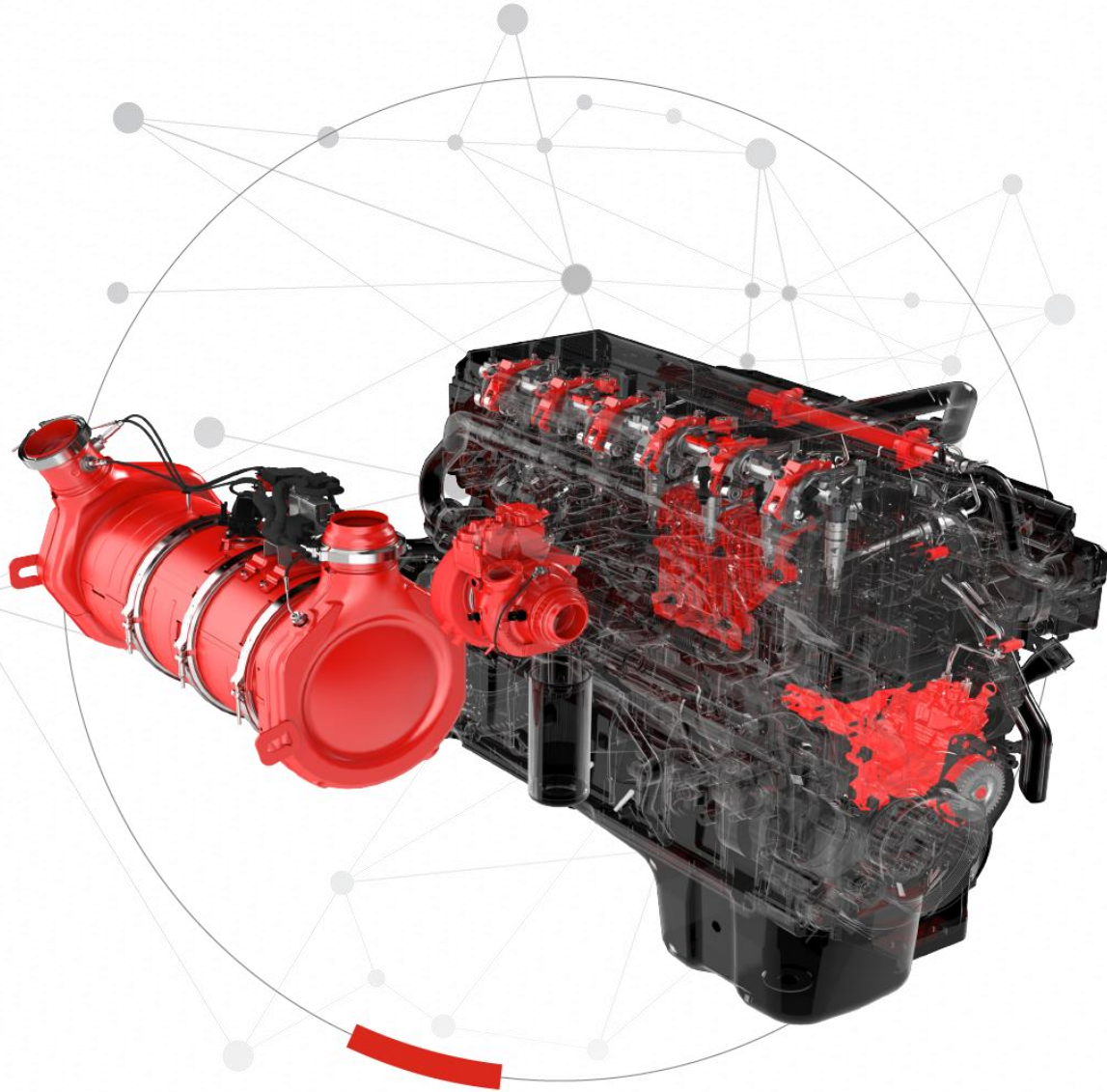




Joint Venture Operations (JVO)

