barcode placement on label and see Appendix 6 for Serial/Lot Number and optional 2D Barcode Matrix Label Requirement
- b. Cummins PDCs performing packaging are currently not required to include information from k,l and m listed above in 2.3.2.

**The standard label size is 3.85” by 3.0”, and bears the graphic as pictured below. All text should be in English with the exception of the part name which should be in English, Spanish and French. (See section 3.2 for instructions for obtaining approval for new label artwork.)**

Part Specific Information – Specific parts may require additional information on the pre-pack label. Contact the receiving sites packaging engineer or Global Packaging Leader for more information.

There are 3 specific types of pre-pack labels:

- Standard Cummins pre-pack label with only the Cummins logo
  - Red Stripe Header – New Parts
  - Black Stripe Header – ReCon Parts.
  - Black Stripe Holset Reman Label – Holset Reman (HX)
  - Red Stripe Cummins label – (NX)
  - Red Stripe Label – Cummins Anticounterfeit

- Black Stripe Reman Label – Cummins Anticounterfeit
- Business Unit Specific
- Product Brand Specific

\* NOTE: Larger or smaller label sizes can be used only with approval of PDC Packaging Engineer.

\*\* NOTE: Cummins Private Branding and Business Unit approved pre-pack. These labels are only to be used when private branding labels or business unit specific labels are required by the Customer.

### Sample Standard Cummins Pre-Pack Labels

**\*NOTE: The traditional three-language label featuring the Cummins logo *only* is being gradually replaced by an Anti-counterfeit label, incorporating a hologram and QR code within the red/black stripe section.**

Standard 3-language pre-pack label – PMS 485 Red Stripe



Standard Cummins Anticounterfeit 3-language pre-pack label – PMS 485 Red Stripe



Recon 3-language pre-pack label – Black Stripe



Recon Cummins Anticounterfeit 3-language pre-pack label – Black Stripe



### 2.3.3. Label Placement

The standard Cummins approved cartons will bear markings to indicate the correct placement of the pre-pack label. Standard placement follows these guidelines:

- Place the label in an open area of the panel that will be facing out when the package is stored in its natural storage orientation on a shelf. Do not cover existing type or logo.
- Label barcoding must be scannable and not folded on one side.
- If the shape of the package prevents this, place the label in the most logical orientation possible.
- In any case, the label shall not be placed over any preprinted graphics on the package (see Graphics in section 3 – Image).

### 2.3.4. Kit Content Labeling

Many multi-component kits are sold in the Cummins Aftermarket for the convenience of the customer. These kits are packaged using the same methods as individual components, including a pre-pack label to identify the kit part number (per section 2.3.2).

In addition to the pre-pack label, a kit shall be labeled with a content label that lists the following for each component in the kit:

- Component part number
- Quantity in kit
- Component part description
- Component country of origin
- Component Serial Number

Contact MDC Packaging Engineering for more information on these or other kit labeling options to suit special kit package needs. **All child components placed in kits must be labelled with a part number prior to being placed in the kit.**





### 2.3.5. Case Pack Labelling (Cummins Plant/ PDC Use Only)

- Purpose – Inventory consolidation and Outbound picking productivity improvement
- Parts identified for Case Packs must be packaged individually in Cummins branded box and label.
- The individually packaged parts will then be packed into an over-pack box per the Case Pack quantity.
  - The over-pack box can be Cummins branded or plain kraft color box with no branding
- Only the Case Pack Label should be placed on the over-pack box. No Red-Stripe or Black-Stripe pre-pack label should be placed on the over-pack box.
- Only one Case Pack label is required on the over-pack box.

The Case Pack label shall include the basic information below (Variations can be approved by site Packaging engineers): (See sample label below)

- White label with black text
- Title – CASE PACK in all caps
- Part Number
- Bar code of part number – 11-digit alphanumeric format
- Part Description
- Part Quantity
- Bar code of Qty – 3-digit numeric format



### 2.3.6. Alternate Labeling Methods

Aside from the pre-pack label, certain packages may require an alternate form of identification. These would include:

- Tagging – If a part meets the requirements for “No Pack” (see section 2.4), there may still be identification needs. In this case, the part shall have wire tag with standard label placed on tag.
- Bulk containers – Similarly, “No Pack” parts may be shipped and stored in bulk quantities. In this case, a standard AIAG shipping label shall be applied to the bulk container.
- Direct print – in automated applications, direct print equipment may be used for package labeling. This is acceptable; however, all required information defined in section 2.4.2 must still be provided.

Any other alternate method must be approved by PDC Packaging Engineering.



### 2.3.7. AIAG Bar Code Label Standards

The Cummins Inc. Labeling Standard is an extraction from the AIAG Shipping/Parts Identification Label Standards (AIAG-B-44) developed by the Automotive Industry Action Group. Cummins variances or additions to the AIAG standard are denoted by an (\*) and provides guidelines for the printing and placement of Shipping/Parts Identification Labels. The bar code standards shall be used in conjunction with Cummins WW Packaging Standards.

Permission to print portions of the AIAG Shipping/Parts Identification Label Standard (AIAG-B-43-19842018) has been granted by the AIAG Board of Directors.

- **1D Barcode - Code 39 symbology**

All 1D bar codes shall be Code 39 symbology and shall conform to the Bar Code Symbology Standard ODETTE, AIAG as specified by your Customer for Master Labels. The Cummins Legacy Label Format is based on the AIAG B-44 format and several sites have adopted later versions. Refer to Site Specific Packaging Requirements for further details and submit a package label example on the Packaging Data Sheet (PDS) for approval.

- **2D Barcode Matrix**

2D Barcode is a two-dimensional type symbol that contains data as a function of the specific arrangement of dark and light squares. The codes contain data in two directions, along the X and Y axis. Common symbology's include Data Matrix, PDF 417 and QR code.

Data Matrix is the only Cummins approved symbology for 2D barcode. In every case, data shall be separated by semicolon as a data separator. There is no fixed length for each data field. The data is bounded by the data identifier at the beginning and data separator, or end of string, at the end. No padded characters (blank spaces) or non-printable characters are allowed in a 2D code dataset.

These labels are designed to improve supplier and customer productivity and controls of suppliers and customers by allowing effective and efficient capture of data for production counts, warehouse input/output, cycle counting, shipper generation, forwarding, freight transfer control, receiving and other inventory controls. It is the responsibility of the supplier to provide barcoded labels that meet these specifications. Strict adherence to these specifications will be enforced.

*In this document the word "Shall" indicates a requirement, and the word "Should" indicates a recommendation.*

### 2.3.8. Definitions

#### **Item**

A single part of material purchased, manufactured, and/or distributed.

#### **Standard Quantity Pack**

A pack which always contains the same quantities of like items.

#### **Non-Standard Quantity Pack**

A pack which contains variable quantities of like items.

#### **Common Item Pack**

A pack which contains all like items, i.e. Same part/item numbers.

#### **Mixed Item Pack**

A pack containing items with different part/item numbers.

#### **Subpack**

One of the smaller packs (which may be a standard quantity or non-standard quantity pack) that make up a larger multiple pack.

#### **Shipping Pack**

A pack used for shipping items from one plant to another and can be any of the packs described above.

#### **Label**

A card, strip of paper, etc. marked and attached to an object to indicate its nature, contents, ownership, destination, etc.

#### **Tag**

A label that is hung from an object, usually with a wire placed through a reinforced eyelet in the label/tag.

#### **Shipping/Parts Identification Label**

A label used to identify the contents of a shipping pack.

#### **Master Label**

A label used to identify and summarize the total contents of a shipping pack.

#### **Mixed Load Label**

A label used to designate mixed contents on the same container.

## Pack, Package or Load

A unit which provides protection and containment of items plus ease of handling by manual or mechanical means. Examples of containers or packs which normally are disposable bags, cartons, cartons on pallets, pallet boxes and metal tubs, and metal racks/skids.

### 2.3.9. Special Labels

While these specifications will cover most situations, there will be circumstances where requirements will dictate special arrangements between Customers and Suppliers. Every effort to minimize these situations should be a goal of all so that complexities and costs are not added.

Two (2) situations where special labels may be needed for better handling are multiple and mixed item packs. They are to be used only when supplier and customer mutually agree.

### 2.3.10. Autobag Labeling or Direct Printed Label Information

The Prepack or Kit labels must be placed on the back of the bag.

The required label information can be printed directly on the back of the autobag as illustrated below. This is our standard format with required information to be printed direct on the bag.



### Multiple, Common Item Packs

\* A Master Label, as shown in Exhibit 4, shall be used when the total contents of a multiple, common item pack shall be identified. Each subpack of the multiple pack shall be identified with a Shipping/Parts Identification Label. The total multiple pack shall be identified with a Master Label on at least one side of the pallet/container. To the extent possible, the label should be placed on a pack in such a manner that when the pack is broken apart the label is discarded (e.g., hang Master Label from banding or stretch wrap, shrink-wrap or on outside of an overpack pallet carton.)





At the top of this label, the heading "MASTER LABEL" shall be printed in bold.

1.0-inch (25.4 mm) letters. The balance of the label format shall conform to the specifications to the Shipping/Parts Identification Label except that the data identifier for the serial number shall be (M) instead of (S). The serial number, preceded by an "M" in the bar code form only shall be a unique number, not to be repeated over the course of a year. The quantity on the master label shall be the total in all the subpacks.

**Purchase Order Number** is a **required** field by Cummins Inc. for **“MASTER LABEL”**.

The human readable purchase order number **shall** be a minimum of 0.2 in. (5 mm) high. The bar code symbol of the purchase order number **shall** be directly below the human readable characters and **shall** be a minimum of 0.5 mm (13 mm) high. The maximum length anticipated for the purchase order number is six (6) characters plus the data identifier (K).

**Exhibit 4 – Cummins MASTER LABEL for COMMON ITEM PACKS**

<h1>MASTER LABEL</h1>	
PART NO. (P) <b>202667B</b> 	
QUANTITY (Q) <b>8</b> 	P.O.NO. (K) <b>LB4547</b> 
SUPPLIER (V) <b>N560B</b> 	
Country of Origin: <b>USA</b>	

**Mixed Item Loads**

Mixed Item loads **shall** have a label with the words “Mixed Load” in bold 1.0 in. (25.4 mm) letters attached in a noticeable location on **2 adjacent sides** of the pack/container. Two alternative label designs are specified. See Exhibits 5A and 5B. Each subpack or item **shall** be identified with a Shipping/Parts Identification Label as referenced in Exhibit 1.

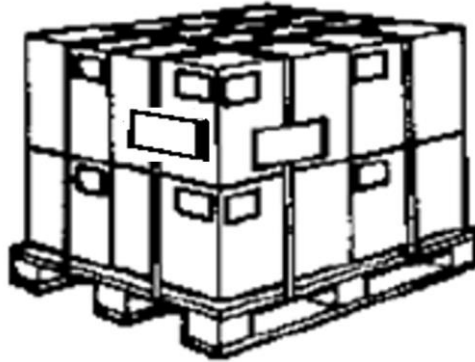
When label design 5B is used, supplier and serial numbers as specified in previous paragraph titled **Label Serial Number Area** same requirements also apply to this label design.

## Exhibit 5A – MIXED LOAD LABEL

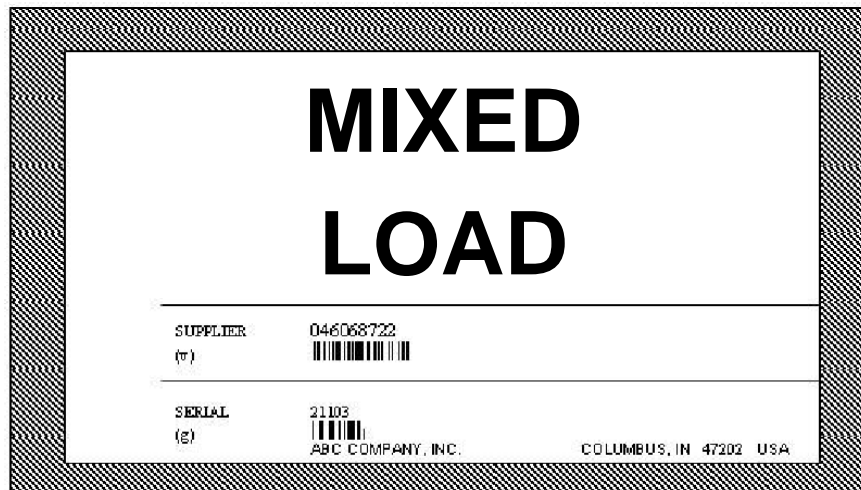


### MIXED LOAD LABEL

All Unit/Pallet Loads that contain more than one part number must be clearly labeled as a "Mixed Load". Mixed Load labels must be placed on **two adjacent sides** of mixed unit loads.



## Exhibit 5B – MIXED LOAD LABEL



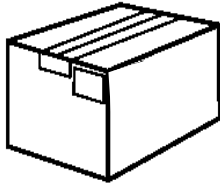
Sample ODETTE Barcode Label

The illustration below (not actual size) shows an example of the label as applied within CAR IND.

RECEIVER <b>CAR IND. CORP. ENGLAND</b>		DOCKGATE <b>352 R7648</b>		
ADVISE NOTE NO (Q) <b>1030046</b> 		SUPPLIER ADDR <b>SUPPLIER XXX</b>		
		NET WT (KG) <b>100</b>	GROSS WT (KG) <b>100</b>	NO OF BOXES <b>16-</b>
PART NO (P) <b>1234567</b> 				
QUANTITY (Q) <b>100</b> 		DESCRIPTION <b>PLASTIC BRACKET</b>		
SUPPLIER (S) <b>25891</b> 		SUPPLIER PART NO <b>200010797</b> 		
		PROD DATE <b>900307</b>	ENG CHANGE <b>P-021</b>	
SERIAL (S/N) <b>200000172</b> 		BATCH NO (B) <b>9003005</b> 		
Odette Ver 1 Rev 4				

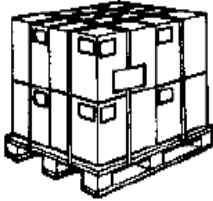


## Exhibit 6A – Label Locations



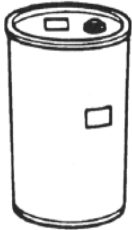
### Box or Carton

Pre-pack label shall be located on one side or in pre-printed designated areas on carton for label placement.



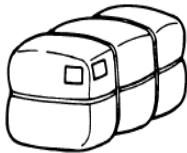
### Carton on Pallet

Each carton shall be individually labeled as directed above. One Master Label may be used as described on page 19, or two Mixed Load Label as described on page 20.



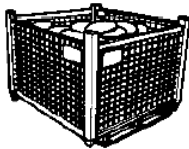
### Drums, Barrels or Cylindrical Containers

Identical labels shall be located on the top and near the center of the side.



### Bales

Identical labels shall be located on two (2) adjacent sides.



### Baskets, Wire Mesh Container

Identical labels shall be located on two (2) adjacent sides.

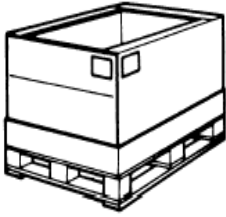


### Metal Bin or Tub

Tag one visible piece near top or use a label holder.

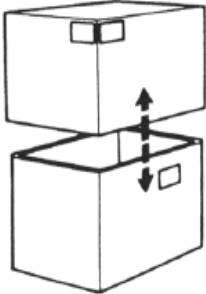
## Exhibit 6B – Label Locations

### Pallet Box



Identical labels shall be located on two (2) adjacent sides (wraparound label acceptable).

### Telescopic or Set-Up Containers



Identical labels shall be located on two (2) adjacent sides of the outer box. Some applications may also require identification of the inner box.



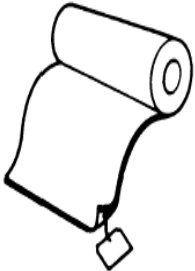
### Bundle

Identical labels should be located on each end.