Global Packaging Requirements for Production Parts

May 2026



Purpose of This Document

Supplier guidance for applying ESN 19041 packaging requirements specific to Cummins Inc. JVO customers, supporting safe handling, product protection, and compliant shipments

Purpose

- Highlight packaging requirements specific to Cummins Inc. Joint Venture (JVO) Customers
- Ensure supplier compliance with Cummins Global Packaging Standards for Productions Parts
- Support suppliers in the development of compliant production packaging for Cummins JVO customers
- Provide descriptions and examples of acceptable and ideal packaging methods
- Ensure packaging is designed to support safe handling, storage, and transportation, preventing injury, part damage, or material failure
- Support lean manufacturing initiatives
- Reduce risk of damage during transportation and handling

Supplier Responsibilities

- Comply with receiving site-specific packaging requirements for each JVO location
- Submit a complete packaging process (PD) for review and approval prior to shipment

Additional Information

- Cummins Global Packaging Standards can be accessed through the [Cummins Supplier Portal](#) under Training -> Packaging Training
- JVO Packaging contact information is provided at the end of this presentation

Who Are We – JVO Logistics & Packaging



Who is CEVA

- CEVA is Cummins' JVO approved Third-party Logistics (3PL) provider supporting JVO customers.
- CEVA places orders on behalf of JVO customers located in:
 - India, China, & Japan
- JVO orders are released based on Supplier-defined MOQ / Lot size

Supplier Packaging Expectations

- ***Packaging must be:***
 - Export-ready for international transportation and handling
 - Designed to ensure Protection, Containment, and Preservation of production parts
 - Appropriately sized to prevent part movement and shifting within primary box and secondary (outer) shipping containers
 - Designed to prevent moisture exposure from corrugated material (rust/corrosion protection, where applicable)

Robust packaging is critical to ensure delivery of quality parts to Cummins JVO customers.

Packaging type Requirements

Expendable packaging only

Returnable packaging is not permitted

(JVO Customers are unable to store, manage, or return supplier containers)



New Packaging Data Submission System

- The previous MS Excel packaging submission process is no longer valid.
- Suppliers are required to use the online Packaging Data Submission system available through the [Cummins Supplier Portal](#).
- Suppliers are responsible for identifying and managing users within their organization who submit, add or update PDS information.
- Suppliers must register and submit a packaging Data Sheet (PDS) for review and approval by each respective Cummins receiving location.

Packaging Process & Approval Requirements

- All supplier part numbers (PNs) shall have an approved packaging process submitted in the Cummins Global Packaging System.
- Packaging processes must be submitted and approved by each Cummins Receiving Location (RL) prior to shipment.
- Any packaging change shall be submitted through the packaging Data Sheet (PDS) review process.

Important Notice

If a PDS is not approved by the Receiving Location's Cummins Packaging Engineering team, the supplier will be held responsible for any claims related to the protection, containment, or preservation of parts.

JVO Receiving Locations & Shipping Flow

JVO Customer orders are received at:

- *CEVA - US_CEVA Logistics JV Kitting - US - Clayton, IN, USA*
- *UK.DAV.UKLC.JVO (Old CEVA UK) - Daventry, UK , Daventry , Daventry*
- *APAC Drop or Drop Shipment – supplier delivered directly to a JVO customer, please use receiving location - WWK_Cummins World Wide Kitting, Columbus, Indiana, USA*

➤ Inactive Receiving Locations (Effective January 2024)

- **CEVA Plainfield, Indiana, USA**
- **CEVA UK – Warrington, UK**

Shipping & Handling Flow

JVO orders are often low volume and suppliers will ship via parcel carriers (UPS, FedEx, etc.) or freight, depending on order size and quantity.

- Supplier shipments may be cross-docked at CEVA Clayton USA or UK Dav UKLC and forwarded to the JVO customer who placed the order.
- Or CEVA Clayton USA or UK Dav UKLC may consolidate supplier shipments into a larger corrugated box or wooden crate for onward shipment to the JVO customer.

Packaging must be export-ready and robust enough to support consolidation and international transportation.