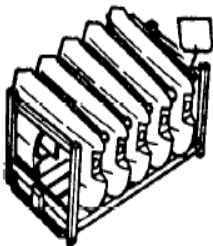
### Bag

Place one (1) label at the center of the face of the bag.



### Roll

Hang one (1) tag 2.0 inches (51 mm) from end of the material.



### Rack

Tag one (1) visible piece near top or use a label holder.



## 2.4. “No Pack” Standards

There may be parts sold in the Cummins Aftermarket that require no packaging. Of course, these parts will be overpacked for protection and identification during shipment. For handling and storage, these parts require no special packaging other than the bulk containers in which they are received. The guidelines for determining whether “No Pack” is an acceptable choice for a part include:

- The part requires no preservation other than any residual lubricants coming from the supplier (e.g., hose).
- The part has no machined or gasket surfaces that must be kept protected from handling damage (e.g., mounting bracket).
- The part has the part number printed or embossed on it; or it will be stored and identified in bulk in a secure location.
- The part has an odd shape that would require an inordinately large package (e.g., fuel line).
- The cost to package the part exceeds the value of the package throughout the delivery chain.
- The part is a type commonly sold in bulk because it is small and inexpensive (e.g., washers, hose clips, cap screws).

## 2.5. Unitization for PDC Warehousing

In an effort to improve warehousing utilization, our PDC’s will require that the product be delivered on pallets that can be used in the operation and the delivery chain.

### 2.5.1. Pallet Styles

#### Acceptable Pallet Styles

- Block Style: Block style pallets shall have a minimum of 9 block risers with minimum 4.0 in (102 mm) height.
- Flush Style Stringer 2Way Entry.
- Flush Style Stringer 4Way Entry.



#### Non-Acceptable Pallet Styles

- Single Faced Stringer
- Double Wing Stringer
- Pressed Wood
- Single Wing Stringer



Single Faced Stringer



Double Wing Stringer



Pressed Wood



Single Wing Stringer

### 2.5.2. Pallet Construction (Measures are Actual, Not Nominal)

The design and construction of the pallet must effectively allow for the acceptable delivery and storage of the product. It is the responsibility of the supplier to determine the quality and performance of the pallet and that it meets and/or exceeds the requirements, taking into consideration all expected dynamics encountered during the distribution and storage environment.

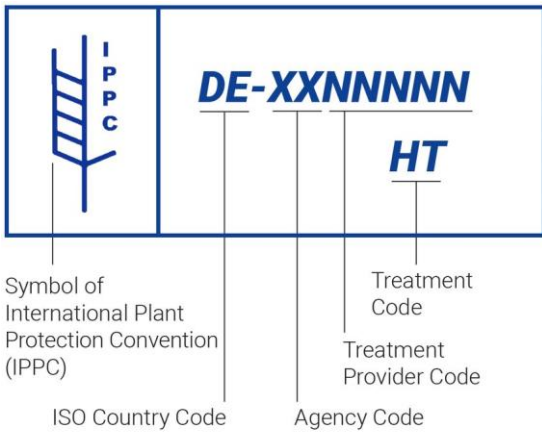
Recycled and/or refurbished pallets must perform the same as new pallets.

- It is **REQUIRED** that all international shipments and any shipments to Cummins Aftermarket Parts Distribution Centers comply with ISPM 15 and be clearly marked as such. In addition, all pallets used in or exported to UK and all European countries **SHALL** comply with ISPM 15.
- Pallets 40-inch L x 40-inch W (1016 mm x 1016 mm) and larger shall have 4-way entry.
- Open space between top deck boards shall not exceed 3 inches (76 mm).
- Top and bottom edge deck boards shall be flush with stringer ends within normal tolerances.
- Top and bottom deck board “Actual” thickness shall be a minimum of 0.5 in (12.7 mm)
- Stringer pallets shall have a minimum lift access of 3.5 inches (89 mm). Notched stringers on 4-way entry pallets shall have an opening height of 2.5 inches (64 mm). Notched opening shall be 9 inches (229 mm) wide, with radial cut top corners and placed on 16 inches to 24 inches (406 mm to 610 mm) centers.
- Block style pallets shall have a minimum lift access of 4-inches (100 mm).
- Pallets shall have sufficient beam strength for use with warehouse storage racks.
- All fastener heads must be countersunk or flush and remain so for the entire use and storage of the product/package.

### 2.5.3. ISPM 15

All internal and external suppliers to Cummins Distribution Centers MUST use ISPM 15 compliant wood packaging materials. The Cummins Distribution Centers will reshipe this product Internationally using the same packaging provided by the Supplier. All other supplier packaging provided to these DC's will be repackaged at the DC using ISPM 15 compliant SWPM for their International shipments.

Any wood packaging materials that have been treated with Methyl Bromide are forbidden. This includes pallets, crates or dunnage that is solid wood and falls within the ISPM 15 guidelines. Only heat-treated wood is acceptable.



The size pallets that all PDC's require, except MDC, are as follows;

Part Number	Size	L	x	W	x	H
3389433		18"		32"		4"
3389435		24"		42"		4"
3887911	4-way entry	40"		32"		4"
3389434	4-way entry	40"		42"		4"
3389541	4-way entry	43"		43"		4"

MDC standard pallet sizes are as follows;

Part Number	Size	L	x	W	x	H
435 HT		24"		42"		4"
434 HT	4-way entry	40"		42"		4"
541 HT		43"		43"		4"
48 SHT A Grade	4-way entry	48"		40"		4"
Re-Con/HT 003		40"		32"		4"
	2-way entry	20"		48"		4"
433 E HT	2-way entry	18"		32"		4"
466 HT	4-way entry	60"		40"		4"
Chrysler	4-way entry	42"		48"		4"

\* NOTE: Some parts will not fit on these pallets. Approval will be made on specific needs by contacting the receiving PDC.

**\*\* NOTE: If Plywood or Manufactured Wood Packaging Materials are used, they must be in compliance with the NIOSH, JISK0303, and World Health Organization Standards regarding air borne levels of Formaldehyde concentration not to exceed 0.1 ppm. Only acceptable grade of plywood for packaging or crating use will be E0 or E1 grade. Any packaging materials used that exceeds 0.1 ppm of formaldehyde air concentration will be subject to return at suppliers' expense and rejected by the receiving plant.**

#### 2.5.4. Unit/ Palletized Loads

All materials coming into PDC must meet the following criteria:

- Contents must not overhang the edges of the pallet.
- The unit load shall safely stack up to 100" (2540 mm) in a dynamic environment (in transit) on a stable level plane of like freight (footprint & weight).
- The unit load height to width ratio (h:w) shall be equal to or less than 1:1.
- Unit loads shall be structured to maximize stability such that the center of gravity is located centrally to the container footprint and at the lowest elevation possible.
- Maximum height of load from floor to top of load cannot exceed 36".
- Maximum weight per pallet must not exceed 3000 pounds.
- Mixed loads should be avoided if possible.
- If mixed loads cannot be avoided due to transportation costs, then parts should be clearly identified.
- Cummins shall make every effort to order in multiples of the SPQ as defined in the Supplier Agreement.
- Cummins should make every effort to order in even layer quantities (even layer multiples of the SPQ).
- Note: Where Cummins is not compliant with these order quantity protocols (compromising value in the supply chain), it is incumbent on the supplier to formally communicate the concern and actively seek resolution.
- Whenever possible, the unit load should contain parts of the same part number however, mixed loads are accepted as allowed by the Cummins Supply Chain Agreement specific to those parts and that Cummins receiving plant.
- When mixed loads are appropriate due to product mix and release quantity, the supplier shall apply proper packaging principles in palletization.
- All unit loads shall be equalized to full layer orientation whenever possible. Stacking cartons in a pyramid configuration on a unit load is not permitted. Exceptions will require written deviation from the Cummins receiving plant.
- All internal and external suppliers to the Cummins Distribution Centers that are packaging the components in Cummins approved aftermarket cartons or using Cummins Genuine Parts Cartons **MUST** use ISPM 15 compliant wood packaging materials. The Cummins Distribution Centers will reshipe this product Internationally using the same packaging provided by the Supplier.
- All other supplier packaging provided to these DC's will be repackaged at the DC using ISPM 15 compliant SWPM for their International shipments.

### 2.5.5. Extreme Distribution Conditions

Extreme distribution conditions require more robust packaging protection than standard domestic highway freight. Examples include Less-Than-Truckload (LTL) vs. Full-Truckload (FTL) highway freight, air freight, ocean freight, rail, and parcel package shipments.

- Less-Than-Container-Load (LCL) vs. Full Container Load (FCL) ocean freight transport methods may require further refinements to packaging design.
- Weather conditions and freight handling methods in different parts of the world require additional protection from the elements.
- The supplier shall be responsible for adequately protecting the product and packaging from moisture through the inclusion of Volatile Corrosion Inhibitor (VCI), Desiccants, and an appropriate closure method.
- Closure methods should include covering and/or sealing the unit load with a polybag or stretch wrap film. This is particularly critical when LCL transportation methods are used.

### 2.5.6. Hazardous Material and Dangerous Goods Shipment

Cummins Aftermarket PDC's generally do not house HAZMAT product. Please contact the packaging rep. or HSE rep. at the primary PDC for guidance on HAZMAT shipments.

The supplier is responsible to understand and comply with the prevailing packaging and transportation regulations for the global regions through which their goods will ship.

## 3. Image \_\_\_\_\_

### 3.1. Discussion

#### 3.1.1. Standards / Packaging / Design Elements / Cummins Branded

The brand design standards for Cummins packaging creates a consistent look and feel for corrugated and chipboard boxes, poly bags, envelopes, pallet cartons, corrugated backer boards, blister pack labels and part number labels.

All parts shipped from Cummins PDC's to customers are required to have Cummins branded packaging (Carton and label) with the exception of filtration parts. Filtration parts are required to have branded label. There are rare cases where older/legacy parts are packed in plain (unbranded) boxes with Cummins branded label. These legacy parts may remain in unbranded boxes per the approval of the Global Aftermarket Packaging Leader.

The Cummins Genuine Parts Branding trademark is for the exclusive use of the Cummins Aftermarket Channel. The Cummins Genuine Parts Branding trademark is not to be used First Fit applications (OEM channel) or Cummins intra-company transfer.

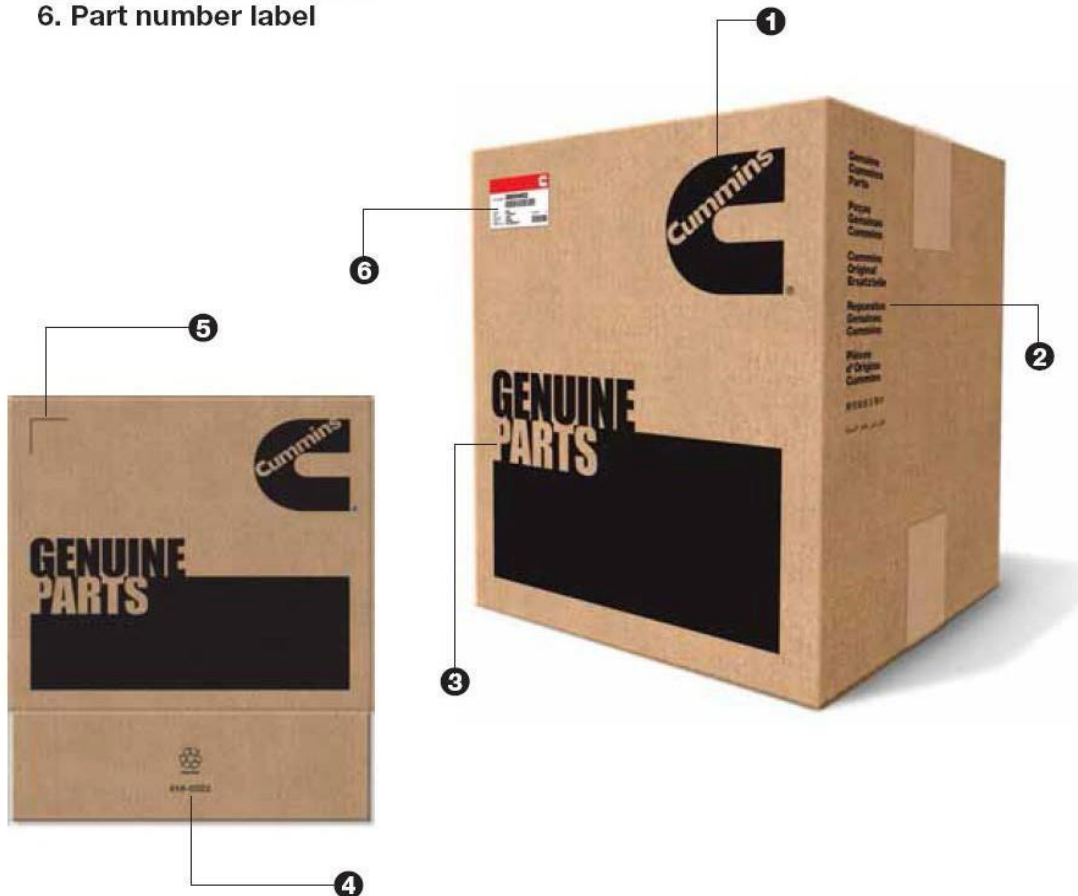
Text such as "This End Up" and "Do Not Stack" may be added if necessary, but adding additional elements such as taglines, web addresses, etc. is prohibited.



Cummins corporate packaging controls the creation of new artwork, the choice of printers and carton suppliers and the specific procedure to be followed when initiating new packaging. A central archive of digital art for each package in the Cummins system has been created, so art is not to be created regionally as in the past. To order artwork or initiate new packaging, refer to the “Order Artwork” section.

Represented below are the graphics created for the majority of packages. The basic design elements are:

1. Cummins logo
2. Translations in seven languages
3. Genuine Parts banner
4. Box number and recyclable symbol (if applicable)
5. Label placement mark
6. Part number label



### 3.1.2. Standards / Packaging / Design Elements / ReCon®

To reduce the amount of box numbers, additional cartons will not be printed for ReCon® parts.

ReCon® parts are to be identified by a label with a black stripe instead of red. The black stripe is reserved for use on ReCon® labels only.



### 3.1.3. Standards / Packaging / Packaging Type / Corrugated Cartons

Corrugated cartons contain the Cummins logo and Genuine Parts banner on two sides. Of those two sides, the front panel also contains a corner mark to guide label placement. The other side panels contain the Cummins Genuine Parts message in seven languages. Tops of boxes are to be free of graphics in most cases, although on some boxes, such as “pizza style” boxes, the top may be the only area large enough for the primary graphic elements.

In the placement of graphic elements, care has been taken to allow tape to continue onto the box sides without covering graphics.

All corrugated cartons are KRAFT (brown) with solid black graphics on the outside. There is no color requirement for inside the carton.



### 3.1.4. Standards / Packaging / Packaging Type / Chipboard Boxes

Chipboard boxes contain the Cummins logo and Genuine Parts banner on two sides. Of those two sides, the front panel also contains a corner mark to guide label placement. Due to the small size of some boxes, the label may wrap around two sides. The other side panels contain the Cummins Genuine Parts message in seven languages. Tops of boxes are to be free of graphics in most cases, although on some boxes, such as “pizza style” boxes, the top may be the only area large enough for the primary graphic elements.

Chipboard boxes are white with solid black graphics.