JVO Packaging Requirements – Acceptable Packaging Materials

Acceptable package materials include, but are not limited to:

- Clean corrugated/fiberboard (appropriate grade for weight and stacking)
- Coated (non-wax) and fully recyclable fiberboard
- Molded pulp
- Clean kraft Paper
- Paper (VCI treated acceptable)
- Polyethylene materials (HDPE, LDPE, LLDPE) *other than foams*
- Polyethylene Terephthalate (PET, PETE, PETG, RPET)
- Polypropylene materials (PP)
- Steel
- Wooden pallets/boxes/crates: (comply with ISPM-15)



Allowable packaging materials ***with Cummins receiving site approval at the part number level:***

- Single Use plastics (e.g. partitions, layer trays and pads)
- Foams (Ethylene, Propylene, Styrene, Urethane, etc.)
 - Foam sage must be technically Justified and approved; documentation is required
- Polyvinyl Chloride (PVC)
- Biodegradable and commercially compostable materials are preferred whenever possible.

Pg 16 found CMI's Global
Packaging Process & Standard

JVO Packaging Team Contacts

Name	Position	Email	Phone
Jesus Avila Gonzalez	Senior Packaging Engineer	jesus.avila.gonzalez@cummins.com	524-448-706700 Ext: 1065
Lori E. Bennett	JVO Packaging Supply Chain Specialist	lori.e.bennett@cummins.com	Mobile +1 (812) 341-7320

JVO Packaging Requirements – Prohibited Packaging Materials



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).
- Microfoam laminated corrugated.
- Materials (solid wood) requiring ISPM 15 compliance treated with methyl bromide (MB) are strictly prohibited in all European Union and United Kingdom nations. All part packages consisting of solid wood packaging materials shall use other than MB treatments to comply with ISPM 15 for all Cummins directed shipments (including Joint Venture locations).

Pg 17 found CMI's Global Packaging Process & Standard

JVO Packaging Unit load Stability Requirements



5.9. Modularity (pg 24) / 5.10. Unit Load Stability and Stack-ability (pg 25- 26) [Click here](#)

- ❖ Unit load shall safely stack up to 100" (2540 mm) in a dynamic environment (in transit).
- ❖ Unit load shall safely stack to the greater of three high o10'6" (3200mm), in a static environment (in warehouse).
- ❖ The maximum gross weight of loads shipped to CMI's locations shall not exceed 4,000 pounds per unit load. .
- ❖ PN's must be packed in their own individual box, no mixing of different PN's, and no loose or bulk bagged parts placed inside on top of other boxed parts inside shipping container
- ❖ All unit loads shall equalize to full layer orientation - **Pyramid stacking is not allowed**
- ❖ Heavy items should be placed on bottom layer
 - Create a stable base and avoid crushing lighter part boxes.
 - Head space should be kept at minimum.
- ❖ Containers are to be sized such that solid foundation support is derived from the pallet (no container/carton overhang allowed).



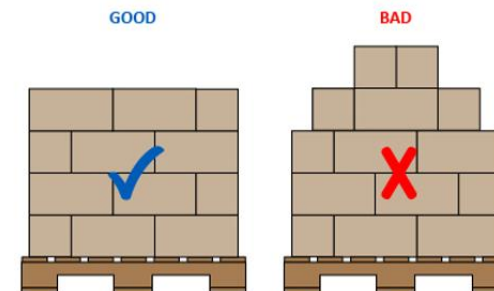
1,300 LB. TRIPLE WALL BOXES

Reusable container protects products in shipment.

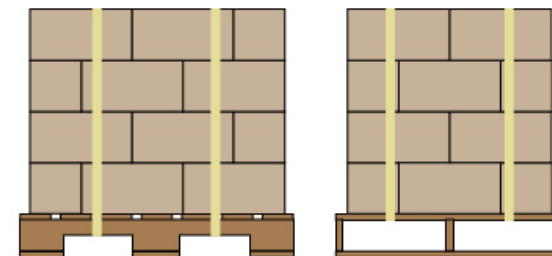
- 1,300 lb. test triple wall side panels for shipping and stacking strength.
- Ships complete with lid and attached pallet.
- Certified and marked for export shipments.