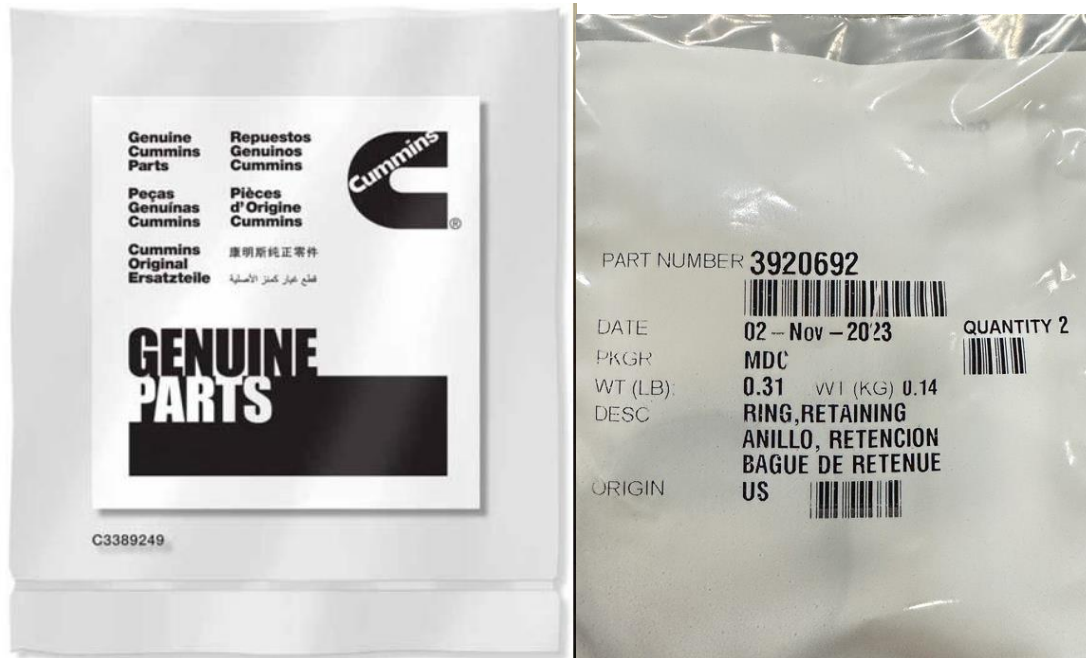




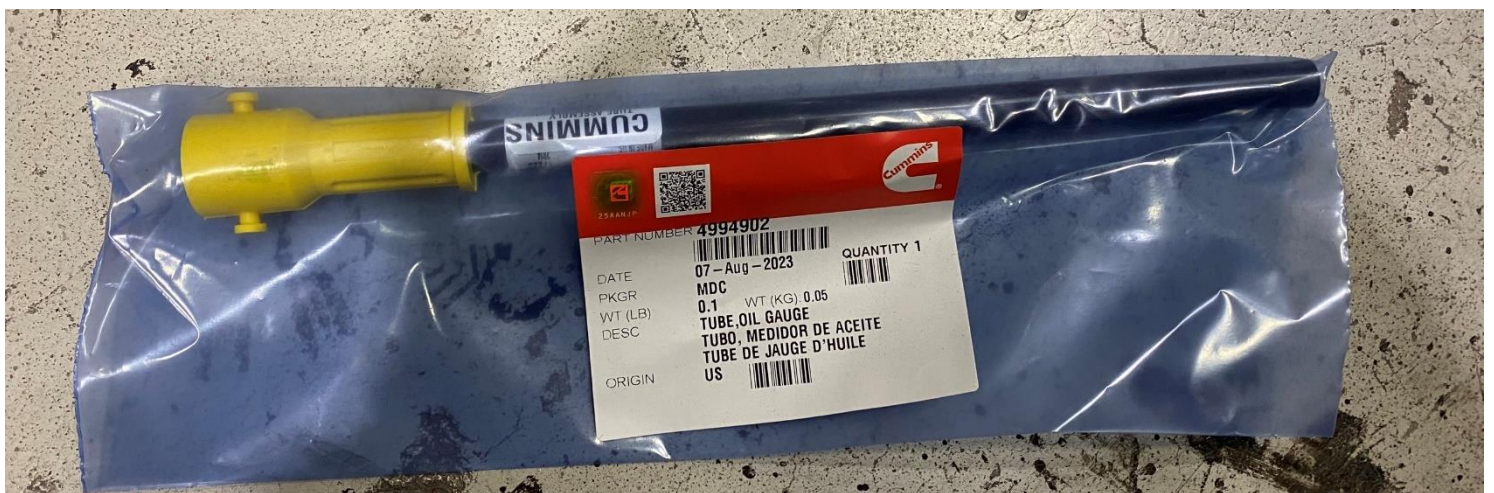
### 3.1.5. Standards / Packaging / Packaging Type / Autobags / Polytubes

Autobags contain the Cummins logo, Genuine Parts banner, and Genuine Parts message in seven languages on the front panel of the autobag. The graphics are black on a white printed panel, centered on a clear plastic bag. The panel leaves enough room on the sides, top and bottom to see the parts inside.

Autobag's contents can be labeled with a prepack label or kit label on the back of the bag as one method of identification. The required label information can be printed direct on the back of the autobag (see sample below).



Polybags do not contain the Cummins logo, Genuine Parts banner and Genuine Parts. These parts will have the Cummins branded label only.



### 3.1.6. Standards / Packaging / Packaging Type / Envelopes

Paper parts envelopes contain the Cummins logo, Genuine Parts banner and Genuine Parts message in seven languages. The graphics are black on a brown envelope.



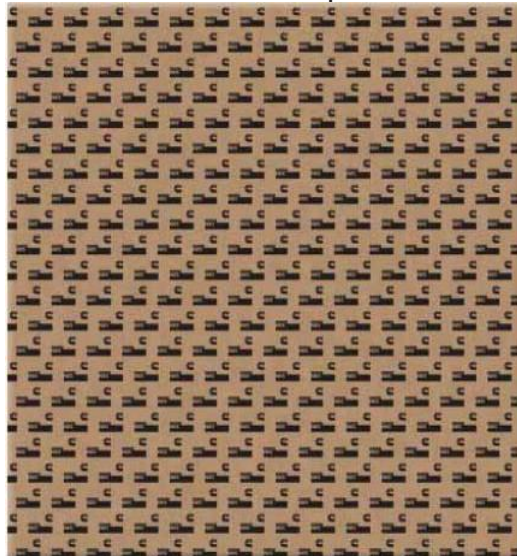
### 3.1.7. Standards / Packaging / Packaging Type / Corrugated Backer Boards

Corrugated backer boards are available in a single uncut size or 40 in x 40 in (1 m x 1 m). These pads can be cut to various sizes and used as a backer for gaskets and other flat material to be shrink wrapped.

The repeat pattern contains the Cummins and Genuine Parts banner. Because of the need for a small pattern, the Genuine Parts message in seven languages is not included for reproduction reasons.

Refer to the “Specification Standards” for the package number.

Entire pad



Portion of pad



### 3.1.8. Standards / Packaging / Packaging Type / Prepack Labels

Standard pre-pack labels measure 3-1/4 in x 2 in (82.6 mm x 50.7 mm).

Imprinted type can vary in size but should follow the format shown in the sample below with the part number always in the first position in a larger size, and the description always at the bottom of the label. Consistent placement of these two elements makes label reading easier.

Use Helvetica Neue 55 Regular, flush left in all caps for the words “Part Number, Description”, etc., and Helvetica Neue 85 Heavy for the actual part number, name of part, etc.

The pre-printed red stripe represents new parts, while the black stripe is used only for ReCon® parts.



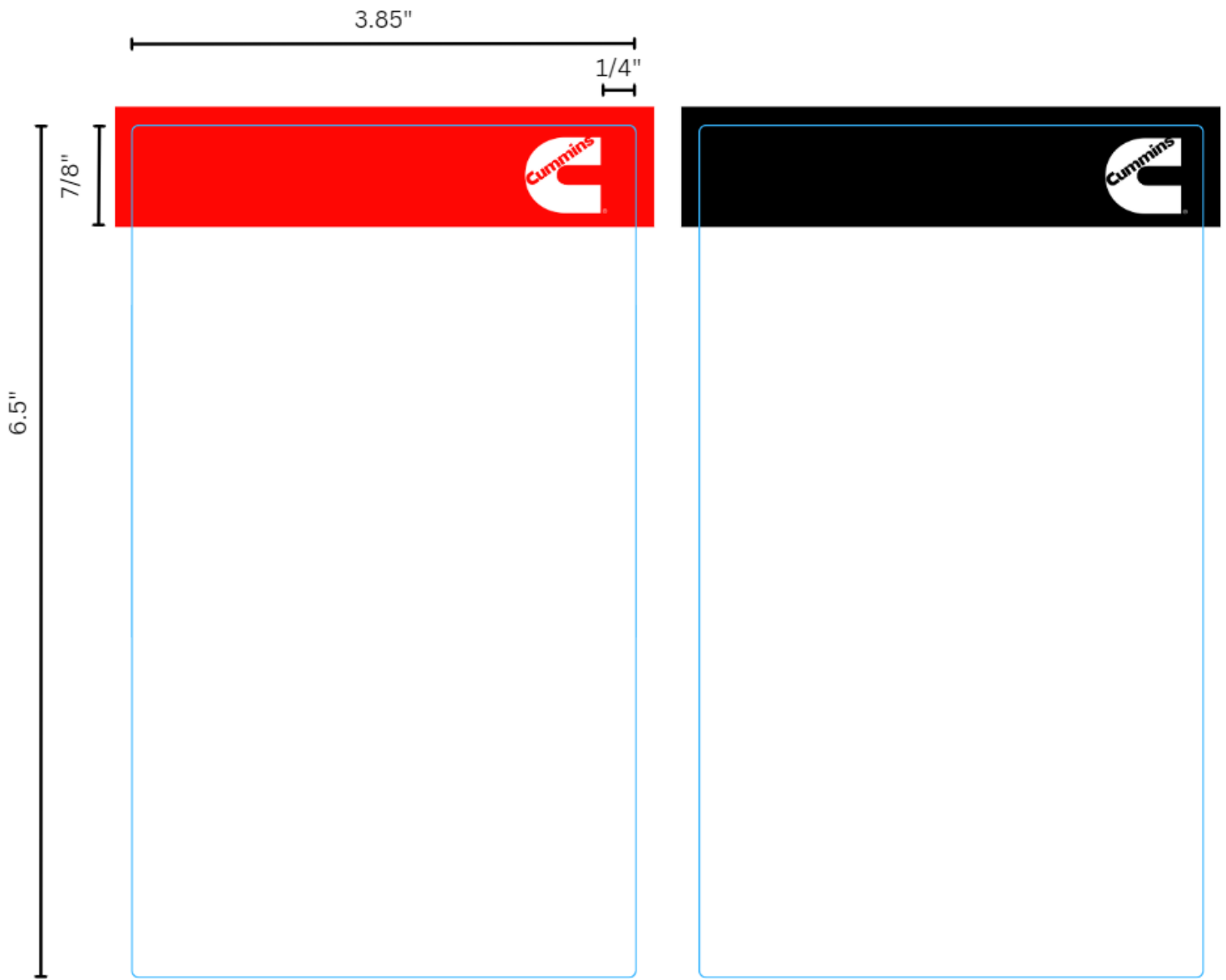
### 3.1.9. Standards / Packaging / Packaging Type / Kit Labels

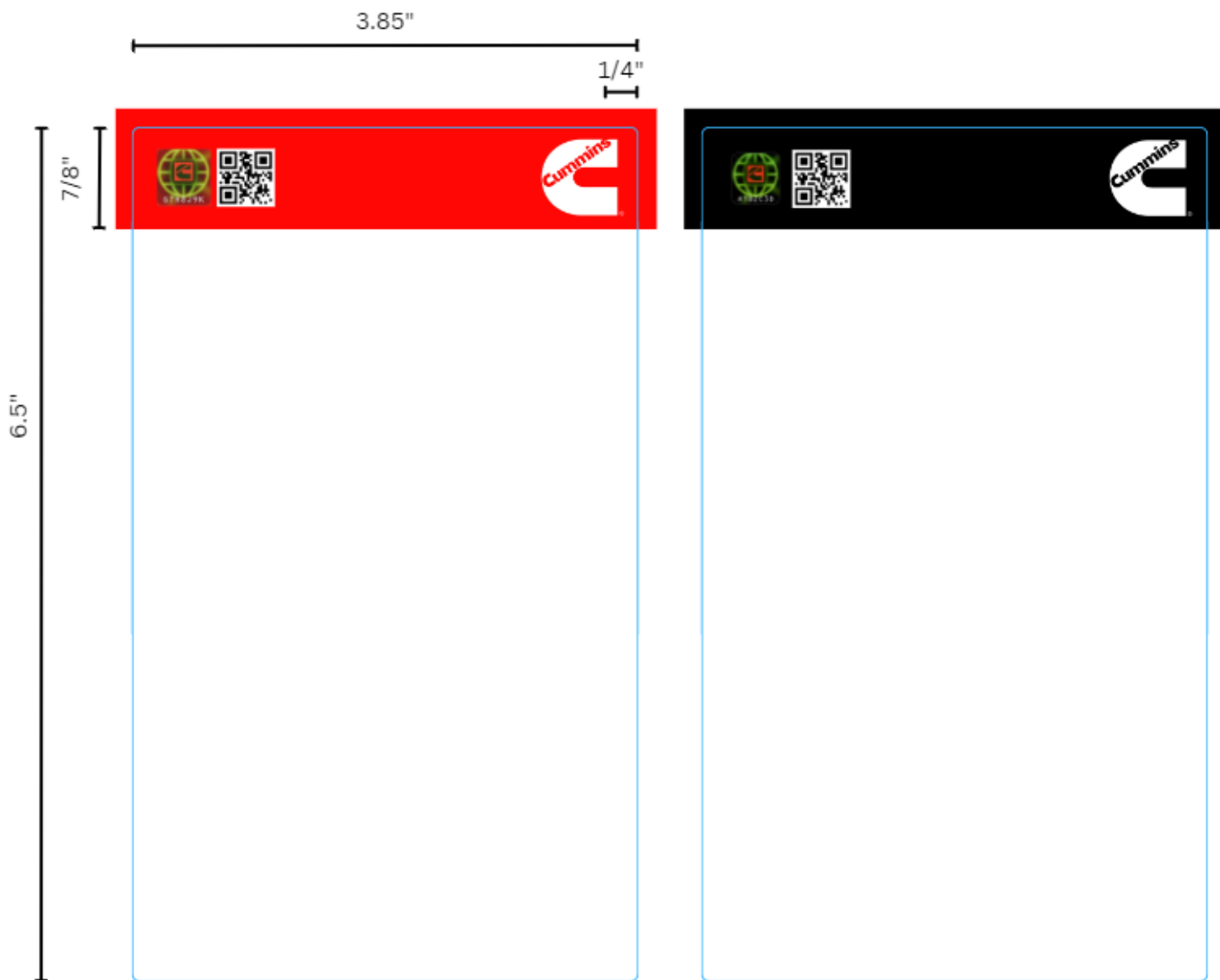
Standard labels measure 4 in x 6-1/2 in (101.6 mm x 165.1 mm) and are available in both vertical and horizontal formats. These labels are used for kits and packing cartons with multiple parts.

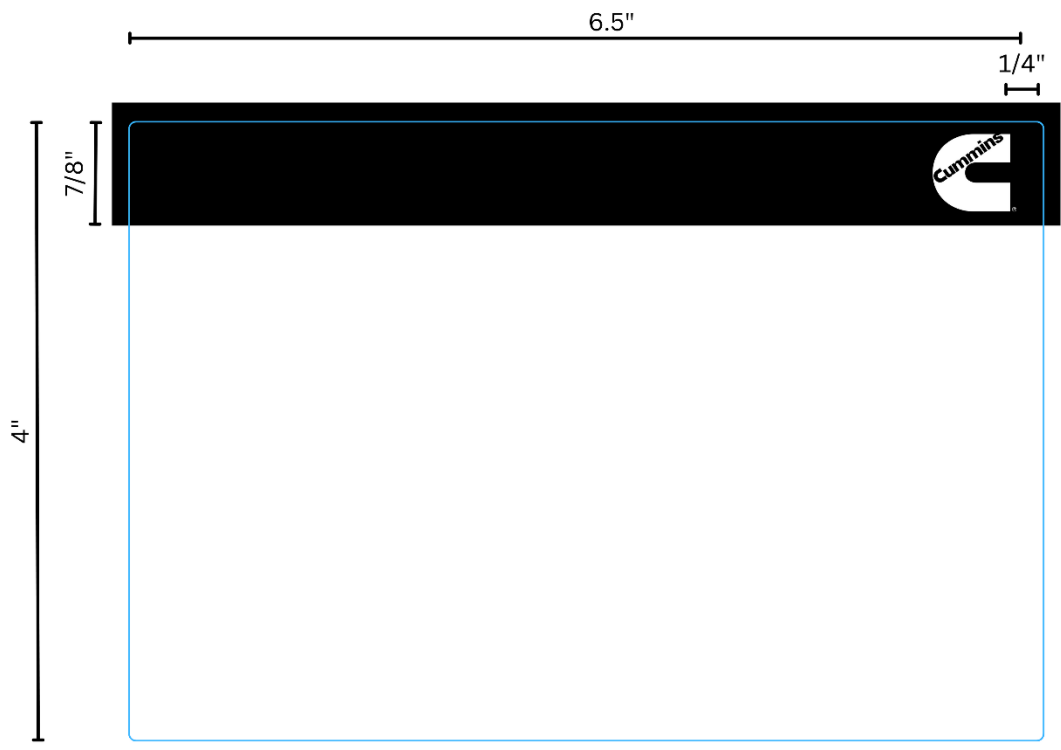
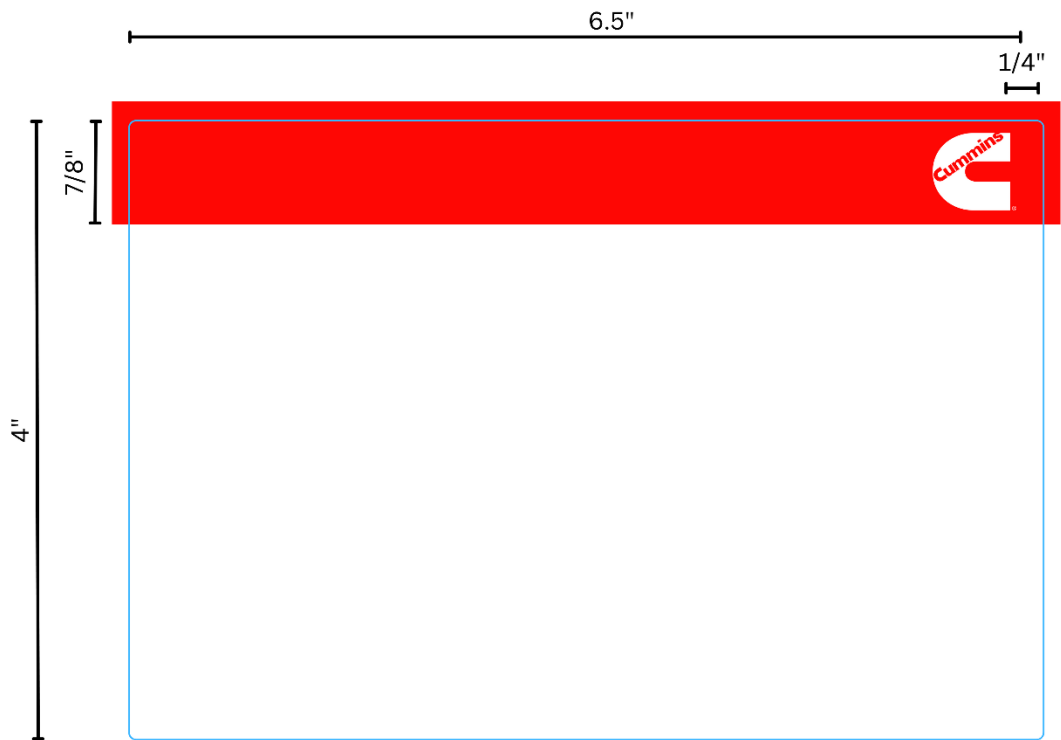
Imprinted type can vary in size but should follow the format shown in the sample below with the part number always in the first position in a larger size, and the description always at the bottom of the label. Consistent placement of these two elements will make label reading easier.

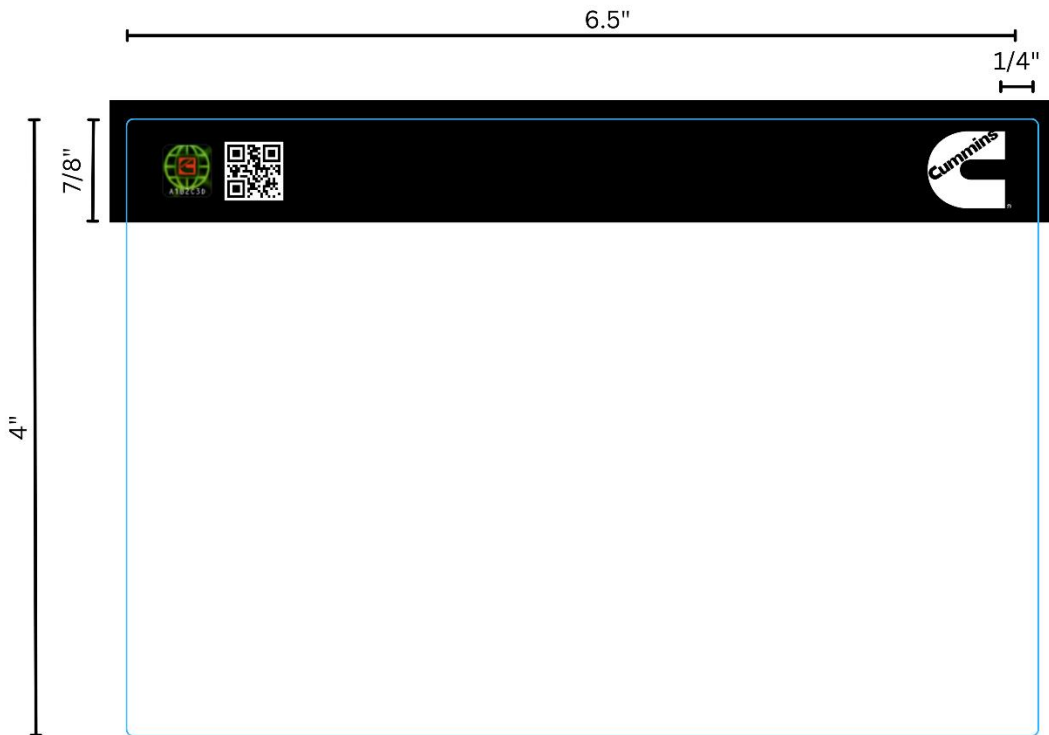
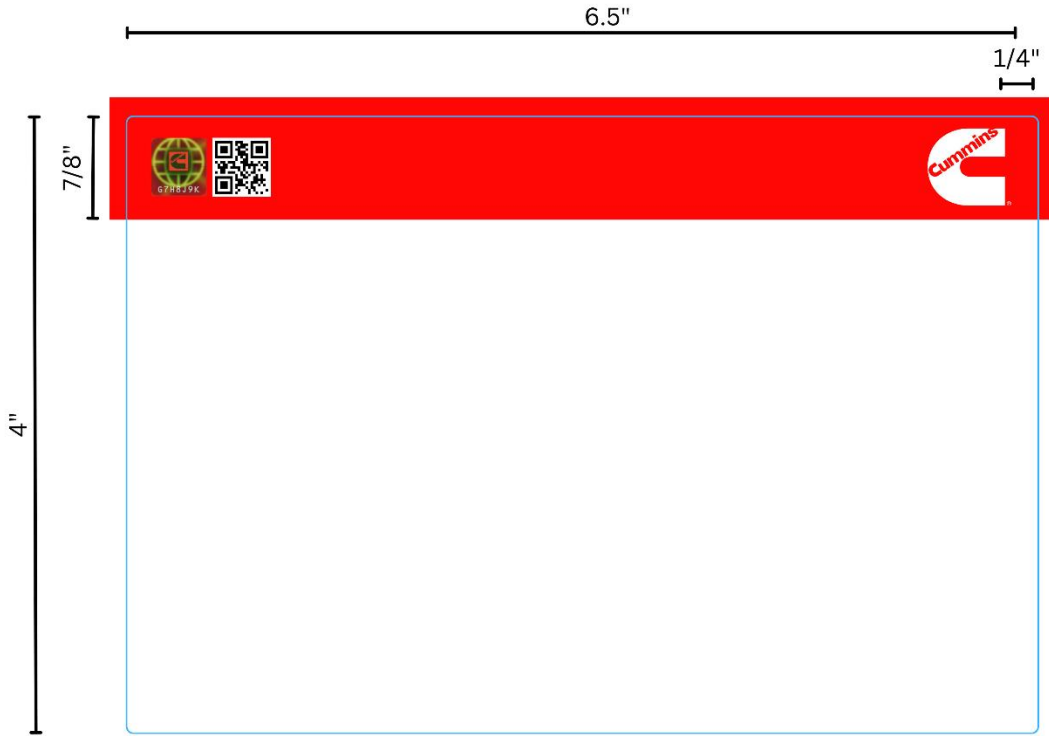
Use Helvetica Neue 55 Regular, flush left in all caps for the words “Part Number, Description”, etc., and Helvetica Neue 85 Heavy for the actual part number, name of part, etc.

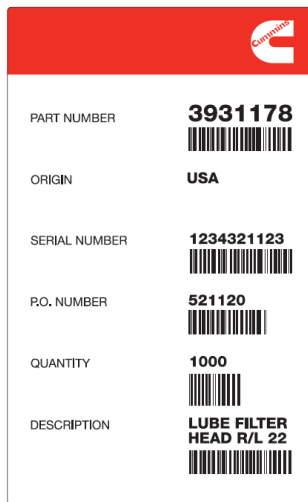
The pre-printed red stripe represents new parts, while the black stripe is used only for ReCon® parts.



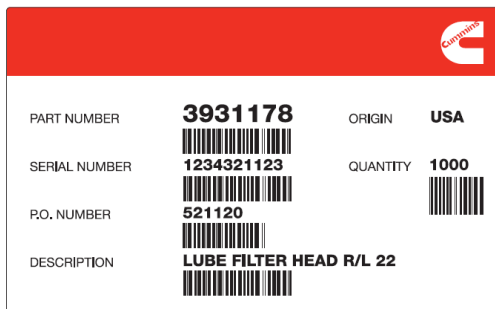








Sample label with imprint



Sample MRP Kit Label for India with Imprint:





### 3.1.10. Standards / Packaging / Packaging Type / Blister Pack

Special packaging, such as a blister pack that is more retail in appearance, can be created as needed.

Similarities to other Cummins packages, such as typestyle, placing the logo on a red background in the upper right corner and putting emphasis on easy-to-read part numbers and descriptors, must be maintained as much as possible to create a look compatible with other Cummins packaging.

To order artwork or initiate new packaging, refer to the “Order Artwork” section.



### 3.1.11. Standards / Packaging / Type Font

Consistent use of type fonts is an important part of maintaining a common, standard look for all Cummins packaging. Listed below are the specific type font standards for the elements illustrated.

The “Genuine Cummins Parts” type is set in Helvetica Neue 95 Black, flush left. Substituting other fonts is not permitted. This type is set in seven languages. Refer to the “Translations” section for examples of all language translations.

**Genuine  
Cummins  
Parts**

The “Genuine Parts” graphic is set in Impact, all caps. This is the only permitted use of this font on Cummins packaging. Substitute fonts and alterations to the proportions or letterspacing is not permitted.

**GENUINE  
PARTS**

The standard fonts for imprinted type on labels is Helvetica Neue 55 Regular and Helvetica Neue 85 Heavy.

Substitutions for the fonts are allowed, but only fonts that resemble Helvetica, such as Arial or Univers should be used.



Additional copy such as “This end up” is set in Helvetica Neue 65 Medium, all caps. When placed in the center of a lid, the type is centered. If used in a corner, the type is flush left. Substituting other fonts is not permitted.

**THIS END UP  
DO NOT DROP**

**FRAGILE  
HANDLE WITH CARE**

### 3.1.12. Standards / Packaging / Color

With several hundred different package sizes, the cost of multiple ink colors is prohibitive and since red can't be used to print the Cummins logo, black is the approved ink color for cartons, chipboard boxes, poly bags and envelopes.

The most cost-effective package materials are brown corrugated and white chipboard, which are the approved colors for cartons and boxes.

Red is used on labels for new parts and black is used for labels on ReCon® parts.

Only Kraft (brown) or clear box tape is approved for use. No Cummins Branded tapes should be used.



### 3.1.13. Standards / Packaging / Language Translations

The message “Genuine Cummins Parts” appears on packaging in English, Portuguese, German, Spanish, French, Mandarin Chinese, and Arabic. The type may be arranged in two or three columns if necessary to fit different shaped boxes and to avoid being covered by tape but should not be changed in any other way from the example shown below. This is an art element that must not be re-created with different letter spacing or fonts.

The Genuine Cummins Parts message should always be used unless there is insufficient room, or unless the type is too small to be legible. Removing the Cummins logo and Genuine Parts graphic is not permitted.

**Genuine  
Cummins  
Parts**

**Peças  
Genuínas  
Cummins**

**Cummins  
Original  
Ersatzteile**

**Repuestos  
Genuinos  
Cummins**

**Pièces  
d'Origine  
Cummins**

康明斯纯正零件

قطع غيار كمنز الأصلية

### 3.1.14. Standards / Packaging / Ordering Artwork

A central database for all Cummins packaging artwork is being created to control costs, limit duplication of sizes and ensure that brand design standards and specifications are met. Regional creation of artwork for packaging is no longer permitted. This is necessary to ensure the objectives listed in section 3.1 are consistently met.

A Corporate Graphics Design database for the approved graphic designs for specific size cartons is maintained by the Cummins Corporate Aftermarket Packaging Leader.

**ONLY PACKAGING GRAPHICS APPROVED BY OUR CUMMINS CORPORATE AFTERMARKET PACKAGING LEADER AND GRAPHICS DESIGN CONSULTANT WILL BE ALLOWED. ANY OTHER DESIGNS or COPIES OF THIS DESIGN WILL BE DEEMED AS FRAUDULENT AND UNAUTHORIZED PACKAGING FOR OUR AFTERMARKET AND SERVICE PART PACKAGING USE.**

### 3.2. Graphic Design Approval Process

Process for Internal and External suppliers for graphic design approval is as follows;

- Ensure carton supplier using Cummins approved artwork has a signed/approved Non-Disclosure Agreement (NDA/CDA). The NDA must be approved by Corp. Indirect Purchasing.
- Submit carton, poly bag, envelope, and label drawings to the Cummins Aftermarket Packaging Leader for review against Approved Graphic Design Database.
- For carton, poly bag, envelope, and label drawings submitted which match an existing approved graphic design and style carton. Poly bag, envelop and label size from the database a pdf file will be forwarded by the Cummins Aftermarket Packaging Leader to the requestor.
- The requestor will provide the approved pdf files for the new graphic designs to their packaging supplier to use to print their new cartons, poly bags, envelopes, and labels. There will be no design fees for graphics already approved in the database. Requestor is responsible for the cost of the new printing plates.
- For carton, poly bag, envelope, and label drawings submitted that do not have an approved graphic design in the database, requestor will need to submit the following to Cummins approved graphic designer.
- Provide drawings for each carton, envelope, poly bag, and label etc.
- Requestor will be responsible for the graphics design fees, print plate, and cutting dies as needed.
- Cummins graphics designer will develop and submit draft art files to the requestor and the Cummins Aftermarket Packaging Leader for approval.
- Once draft files are approved, Cummins graphics designer will develop and submit production eps and pdf art files to the requestor. Requestor will use the production art files to their carton supplier to develop new print plates.
- The requestors carton supplier must submit print proof drawings of the new branded cartons to the Cummins Corporate Aftermarket Packaging Leader to validate supplier has met the specifications prior to releasing cartons for production.
- Once print proofs have been reviewed, the requestor will be notified that the print proofs were either approved or rejected. Once approved the requestors supplier will be released to proceed to full production.