Adding a sleeve around unit loads can help prevent box movement during shipping or storage by creating a tighter, more cohesive unit. Sleeves act as a protective barrier, reducing shifting and potential damage.



- The Gross Weight Limit (GWL) for manually handled containers to any given Cummins facility shall not exceed 15 kg or 33 lbs. [Click here](#) Lean Principles in Containerization (Pg 19)



Before wrapping your freight in stretch wrap, recommend Fasten shipping bands around freight and pallet using at least two straps on each side as shown and then shrink wrap unit load

Packaging recommendation, examples when shipping to CEVA JVO US or UKLC JVO



Part protection is the responsibility of the supplier, recommendation below.

Dunnage - Is the part susceptible to rust and is there any type of RP process.

- Corrugated cardboard tends to absorb water/moisture, metals that are placed directly on or near the corrugated, activates the acidic residue which will cause corrosion on the metal. To avoid this, metal parts should have some type of protection between the corrugated material and metal.
- Vapor Corrosion Inhibitor (VCI) products – VCI bag / film, VCI paper (sealed to be fully effective), Desiccant bag. Metal part should be no more than 10” from the VCI product. The closer to the metal, the better the corrosion protection. Rust protection, when used properly, can protect against corrosion for several years.
- Metal parts must be fully coated to be protected, E-coating (electrocoating) may not be needed if VCI product is used.
- Foam dunnage such as Ethylene, Propylene, Styrene and Urethane foams are prohibited. Contact Packaging Representative for further information or exceptions.

Examples Primary Container Dunnage - VCI product, Poly bag, kraft paper

Generally, the thicker the material, the stronger the product



Parts not susceptible to rust inside coated divider cells.



One big Secondary VCI bag and Individual VCI bag

One big secondary VCI bag and Individual poly bag



One large VCI bag folded over and taped.



Individual part bags inside primary box with dividers.



Dividers allow access to multiple parts. Reduces part extraction time and excess materials.



VCI paper or Kraft paper can be used to wrap the part/parts

[Click here](#) Packaging Requirements (Pg 14 – 19)

JVO Packaging Pallet, Wooden Crate Requirements

Wood Pallets / crates must have ISPM15 Certification stamp

- Four-way entry pallet recommended.
- Strapping freight to pallet – polypropylene, rayon or polyester, **No** metal or steel straps.

Acceptable Pallet Styles

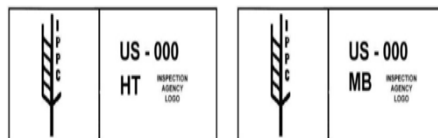


Figure 5: Acceptable Pallet Styles

[Click here](#) – Pallet Design Requirements (Pg 21 – 23)



- Stringer Style Pallet
- Max 3" spacing
- Minimum 1/2" thickness
- Minimum notched height of 2 1/2"



USA HT stamp example



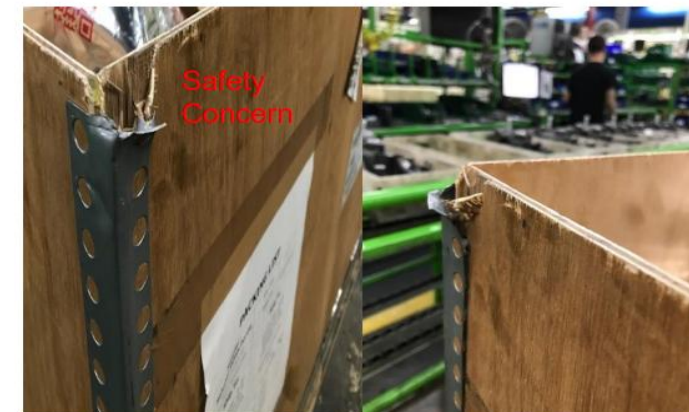
International HT stamp example

Prohibited package closure due to safety issues.

Metal Stitches, staples, Nailing and tongue-type fasteners or steel strapping.