- The Cummins graphics designer will provide approved production art files to the Cummins Aftermarket Packaging Leader to post the new art files and carton sizes to the Corporate Approved Graphics Design database.

### **3.3. Product Literature and Special Information**

In addition to the exterior package graphics, the value to the customer can be enhanced by the type of information and labeling that is included with the package. Section 2.3.2 deals with basic pre-pack labeling requirements; more information about obtaining these labels can be found by contacting the appropriate DC Packaging Engineer.

#### **3.3.1. Information included in the Package**

Cummins makes most of its product specification and installation information available through service publications. Still, it is often necessary to include product literature or other information along with the packaged part. The responsibility for the content of these materials lies with the product manager or service information manager, but it is the packager's responsibility to make sure the information is available and included in the package.

Any literature or special information that is to be packaged with a service part must be approved by the DC Packaging Engineering and given a Cummins part number. All proposed literature/literature changes must be approved by Parts Engineering responsible for literature technical accuracy/art mediation and control. Contact DC Packaging Engineering for additional information.

#### **3.3.2. Extraneous Supplier Labelling and Information**

Any labels, stickers, or inserts identifying the supplier are not to be present on or with the part. Only Cummins branded labels, stickers, or inserts are permitted for Cummins Aftermarket New & ReCon parts. For any concerns or clarification, contact Supplier Development for Cummins New and Recon Parts.

## **4. Efficiency** \_\_\_\_\_

The Cummins Aftermarket business utilizes a multi-dealer distribution network. Consequently, a packaged part may be received and shipped by several delivery partners before it is actually sold to the ultimate consumer. For the delivery partners, the service part's package may be the only thing they see of the part.

For this reason, it is important that the package makes it easy for the part to be integrated into each customer's business operation.

### **4.1. Automatic Data Collection**

Utilization of the bar-coding standards on pre-pack labels will make it possible for each delivery partner to complete automated inventory transactions. Although many of the delivery partners are not capable of bar code scanning today, the successful implementation of BP2000 and Movex programs (updating distributors to modern business practices) will depend on service part packages being correctly labeled.

## 4.2. Quantity Packs

A package design consideration that has a considerable impact on distribution operations is the package quantity. Aside from functionality, the package quantity is the most important concern to Cummins distributors.

Aftermarket Packaging has developed a set of guidelines to determine the most cost-effective unit of issue (quantity pack) for the distribution network. Criteria in this process include: unit cost per part, physical characteristics of part, sales volumes, engine set applications, etc.

While this manual serves to assist the initial parts packager in determining what types of packaging materials to use, Aftermarket Packaging will ultimately determine the package quantity of a specific part. Please consult with DC Packaging Engineering to determine what the unit quantity will be in your packaging application.

## 4.3. Sustainable Packaging

Recyclability, Reusability and Returnability- The “3 R’s”

### 4.3.1. Recyclability

Recyclability is the most important environmental concern for Aftermarket Packaging because parts are sold and shipped to entities other than Cummins, Inc. locations. For this reason, every effort should be made to use recyclable packaging materials when making design choices. The graphics standards include recyclability symbols so the customer can be assured of the environmental friendliness of the packaging.

### 4.3.2. Reusability

Although many delivery partners may choose to reuse some of the overpack containers used for service parts shipments, the reuse of individual unit packages is strictly prohibited.

### 4.3.3. Returnability

Although not prevalent in the Aftermarket today, there are many potential applications for returnable packaging. This is especially true for parts that will be consumed by Cummins distributors in their own service operations.

## 5. Returnable Packaging

Returnable Containers are used to maximize the economics of product flow between PDC’s, RDC’s and Dealers in some instances. Further, these containers are utilized to reduce the collective use of expendable packaging and advance our achievement of shared environmental initiatives. Although the ambition, it is not the specific mandate of a returnable container program to eliminate the use of expendable material in conjunction with the use of the returnable containers. In some instances, expendable dunnage and/or strapping is necessary to effectively and economically perform the appropriate container function.



## 5.1. Returnable Packaging Policy

In **no** instance is the external or internal supplier to purchase or ship product in returnable containers to Cummins Aftermarket with the belief that the supplier will be reimbursed for any such expenditure or expecting the container will be returned to supplier, without express written authorization from the responsible Cummins receiving plant Packaging Representative and the responsible Cummins Sourcing Manager.

## 6. Heavy Parts Packaging and General Packaging Guidelines

The following packaging guidelines are required for all heavy parts entering Cummins Global Logistics (CGL) facilities. The intent of this guideline is to provide standardization, reduce product damage, and prevent safety-related incidents resulting from packaging failures. The guidelines will take various parameters (e.g. size, weight, containment) into account to reach the end solution. All packaged parts **SHALL** be in accordance with the New and Recon Parts Packaging Standard.

### 6.1. Scope

All parts more than 33 lbs. (15kg) are considered heavy from a manual handling safety perspective. Special marking and design requirements apply to heavy packages depending on the weight range.

### 6.2. Material Handling and Ergonomics

All containers and packaging **SHALL** be designed with consideration given to ease of handling and part removal. Appropriate consideration **SHALL** be given to height restrictions, weight restrictions, carton disassembly and any other issues, which may affect worker safety. The supplier or the packaging engineer is responsible to ensure all parts are packaged in such a way to ensure safety is maintained throughout the product distribution stream.

The heavy part label in English, Spanish and French (as shown below) is required for packages weighing 33 lbs. or more that do not have a base pallet built into the overall package but excludes packages that can only be handled by machinery (i.e., Engine or Transmission packs).



### 6.3. Primary Box (crate or carton) Requirements

The package design is the responsibility of supplier or packaging engineers' in CGL facility, and they SHALL ensure that all parts are packaged to support shipments and received in acceptable (damage free) condition. The primary container will carry the part from shipping origin to the point of assembly where it is presented to the operator. The packaging SHALL maintain part quality through transit and multiple handlings to the end customers.

The appropriate size, strength and type of primary container SHALL be chosen to support the mode of transportation, government and carrier regulations, part protection, transfer points and distance of travel.

Table below shows the general requirement for the box or crate. Suppliers shall contact the Packaging Representative from each specific Cummins receiving PDC to inquire about any site-specific requirements.

Weight Range	Box Required and Specification
Over 150 lbs. (68 kg)	** Wood Crate
Over 80 lbs. (36.60 kg)	Corrugated FOL-style top and bottom
Over 33 lbs. (15 kg)	Corrugated FOL-style bottom ; RSC-style allowed for top

*\*\* Exceptions to wooden crates for parts over 150 lbs. must be approved by site packaging representative*

- Piece part weight, size, part characteristic and presentation to the operator have to be considered to select the right box for the part. For example, wooden crates for camshaft (typically below 150 lbs.) would be the preferred pack method.
- Standard crate/box should be used for each part to avoid having different packaging size boxes for same like parts.

#### Not Acceptable



## 6.4. Wooden Crate Design

- Material – All solid wood packaging materials used SHALL adhere to the ISPM 15 requirements and contain no more than 14% moisture.
  - The following material is acceptable to use during the construction of the packaging solutions: Hardwood Species – (e.g., oak, aspen, maple, poplar, ash, cottonwood, locust)
- Metal tabs for closure or metal corners shall not be used without express written permission from the Cummins Receiving Site Packaging Representative
- Softwood Species – spruce, pine, fir
- Plywood – E0 or E1 grade plywood is acceptable to use for the wall components only (sides, ends and tops). If plywood is chosen for wall components, shall be a solid sheet.

### Examples of Acceptable Crate Designs



## 6.5. Fasteners

- Type – Helical, smooth shank, and ring shank nails are acceptable fasteners to use during the construction. Screws are also allowed as long as they meet the engagement requirement. Staples are only acceptable fasteners for FOL style cartons. Other sealing methods must be approved by site Packaging Rep.
- **CAUTION:** Protruding nails or screws are called “Shiners”. From a Safety Standpoint “Shiners” are not permitted in order to avoid personal injury during handling.
- Engagement – The fastener engagement of two members must be at least 75%. (e.g., when nailing a .75” (19.05 mm) thick panel to a 1.5” (38.1 mm) cleat, the minimum length of the fastener must be 1.5” (38.1 mm) to provide adequate engagement.
- Tops shall be fastened with screws for ease of unpacking and customs inspection.
- Fastening product to base – If product is to be fastened to base, the supplier shall use deck material with a minimum thickness of 1.5” (38.1 mm) and shall not protrude the deck which can cause stripping.

## 6.6. Banding

- Banding material SHALL be polyester strapping with a minimum width of
- .75" (19.05 mm). No steel banding permitted. Banding shall be aligned on cleats and battens if present.
- The top of the crate SHALL be flush with the sides- it cannot be inset from the sides. Parts that can roll, such as camshafts and crankshafts, SHALL be packaged to prevent part from shifting internally whether in wood crate- boxes or corrugated cartons.

### Unacceptable Crate Build



## 6.7. One Piece per Pallet (Must be approved by site Packaging Representative)

Large parts over 150 Lbs. (68 kg) have specific characteristics and SHALL be placed individually on a pallet so that they can be mechanically handled. No more than 1 part per crate-box or pallet. Box use must be approved by site Packaging Rep.

- Engine overhaul kits may be in a corrugated carton if it is at least 48 ECT and has FOL flaps top and bottom and SHALL only be 1 one kit per pallet. The four bottom corners of the carton SHALL be placed firmly on pallet deck boards and not overhang the pallet.

### Examples of proper one-piece placement





- Engine blocks may be an exception to the wood crate requirement. The engine blocks SHALL be on a wooden pallet but may have a corrugated over-pack carton if it is at least 48 ECT and has FOL flaps top and bottom and SHALL only be 1 one block per pallet. The four bottom corners of the over-pack carton SHALL be placed firmly on pallet deck boards and not overhang the pallet.
- Smaller, lighter weight parts may be packaged in a wooden crate. For example, if an 80 lb. (36.3 kg) part is supplied and packaged by the supplier, and has 1 part per crate, supplier crate is acceptable. Repacking at the PDC will not be necessary.

### 6.8. Corrugated Box Design

- Parts over 80 lbs (36.3 kg) must be in FOL (full overlap) cartons top and bottom.

#### RSC Style



#### FOL Style



- Some parts below 80 lbs. may use an FOL bottom and an RSC (regular slotted carton) style top. RSC style cartons SHALL be sealed with tape or hot glue, **no staples**. Staples are acceptable only on the FOL style cartons. Tape must be at least 2" (50.8 mm) wide and come over the side at least 3" (76.2mm). Pressure sensitive or water activated tape are both acceptable. Hot glue is also acceptable on all corrugated cartons.

### RSC Style – Acceptable



### RSC Style – Unacceptable

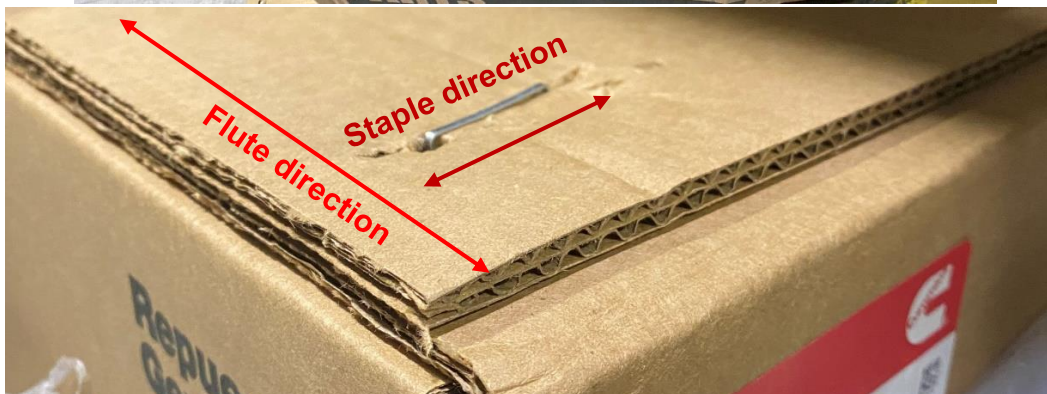
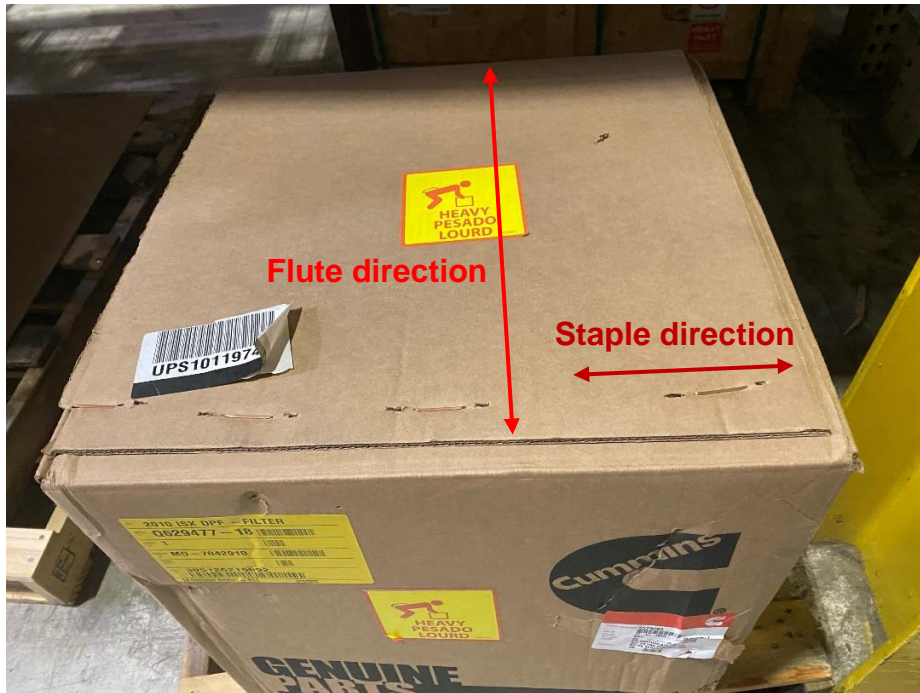


Plastic banding is also an acceptable way to close all corrugated cartons. If banding is used to close a corrugated carton, edge protectors SHALL be used.



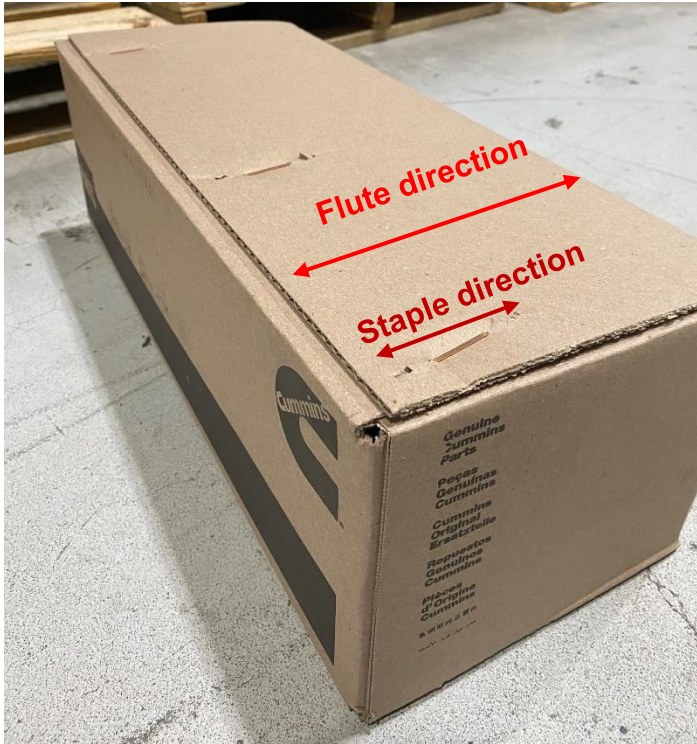
- Staples must be perpendicular to the direction of flutes and staples SHALL also be no more than 8" (203 mm) apart as photo below indicates:

**Acceptable**





**Unacceptable: Staples are parallel to the Flutes**



- No hand holes (access holes) may be used on parts over 40 lbs (18.14 kg). If hand holes are used they SHALL be the inverted “V” style

**Acceptable**



**Unacceptable**



- If individual parts are placed on a pallet, the pallet SHALL closely fit the part with no carton overhang allowed.

- Stacking- all packaged parts SHALL be packaged such that they are capable of being stacked two unit loads high without carton deformation of any carton in any level of the unit loads.

## **6.9. Part Protection and Rust Prevention**

- CGL is committed to providing our customers with high-quality, low-cost service parts. When our customers receive a service part from us, they expect it to be protected from damage and rust. Customer satisfaction needs to be the top priority for all of us as we move forward. For that reason:
- Parts SHALL be protected against rust, abrasions, nicks, scratches, dents, etc. and all fragile items SHALL be cushioned properly for protection from shock and vibration. Dunnage SHALL be required when part shifting or rubbing will cause damage and/or entanglement. In addition, packaging SHALL be designed to allow part removal in an ergonomically friendly manner without special maneuvering.
- We are requiring that all metal parts shipped to CGL facilities SHALL be corrosion free upon receipt and SHALL have minimum 18 months rust free shelf life.
- Metal parts shipped using wooden crates; pallets and/or dividers SHALL have a VCI barrier between the part and the wood to protect the part from moisture absorbed by the wood.

## **PART TWO: APPENDICES**

### **7. Appendix One** \_\_\_\_\_

# **PACKAGING GLOSSARY**

**Adhesive:** Materials capable of adhering one surface to another. As used in connection with fiber boxes: a material to glue piles of solid fiberboard, to glue facings to corrugating medium in combined corrugated board, to glue the overlapping sides of a box forming the manufacturer's joint or to glue the flaps in closing a slotted box.

**Banding:** Something that binds, ties or encircles the package.

**Basket Liner:** A scored sheet inserted into a container and covering all sidewalls.

**Blocks:** Vertical members used as spacers between the top and bottom decks of full four-way entry pallets.

**Bottom Deck:** Load-bearing surface.

**Box:** A rigid container having closed faces and completely enclosing the contents.

**Box Maker:** A corrugated or solid fiber box manufacturing establishment which has equipment to score, slot, print and join corrugated or solid fiber sheets into boxes, which equipment is regularly utilized in the production of fiber boxes in commercial quantities.

**Bursting Strength:** The strength of material expressed in pounds per square inch.

**Cell Dividers:** Interior packaging walls used to create a cell pack.

**Cell Pack:** A package system providing an enclosed cavity for each product.

**Certificate, Box Maker's:** A statement printed on a corrugated fiberboard box guaranteeing that all applicable construction requirements of the carriers have been observed and identifying and locating the box maker.

**Clinched (Fastener):** Pointed ends of fasteners having been driven through a member, bent sideways at least 90 degrees from the vertical and flush with the nailing surface. The length of the clinch point shall be equal to or greater than  $\frac{1}{4}$ " (6.35 mm) per fastener leg.

**Closure:** A means of closing a container to retain the contents.

**Container:** A box or receptacle, which is usually the outer protection, used in packing goods for shipment.

**Container Expendable:** A container for shipping or storage, or both intended primarily for a single trip.

**Container, Returnable:** A shipping container of any material designed to be used for more than one shipment.

**Container, Reusable:** A shipping and storage container designed for reuse without impairment of its protective function.

**Container, Stackable:** A container or container system having features which allow each container to support another independent of the contents therein.

**Converter:** A business that makes basic materials, such as sheets of plastic corrugated into finished form, such as containers or trays.

**Corner Posts:** A square or triangular member placed inside or outside of the corners of pallet containers.

**Corrugated Board – Double Wall:** The structure formed by three flat facings and two intermediate corrugated members.

**Corrugated Board – Single Face:** The structure formed by one corrugated member glued to one flat facing.

**Corrugated Board – Single Wall:** The structure formed by one corrugated inner member glued between two flat facings. Also known as double face.

**Corrugated Board – Triple Wall:** The structure formed by four flat facings and three intermediate corrugated members.

**Countersink:** Overdriven fasteners below surface of deck boards.

**Deck:** The horizontal load-carrying or load-bearing surface of a pallet.

**Deck Mat (Block Pallet):** Assembly of deck boards and stringer boards forming deck of block pallet.

**Deck Opening:** Any void in the deck caused by the spacing of surface elements or a cutout in a solid deck pallet.

**Deck Spacing:** Any opening in the deck caused by deck board placement or cutouts on a panel dock pallet.

**Deck board:** The surface element used in the construction of pallet deck.

**Deflection:** The measurement of the give or bending force on the container, dunnage, or top and bottom faces of a pallet.

**Depth:** The distance between the innermost surface of the box measured perpendicular to the length and width.

**Die Cutting:** The use of special cutting tools to punch out a shape from a flat sheet of materials. May also include perforation and scoring.

**Dunnage:** Devices or materials used to hold, secure, or protect goods during shipment.

**Edge Board:** A member assembled at right angles to the extreme ends of stringers or stringer boards.

**Fasten:** To make something stay firmly in place. To fasten implies an action such as nailing or stapling, when related to pallets, and stapling, stitching, or gluing when related to corrugated.

**Flaps:** The closing members of a fiberboard box.

**Flush Pallet:** A pallet whose decks do not protrude beyond stringers or deck spacers.

**Four-Way Pallet:** A pallet whose configuration permits insertion and withdrawal of handling equipment from all sides of the pallet.

**Glue:** A term used in the classifications as a synonym for “adhesive”.

**Hazardous Material:** A substance or material which has been determined by the Secretary of Transportation to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce, and which has been so designated.

**Height:** The overall dimension of the container in the vertical direction. In the case of cartons on a pallet it is the dimension from the bottom of the pallet to the top of the highest carton.

**Joint:** That part of the box where the ends of the scored and slotted blank are jointed together by taping, stitching, or gluing. When accomplished in the box manufacturer’s plant, it is known as a manufacturer’s joint; when effected at the time the box flaps are sealed in a box user’s plant (usually on automatic equipment). It is called a user’s joint.

**Layer Pad:** A separator sheet used between layers of product in a package.

**Length:** The dimension parallel to the stringers or stringer boards; the first dimension stated in designating a pallet size.

**Material Supplier:** A business that creates basic materials, such as sheets of plastic corrugated, from raw materials such as plastic resin.

**Nestable:** Able to be reduced in volume by placing one within another, with no more than one third of an item projecting outward.

**Nonreversible Pallet:** A pallet having dissimilar top and bottom decks, with only the top deck having a load-carrying surface.

**Notched Stringer:** A stringer that has openings cut out for insertion and withdrawal of pallet-lifting equipment.

**Overhang:** That portion of the unit load that exceeds the width or length dimension of pallet. (Not allowable.)

**Overlaps:** A design feature wherein the top and/or bottom flaps (usually outer only) do not butt but extend one over the other. The amount of overlap is measured from flap edge to flap edge.

**Pack:** (1) To put material or goods into a container for storage or transportation. (2) Number of inner pack units per outer pack unit.

**Packaging Unit:** Cleaning, preservation, and determination of unit quantities per package, and protective wrapping, cushioning, and identification marking, up to but not including the shipping container.

**Pad:** A corrugated or solid fiberboard sheet or other authorized material used for extra protection or for separating tiers or layers of articles when packed for shipment.

**Pallet:** A horizontal platform device used as a base for assembling, storing, handling, and transporting materials and products in a unit load.

**Partial Four-Way Pallet:** A pallet whose configuration permits four-way entry by the forks of a lift truck, but restricts the load wheel forks of a hand pallet truck to two-way entry.



**Partitions:** A set of corrugated or solid fiberboard pieces slotted so they interlock when assembled to form a number of cells into which articles may be placed for shipment.

**Primary Container:** The smallest container in which a part is packaged for shipment.

**Recyclable Material:** Material that may be reprocessed for use as raw material.

**Reversible Pallet:** A pallet having similar top and bottom decks capable of carrying a load.

**Score:** An impression or crease in corrugated or solid fiberboard to locate or facilitate folding. (See also Slit-Score.)

**Seam:** The junction created by any free edge of a container flap or wall where it abuts or rests on another portion of the container and to which it may be fastened by tape, stitches or adhesives in the process of closing the container.

**Secondary Container:** A large container in or on which multiple primary containers of a part are shipped.

**Shell:** A sheet of corrugated or solid fiberboard scored and folded to form a joined or un-joined tube open at both ends. Used as inner packing.

**Signage:** Graphic design as symbols, emblems or words used especially for identification or as a means of giving direction or warning.

**Sleeve Pack:** A shipping container utilizing a rectangular tube with open ends and usually separate top and bottom caps.

**Slip-Sheet:** A flat sheet used on the bottom of a unit load of packaged to facilitate materials handling. Often provided with one or more tabs for attachment of material handling devices.

**Slit:** A cut made in fiberboard sheet without removal of material.

**Slit-Score:** A cut made in fiberboard sheet extending through only a portion of the thickness.

**Slot:** A cut made in a fiberboard sheet, usually to form flaps and thus permit folding. Widths of ¼ and 3/8 in. (6.35mm and 9.52mm) are common.

**Standard Pack/ Standard Park Quantity:** Standard number of pieces in the primary container.

**Stitching or Stapling:** Application of metal fasteners to form the joint of fiber boxes or to close boxes. Stitches are machined-formed using wire drawn from a spool. Staples are pre-formed.

**Stringer:** A continuous longitudinal member that supports the decks.

**Tape:** A strip of cloth or paper, sometimes having a filler or reinforcement, coated on one side with an adhesive. It is used to form the joint on a fiber box or to close or reinforce such a box. Closure and reinforcement can also be effected with pressure-sensitive tape.

**Tare Weight:** Includes the weight of primary and secondary containers, ungnage, banding, plastic films and excludes the weight of the parts.



**Test, Bursting Strength (Mullen):** Measurement of the resistance of a material to bursting expressed in pounds per square inch. The test is made on a motor-driven Mullen tester.

**Top Deck:** Load-carrying surface.

**Tray:** A shipping and storage container, with or without a removable top, with relatively shallow depth.

**Unit Load Quantity:** The number of pieces per primary container multiplied by the number of primary containers in/on the secondary container.

**Width:** The dimension parallel to the top deck boards; the second dimension stated in designating pallet size.

**Wing Pallet:** A pallet whose deck protrude along two sides beyond the outer edges of the stringers, block, or deck spacers.

# TEST STANDARDS

The supplier shall insure part packaging performance complies with Cummins requirements. Cummins does not require Suppliers to perform laboratory validation testing of their packaging. Cummins recommends, especially in the instance of critical, high cost, sensitive or fragile parts, that testing be performed in a certified packaging test lab. The decision to perform validation testing, the selection of the appropriate test standard and assurance level is the responsibility of the supplier or joint decision between supplier and customer. It is recommended that the packaging for all critical, high cost, sensitive or fragile components be tested in a certified packaging test lab. Below are several Packaging Performance Assurance Level Test Standards to assess our packaging for reliability and performance assurance to adequately protect our engines and components.

Here is a suggested sample list of these type of components, but not totally inclusive:

Engines	Turbochargers	Fuel Systems	Cylinder Blocks
Cylinder Heads	Crankshafts	Camshafts	Ceramic DPF Filters

Electronic components such as: Control Modules, sensors, valves etc...

The most common test below for our domestic freight would be the ASTM D4169 Test Standards. For International Packaging we would suggest ISTA 3H for unit pallet loads and ISTA 3A for small box parcels.

This would include:

- Random Vibration
- 8" Rotational Drop Testing
- 4 side Incline Impact Test Humidity/Thermal Conditioning Compression Testing

ASTM (American Society for Testing and Materials) produce technical standards for industries worldwide.

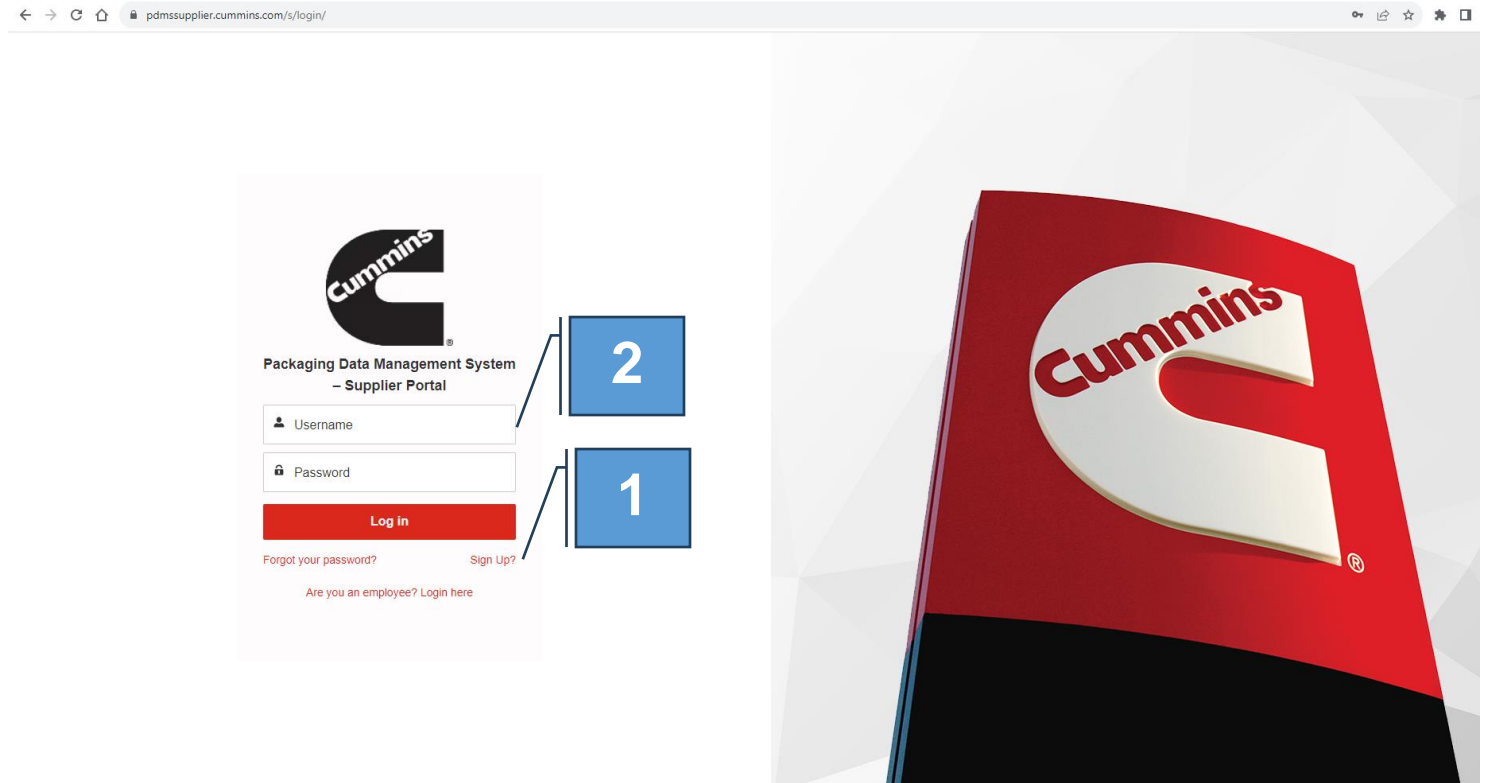
If you need to access the complete standards contact ASTM ([www.astm.org](http://www.astm.org)) or a university library.

Cummins has adopted the following standards to test packaging across the corporation.

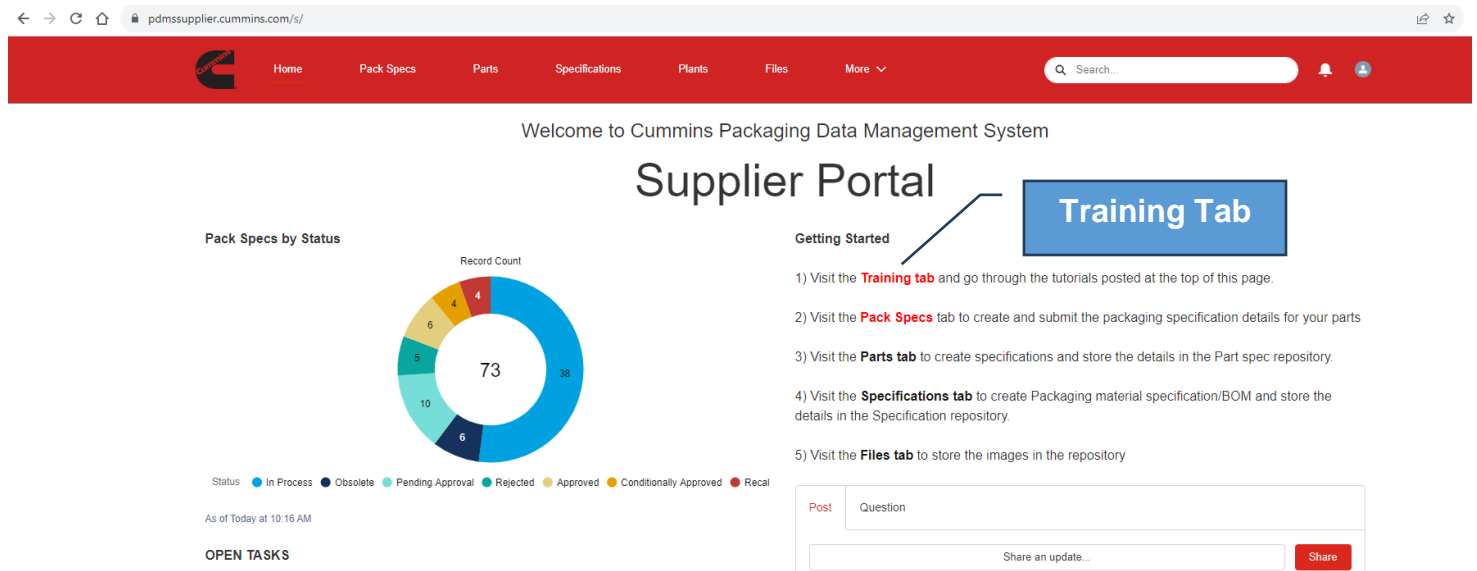
- ASTM D642-94 Standard test method for determining compressive resistance of shipping containers, components, and unit loads.
- ASTM D880-92 Standard test method for impact testing for shipping containers and systems.
- ASTM D999-96 Standard methods for vibration testing of shipping containers.
- ASTM D4003-98 Standard test methods for programmable horizontal impact test for shipping containers and systems.
- ASTM D4169-99 Standard practice for performance testing of shipping containers and systems.
- ASTM D4728-95 Standard test method for random vibration testing of shipping containers.
- ASTM D5998-96 Standard specification for molded polyethylene shipping and storage drums.
- ASTM D6179-97 Standard test methods for rough handling of utilized loads and large shipping cases and crates.
- ASTM D6198-98 Standard guide for transport packaging design.
- ASTM D6344-908 Standard test method for concentrated impacts to transport packages.

# Packaging Data Management System (PDMS)

The Packaging Data Sheet is to be filled out by the supplier via the Packaging Data Management System (PDMS) Supplier Portal which can be found here: [Cummins Supplier Portal](#). All new suppliers are required to create a new account by signing up (1) and returning suppliers can log in using their credentials (2).



A variety of training resources are available for reference on the PDMS Supplier Portal home page.



The training resources are available for reference here: [Packaging - Packaging Data Sheet \(PDS\) Guidance \(cummins.com\)](#)

https://public.cummins.com/sites/CSP/Pages/Packaging---Packaging-Data-Sheet-Guidance.aspx

Supplier Portal

Supplier Portal • Packaging - Packaging Data Sheet (PDS) Guidance

Welcome to Supplier Portal

My Business Applications

News & Announcements

Supplier Recognition

Procurement Organization

Supplier Webcasts

- Corporate Responsibility
- Environmental Stewardship
- Business Resilience
- Supplier Diversity
- Supplier Payments
- Standards & Processes
- Shipping
- Mexico
- Recent

Purchase Order Terms and Conditions

## Packaging - Packaging Data Sheet (PDS) Guidance

**Packaging Data Sheet (PDS) Guidance** will review critical regulations around the packaging world. This includes safety as well as legal requirements and it will be the responsibility of the supplier to ensure that these critical issues are included in the design or the packaging and the selection of the materials. Review this section carefully and review the training that Cummins has created to help you meet these requirements.

On **November 27th 2023**, Cummins introduced a **new and improvised packaging supplier portal** where suppliers can sign up and submit PDS (Packaging Data Sheet) for review. This replaces the previous MS Excel submission process.

**Create a user account in the Packaging Supplier portal to submit Packaging Specs.**

- New User - [Click here to Sign up](#)
- Existing Users - [Click here to login](#)

**Training Documents:** You can use the below-provided training video tutorials or PPT files to submit Pack Specs.

Sl. No	PDMS Supplier Portal Training Videos
1	<a href="#">PDMS Supplier Portal - Introduction</a>
2	<a href="#">How to submit PackSpec for Expendable Packaging/Backup</a>
3	<a href="#">How to submit PackSpec for Cummins Owned - Standard Returnables</a>
4	<a href="#">How to submit PackSpec for Cummins Owned - Customized Returnable</a>

**Summary Links**

- [Packaging Overview](#)
- [Production Parts](#)
- [New and ReCon Parts](#)
- [Packaging Data Sheet \(PDS\) Guidance \(THIS PAGE\)](#)
- [Packaging Training](#)

## Creating a New PDS/ Pack Spec

Creating a new PDS begins with clicking the “Pack Specs” tab and selecting “New” to specify the packaging type to prompt future inputs. The workflow depends on the selection of packaging type and the information to input will differ. Ensure that the correct unit of measure is selected which matches the information you will be entering. Here is a sample of what you will see:

pdmssupplier.cummins.com/s/

Home **Pack Specs** Parts Specifications Plants Files More

Welcome to Cummins Packaging Data Management System

# Supplier Portal

**Click “Pack Spec” to proceed.**

**Pack Specs by Status**

Record Count: 73

Status: In Process (38) Obsolete (6) Pending Approval (10) Rejected (6) Approved (4) Conditionally Approved (4) ReCal (4)

As of Today at 10:16 AM

**OPEN TASKS**

**Getting Started**

- 1) Visit the **Training tab** and go through the tutorials posted at the top of this page.
- 2) Visit the **Pack Specs** tab to create and submit the packaging specification details for your parts
- 3) Visit the **Parts tab** to create specifications and store the details in the Part spec repository.
- 4) Visit the **Specifications tab** to create Packaging material specification/BOM and store the details in the Specification repository.
- 5) Visit the **Files tab** to store the images in the repository

Post Question

Share an update... **Share**

https://pdmssupplier.cummins.com/s/spec-family/specright\_\_Spec\_Family\_c/Default

Home Pack Specs Parts Specifications Plants Files More

Search...

Pack Specs All

Click "New" to proceed.

Search this list...

50+ Items • Sorted by Last Modified Date • Filtered by All pack specs • Updated a few seconds ago

SKU	Status	Part Na...	Part Num...	Sup...	Type	Returnable Type	Cum...	UOM	Ve...	Created Date	Last Modified D...
DDTDNS_000384	In Progress	Metal	10262023		Expendable			Imperial (l	1	10/31/2023 11:11 AM	10/31/2023 11:21

In order to proceed, you will be prompted to select the type of packaging that will be used- expendable or returnable. This selection will determine the path for entering information for your pack spec.

### Pack Spec

\* Type  
Expendable

\* UOM  
--None--

- None--
- Imperial (In/Lb/Mils)
- Metric (mm/Kg/Microns)

Next

### Pack Spec

\* Type  
Returnable

\* UOM  
Metric (mm/Kg/Microns)

\* Returnable Type

- Supplier Owned
- None--
- Cummins Owned
- Supplier Owned
- Leased

Next

Please note, the next screen refers to the part that you will be packaging. Choose the "select from existing" option if you are creating a pack spec for a part you previously entered in the system. Select "Create New Part" if the spec is being created for a new part. If any modification needs to be made to an existing part, you will need to create a new part to ensure other pack specs remain unaffected by the change. Edits to specific parts can be made after this process by going to the "Part Spec" tab on the main page.

### Parts

#### ▼ Pack Spec - Part

- \* How do you want to add the part?
- Select from existing
  - Create New Part

Previous Next



Part information and receiving location will be the same for all packaging types. The next steps to enter packaging details will be based on the packaging type that was selected in the beginning. Please refer to the training tab for all packaging types and submission details.

Once the Pack Spec has been submitted, updates, status and all other information will be visible on the submission page.

Any questions or updates can be directed to the “Post” or “Question” tab which can be found on the main page or the pack spec page. Enter any project updates in “Post” and any questions under “Question”.

Enter generic questions on the main home page found here:

Welcome to Cummins Packaging Data Management System

## Supplier Portal

**Pack Specs by Status**

Record Count

Status	Count
In Process	40
Obsolete	6
Pending Approval	5
Rejected	10
Approved	6
Conditionally Approved	4
Recal	4
<b>Total</b>	<b>75</b>

Status: ● In Process ● Obsolete ● Pending Approval ● Rejected ● Approved ● Conditionally Approved ● Recal

As of Today at 7:38 AM

**OPEN TASKS**

- Pack Spec - Location Rejection  
[P RTPDS-000360](#)

**Getting Started**

- 1) Visit the **Training tab** and go through the tutorials posted at the top of this page.
- 2) Visit the **Pack Specs** tab to create and submit the packaging specification details for your parts
- 3) Visit the **Parts tab** to create specifications and store the details in the Part spec repository.
- 4) Visit the **Specifications tab** to create Packaging material specification/BOM and store the details in the Specification repository.
- 5) Visit the **Files tab** to store the images in the repository

**Oct 4**

Enter any specific pack spec questions in the spec page and the receiving site packaging representative will be able to assist you.

C

[Home](#)
[Pack Specs](#)
[Parts](#)
[Specifications](#)
[Plants](#)
[Files](#)
[More](#)

**Pack Spec**  
**PRTPDS-000384**

+ Follow
Edit
Submit
Recall
▼

Version Number	Type	UOM	Status	Submission Date	Created By
1	Expendable	Imperial (In/Lb/Mils)	In Process		Test Supplier, 10/31/2023, 11:11 AM

Receiving Locations (1)
⚙️
↻

1 item • Sorted by Created Date • Updated a few seconds ago

#	Location Name	Status	Approve/Reject Comments	Location Packaging Engineer	State	City	Country
1	<a href="#">RL-00516</a> PDC - MDC_Parts Distribution C...	In Process		Akhil Sai Konda	TN	Memphis	USA

[View All](#)

Parts (1)
⚙️
↻

1 item • Updated a few seconds ago

Part Number	Part Name	Annual Vol...	Pieces/Container ...	Piece/Cost (Returna...	Pieces/Con...	Annual Con...	Unit Load Qua...	Primary Con...	Secondary Container Qua
1	<a href="#">10262023</a> Metal	1	1				0	1	0

[View All](#)

Details
BOM
Files
History

<p>Type</p> <p>Expendable</p> <p>UOM</p> <p>Imperial (In/Lb/Mils)</p> <p>Returnable Type</p> <p>Cummins Owned Returnable Type</p> <p><b>▼ SUPPLIER INFORMATION</b></p> <p>Supplier</p> <p><a href="#">Test Supplier</a></p> <p>Supplier User</p> <p> <a href="#">Test Supplier</a></p> <p>Supplier Company Name</p> <p>Test Supplier</p> <p><b>▼ Specifications Information</b></p> <p># Parts</p> <p>1</p>	<p>SKU</p> <p>PRTPDS-000384</p> <p>Status</p> <p>In Process</p> <p>Submission Date</p> <p>Approved Date</p> <p>Supplier ID No.</p> <p>1234567890</p> <p>Supplier Packaging Engineer</p> <p># Receiving Locations</p> <p>1</p>
---	---

Filters: All time • All activities • All types
⚙️

Refresh • Expand All • View All

**▼ Upcoming & Overdue**

No activities to show.

Get started by sending an email, scheduling a task, and more.

---

No past activity. Past meetings and tasks marked as done show up here.

File Preview

Post
Question

Share

69 **Packaging Standards**

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10/31/23








# Preservation

Preservation minimum requirements for both purchased parts from suppliers and Cummins' manufactured parts are for preservation and packaging that will protect the parts from corrosion for a minimum eighteen (18) months for Aftermarket-Service parts under normal inside warehouse storage from the time Cummins takes possession of the parts. This includes any production parts that are shipped into the aftermarket-service parts channel. Some parts may have more stringent requirements for preservation shelf life due to unique handling or storage conditions. Requirements for these parts will be determined at the receiving site level.

- The Suppliers standard manufacturing and handling process and preservation methods must prevent the start of corrosion on castings and metal fabrication stock. No preservation can remove existing corrosion.
- Parts for external engine mounting and subsequent cleaning and painting must not have wax base preservative. All preservation methods must be of the type that will not require special cleaning for removal before normal usage of the part. All preservatives that remain on the part must be compatible with diesel fuel and/or lube oil.
- The Suppliers processes must provide for the following:
  - Parts are clean of casting sand, dirt, rust, soap residue, and fingerprints.
  - Surface residues from washing, cleaning or other operations shall not adversely affect subsequent preservative processes or effectiveness of the preservative coating. Wash tank solutions and/or separate oil preservative must be blown or drained out of cavities.
  - Ferrous metal parts must not have machine surfaces in flush contact with corrugated, wood packaging materials, etc. Separation must be with clean plastic, VCI, or other barrier paper.
  - Parts are covered to protect from dirt. Supplier' packs, in corrugated boxes that make up a pallet unit load must be individually sealed.
  - Preservative coatings on parts must be acceptable to the sending and receiving Plants or PDC's.
  - The dip method of preservation with draining as required plus keeping the parts covered is the preferred method for dependable preservation.
  - The spray method of preservation requires regular audits to ensure complete coverage.

# Polymer Resin

Where practicable, all polymer resin material must have the recycling resin code visible and legible. Per ASTM D7611—Standard Practice for Coding Plastic Manufactured Articles for Resin Identification.

1 PETE	2 HDPE	3 PVC	4 LDPE	5 PP	6 PS	7 OTHER
polyethylene terephthalate	high-density polyethylene	polyvinyl chloride	low-density polyethylene	polypropylene	polystyrene	other plastics, including acrylic, polycarbonate, polyactic fibers, nylon, fiberglass
soft drink bottles, mineral water, fruit juice containers and cooking oil	milk jugs, cleaning agents, laundry detergents, bleaching agents, shampoo bottles, washing and shower soaps	trays for sweets, fruit, plastic packing (bubble foil) and food foils to wrap the foodstuff	crushed bottles, shopping bags, highly-resistant sacks and most of the wrappings	furniture, consumers, luggage, toys as well as bumpers, lining and external borders of the cars	toys, hard packing, refrigerator trays, cosmetic bags, costume jewellery, audio cassettes, CD cases, vending cups	an example of one type is a polycarbonate used for CD production and baby feeding bottles
						

Source: Recycling Resin Code per Sustainable Packaging Coalition



# **Serial/ Lot Number & 2D Barcode Matrix Requirements**

## **SERIAL / LOT NUMBER AND 2D BARCODE MATRIX LABEL REQUIREMENT**

### **Part Serial / Lot Number**

All internal and external Cummins Aftermarket suppliers using Cummins branded packaging and labeling are required to add the **part serial / lot number and corresponding barcode (1D or 2D) to the pre-pack label** if there is a serial number listed on part.

2D barcode is also required in the upper right corner of the label containing the alphanumeric digits for the **Part Number +; + Date +; + Packager +; Quantity in Carton + Serial/Lot #**. See 1D and 2D barcode standards on page 12-13 and sample label pictures for proper 1D or 2D barcode placement on the label on page 16 and 77.

**The expectation is that this be added to all pre-pack labels no later than 6 months after the release date of this revised Packaging Standard.**

### **AIAG Bar Code Label Standards**

The Cummins Inc. Labeling Standard is an extraction from the AIAG Shipping/Parts Identification Label Standards (AIAG-B-4) developed by the Automotive Industry Action Group. Cummins variances or additions to the AIAG standard are denoted by an (\*) and provides guidelines for the printing and placement of Shipping/Parts Identification Labels. The bar code standards **shall** be used in conjunction with Cummins WW Packaging Standards.

Permission to print portions of the AIAG Shipping/Parts Identification Label Standard (AIAG-B-4-2018) has been granted by the AIAG Board of Directors.

- **1D Barcode - Code 39 symbology**

All 1D bar codes **shall** be Code 39 symbology and **shall** conform to the Bar Code Symbology Standard ODETTE, AIAG. The Cummins Legacy Label Format is based on the AIAG B-4 format and several sites have adopted later versions. Refer to Site Specific Packaging Requirements for further details and submit a package label example on the Packaging Data Sheet (PDS) for approval. See Traceability Barcode Label Quality Control Requirement Table, at the end of this section. Contact your Cummins sourcing manager with any questions.

- **2D Barcode Matrix**

2D Barcode is a two-dimensional type symbol that contains data as a function of the specific arrangement of dark and light squares. The codes contain data in two directions, along the X and Y axis. Common symbology's include Data Matrix, PDF 417 and QR code.

Data Matrix is the only Cummins approved symbology for 2D barcode. In every case, data shall be separated by semicolon as a data separator. There is no fixed length for each data field. The data is bounded by the data identifier at the beginning and data separator, or end of string, at the end. No padded characters (blank spaces) or non-printable characters are allowed in a 2D code dataset.

These labels are designed to improve supplier and customer productivity and controls of suppliers and customers by allowing effective and efficient capture of data for production counts, warehouse input/output, cycle counting, shipper generation, forwarding, freight transfer control, receiving and other inventory controls. It is the responsibility of the supplier to provide **barcoded** labels that meet these specifications. Strict adherence to these specifications will be enforced. See Traceability Barcode Label Quality Control Requirement Table, at the end of this section. Contact your Cummins sourcing manager with any questions.

In this document the word “Shall” indicates a **requirement**, and the word “Should” indicates a recommendation.











Example of data matrix (square and rectangle respectively) symbol only:



### **Conditions for Corrective Action on Suppliers**

Labels with: (1) information missing, (2) in the wrong location or orientation, or (3) unreadable or not decoded codes shall be considered defective material, subject to Non-Conforming Material Review (MNC) by Supplier Quality Improvement Engineer (SQI), therefore requiring corrective action and disposition by the supplier. Any code not decoded will be subject to corrective action.

## Traceability Barcode Label Quality Control Requirement Table Matrix

Pre-Pack Label	Kitting Label	Auto Bag	Label Data Field	Bar Code Type	1D & 2D Bar Code Size	1D & 2D Bar Code Type	Data String Format
X	X		<b>Part number</b>	1D BARCODE- CODE 39	.25 in (min) Height		Part Number barcode value = Part Number
X	X		<b>Quantity</b>	1D BARCODE- CODE 39	.25 in (min) Height		Quantity barcode value = 001
X	X		<b>Matrix (in upper right corner)</b>	2D BARCODE DATA MATRIX	.23 mm (min) - X Dimension		Barcode Value = Part Number + ; + Date + ; + Packager + ; + Serial/Lot #  Example #1 - 5322354RX;020221;445324- 10010;M102029700196
					.23 mm (min) - X Dimension		Barcode Value = Part Number + ; + Date + ; + Packager + ; + Serial/Lot #  Example #2 = 3075537;301121;52509; P3075537;S532100700005;V102059- COLUMBUS-00
X	X	X	<b>Serial / lot # (non-serialized components)</b>	1D BARCODE- CODE 39 or 2D BARCODE DATA MATRIX	.125 in (min) Height		Lot Number string format ddmmyy + sequential number (00001, 00002) + line/area (01, 02)  Example #1= 1805210000101
					.23 mm (min) - X Dimension		Note for Auto Bag Bar Code Type will be 1D BARCODE- CODE 39
X			<b>Serial / lot # (serialized components, with one data string, from original mfg supplier traceability information)</b>	1D BARCODE- CODE 39 or 2D BARCODE DATA MATRIX	.125 in (min) Height		Data String example with one data string
					.23 mm (min) - X Dimension		Example #1 = M012028700196    Example #2 = 532100700005
X			<b>Serial / lot # (serialized components, with multiple data string from original mfg supplier traceability information)</b>	2D BARCODE DATA MATRIX	.23 mm (min) - X Dimension		Serialized components by MFG Supplier, with multiple data string  Example #1 - PA1234A1234;SABC191231234;V123456- ABCDE  Example #2 - PA1234A1234;1TABC19123;V123456-ABCDE
	X		<b>Serial # for each kits contains components (only for indivial kits components that contain a serialized components)</b>	2D BARCODE DATA MATRIX	.23 mm (min) - X Dimension		Serialized components by MFG Supplier, with multiple data string  Example #1 - PA1234A1234;SABC191231234;V123456- ABCDE

**Sample Labels: Prepack and Kitting Labels**



PART NUMBER **4955622** 



ORIGIN **US**  
 DATE **06 Nov 2023** QUANTITY 1  
 PACKAGER **445324**   
 WEIGHT **4.55 (LBS) - 1.99 (KG)**  
 DESCRIPTION **KIT, ENGINE PISTON  
 KIT, PISTÓN MOTOR  
 KIT, PISTON MOTEUR**

SERIAL/LOT # **5321007000501** 





PART NUMBER **4955622** 



ORIGIN **US**  
 DATE **06 Nov 2023** QUANTITY 1  
 PACKAGER **445324**   
 WEIGHT **4.55 (LBS) - 1.99 (KG)**  
 DESCRIPTION **KIT, ENGINE PISTON  
 KIT, PISTÓN MOTOR  
 KIT, PISTON MOTEUR**

SERIAL/LOT # **5321007000501** 







PART NUMBER **5486592RX** 





ORIGIN **US**  
 DATE **06 Nov 2023** QUANTITY 1  
 PACKAGER **445324**   
 WEIGHT **0.938 (LBS) - 0.43 (KG)**  
 DESCRIPTION **SENSOR, NITROGEN OXIDE  
 SENSOR, OXIDO DE NITRÓGENO  
 CAPTEUR, OXYDE D'AZOTE**

SERIAL/LOT # **5321007000501** 

PART NUMBER **3920692** 

DATE **02 -- Nov -- 2023** QUANTITY 2  
 PKGR **MDC**   
 WT (LB): **0.31** WT (KG) **0.14**  
 DESC **RING, RETAINING  
 ANILLO, RETENCION  
 BAGUE DE RETENUE**

ORIGIN **US** 

LOT SN # **18052100001** 

# Revision Log Sheet



Date	Page #	What Changed or Updated	By Whom
6/1/2019	2	Added statement - Supplier packaging shall preserve part quality through the entire distribution chain up to and including the point of use regardless of the freight terms or mode of transport.	S. Joseph
6/1/2019	2	Removed the name Lerory Shirk and added Paul G. Ouillette contact info.	S. Joseph
6/1/2019	4	Added section 1.2 Supplier Compliance	S. Joseph
6/1/2019	5	Added section 1.4 Packaging Specification Approval Process	S. Joseph
6/1/2019	7	Added section 2.1.3 Packaging Design and Material Selection	S. Joseph
6/1/2019	8	Added section 2.1.5 Environmental Impact	S. Joseph
6/1/2019	9	Added section 2.1.6 Recommended Corrugated Strength for Individual Part Packaging	S. Joseph
6/1/2019	10	Added "Recommended Aftermarket Corrosion Prevention Method" to section 2.2.3 Metal Corrosion Prevention	S. Joseph
6/1/2019	11	Added Statement - "Shipments with multiple pallet loads MUST have a packing slip on each individual pallet load which identifies/matches the contents of each pallet load to the packing slip" to section 2.3 Identification	S. Joseph
6/1/2019	12	Added/changed the following in section 2.3.2 Pre-pack Label Standard 6. Country of origin - <b>ISO Alpha-2 (two-letter abbreviation)</b> 7. Total Package weight (Part + Carton) – decimal weight to the <b>nearest 0.1 (LB) and (KG)</b> 8. Date packaged – <b>DD-MMM (Text Abbreviation)</b> -YYYY format <b>10.(Optional) Bar Code of County of origin - 11-digit alphanumeric format</b> <b>11.(Optional) Part Serial Number - 11-digit alphanumeric format</b>	S. Joseph
6/1/2019	14	Added section 2.3.5 Case Pack Labeling (Cummins Plant/PDC Use Only)	S. Joseph
6/1/2019	19	Added statement "All Unit/Pallet Loads that contain more than one part number must be clearly labeled as a "Mixed Load". <b>Mixed Load labels must be placed on two adjacent sides of mixed unit loads</b> " to section "Mixed Item Loads"	S. Joseph
6/1/2019	23	Added section 2.5.1 Pallet Styles	S. Joseph
6/1/2019	24	Added section 2.5.2 Pallet Construction (Measures are Actual, Not Nominal)	S. Joseph
6/1/2019	27	Added section 2.5.5 Extreme Distribution Conditions	S. Joseph
6/1/2019	27	Added Section 2.5.6 Hazardous Material and Dangerous Goods Shipments	S. Joseph
6/1/2019	45	Added Section 5.1 Returnable Packaging	S. Joseph
6/1/2019	47	Added statement "*** Exceptions to Wooden Crate (Parts over 150 lbs) must be approved by the site Packaging representative" to section 6.4 Primary Box (crate or carton) Requirements	S. Joseph
6/1/2019	49	Added statement "Box use must be approved by site Packaging Rep." to section 6.8 One Piece Per Pallet (Must be approved by site Packaging Rep.)	S. Joseph
6/1/2019	61	Added Appendix 3 "Packaging Data Sheet (PDS)"	S. Joseph
6/1/2019	64	Added Appendix 4 "Preservation"	S. Joseph
6/1/2019	65	Added Appendix 5 "Recycling resin codes"	S. Joseph
6/1/2019	66	Added Appendix 6 "Revision Log Sheet"	S. Joseph
12/14/2020	27-28	Added statement "The Cummins Genuine Parts Branding trademark is for the exclusive use of the Cummins Aftermarket Channel. The Cummins Genuine Parts Branding trademark is not to be used First Fit applications (OEM channel) or Cummins intra-company transfer."	S. Joseph
12/14/2020	8, 25	Added statement "Any wood packaging materials that have been treated with Methyl Bromide are forbidden. This includes pallets, crates or dunnage that is solid wood and falls within the ISPM 15 guidelines. Only heat-treated wood is acceptable."	S. Joseph
12/14/2020	27	Added statement "All parts shipped from Cummins PDC's to customers are required to have Cummins branded packaging (Carton and label) with the exception of filtration parts. Filtration parts are required to have branded label. There are rare cases where older/legacy parts are packed in plain (unbranded) boxes with Cummins branded label. These legacy parts may remain in unbranded boxes per the approval of the Global Aftermarket Packaging Leader."	S. Joseph

12/14/2020	6	Added statement "Cummins Internal (PDC to PDC) and PDC to Customer Shipments - Engine Down (ED) shipments/orders are not required to be individually packed in Cummins branded cartons for Cummins internal (PDC to PDC) or external customer shipments/orders. Exceptions may be approved for external customers by the site packaging representation."	S. Joseph
7/15/2022	3	Added # 6 to Appendices "Serial / Lot Number and 2D Barcode Matrix Label Requirement"	S. Joseph
7/15/2022	12	Added pre-pack label requirement information to # 12, 13 and "Note".	S. Joseph
7/15/2022	13, 14	Added pre-pack label pictures (w/ serial # and 2D Barcode).	S. Joseph
7/15/2022	15, 16	Added 1D Barcode (Code 39 symbology) and 2D Barcode Matrix Std.	S. Joseph
7/15/2022	68	Added Appendix 6 "Serial / Lot Number and 2D Barcode Matrix Label Requirement"	S. Joseph
11/16/2023	all	Reformatted entire document which included; 1. Updating graphics for high-res images wherever possible (a) Changed Kit label origin/ weight format (i.e. USA to US) (b) Added "01" to the end of the serial line (c) Removed Lot SN from Kit Label (d) updated all label sizes 2. Updating footer (placement of logo and text) 3. Spelling and gramatical errors 4. Consistency with spacing, text formatting and bulleting	S. Joseph
11/16/2023	all	Updating "PDMS" wherever applicable	S. Joseph
11/16/2023	10	Updated table for Packing Slip	S. Joseph
11/16/2023	10	Added "Shipment ID"/ "Shipment Identification Number" text	S. Joseph
11/16/2023	11	Updated all instances of "11-digit" to "11 or 13-digit"	S. Joseph
11/16/2023	11	Added 3 languages to 2.3.2.e. as well as bold text before "Part Specification Information"	S. Joseph
11/16/2023	all	Updated all instances of "De La Rue" to "Cummins Anticounterfeit" and "DLR" to "AC"	S. Joseph
11/16/2023	all	Updated all label graphics to match current requirements (i.e. 3-language). All labels have a plain version (standard/ reman) and an anticounterfeit version	S. Joseph
11/16/2023	14	Added statement about child components: "All child components placed in kits must be labelled with a part number prior to being placed in the kit."	S. Joseph
11/16/2023	18	Updated image for 2.3.10 to one with three languages	S. Joseph
11/16/2023	19	Updated Master Label Image in Exhibit 4	S. Joseph
11/16/2023	22	Updated image and text for Exhibit 6A Box or Carton - changed "two sides" to "one side"	S. Joseph
11/16/2023	26	Updated graphics and tables for section 2.5.3	S. Joseph
11/16/2023	32	Updated images in 3.1.5 to show three languages	S. Joseph
11/16/2023	34	Updated kit label graphic to match current requirements	S. Joseph
11/16/2023	35-38	Updated label graphics to have standard and anticounterfeit version	S. Joseph
11/16/2023	41	Updated label graphic for font section	S. Joseph
11/16/2023	42	Added Anticounterfeit label to group of graphics	S. Joseph
11/16/2023	47	Updated label to three languages in 6.2	S. Joseph
11/16/2023	51-53	Updated RSC and FOL box images and added detail about flute and staple direction	S. Joseph
11/16/2023	55 - 79	Updated all Appendix title pages	S. Joseph
11/16/2023	63 - 68	Updated PDMS section based on new implementation of PDMS portal	S. Joseph
11/16/2023	76	Updated "Serial / lot # (non-serialized components)" to include "+line/area (01,02...)"	S. Joseph
11/16/2023	78	Updated Revision Log Sheet	S. Joseph