Wooden Box/crate lids to be screwed.

[Click here](#) Package Closure (Pg 24)



Acceptable methods of closure - Adhesives, Sealing Tape, Polyester or Nylon Strapping

Unacceptable Pallet Styles



JVO Packaging – Dunnage, blocking, Bracing & Shipping label Requirements

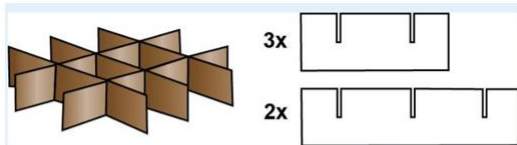
Recommendation –

Adding dunnage, cushioning, fill voids and lock the part in place to prevent / lessen the impact from over handling, heavy vibrations causing parts to shift or break out of the shipping box.

Blocking and Bracing are necessary steps to prevent damage during shipping, it secures and prevents the load from moving and reduces risk of damaged product.

Adding extra shrink wrap, helps hold boxes together, behave as one unit instead of many individual boxes.

Die Cut support pads, partitions , cushion, filling void space.



Inner Packing Pieces are scored and/or folded pieces of fiberboard used for cushioning, suspension and separation, and to fill voids.



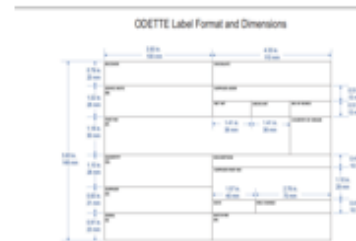
Inner Pack Forms are usually die cut fiberboard pieces designed to position and support products away from the walls of the box for added protection.



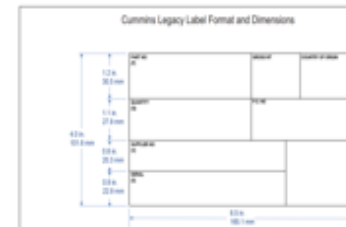
Bar Code Shipping / Part Identification labels affixed to each container



Bar Code Shipping/ Parts Identification labels
- The preferred CMI's labeling format is ODETTE or a AIAG B-3 format.



Cummins Rocky Mount Engine Plant		RL087	
1030046		123 Main St, Columbus, IN	
A053S716		330	350
1 EA		US	
481734		Charge Air Cooler	
100000012		45684231	
P190124		90004	



PART NO (P)	2942351	GROSS WT	23	COUNTRY OF ORIGIN	US
QUANTITY (Q)	1200 EA	P.O. NO	393946		
SUPPLIER NO (S)	16333	P.O. Release No.: 98712365			
SERIAL (R)	2349871236	R/L 031			
SUPPLIER NAME AND ADDRESS INFORMATION IN THIS LOCATION				PARTS LIST / ASSY	

[Click here](#) Bar Code Shipping/Parts/ Label Specifications (Pg 35 – 48)

JVO Packaging Requirements – Important Notes

[Click Here](#) 5. Packaging Requirements (Pg 14 – 26)

5.5. Sustainability and Environmental Impact

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

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

- **Single Face:** Combination of one fluted corrugating medium glued to one flat facing of linerboard.
- **Single Wall:** Two flat facings of linerboard, one glued to each side of a corrugated medium. Also known as Double Face.
- **Double Wall:** Three flat facings of linerboard, one glued to each side of two corrugated mediums.
- **Triple Wall:** Four flat facings of linerboard, one glued to each side of three corrugated mediums.

- Suppliers are responsible for reviewing and complying with all applicable requirements in the Cummins Global Packaging Standards (CMI Supplier Portal) under Training
- Final approval is based on the submitted and approved PDS by CM's receiving site Packaging Engineer Approval
- Use of these materials without documented approval may result in PDS rejection of packaging non-compliance.

Only heat-treated wood is acceptable.

This includes pallets, crates or dunnage that is solid wood and falls within the ISPM 15 guidelines. Only heat-treated wood is acceptable.

[Click here](#) (Pg 19 – 23)

Shipping labels should be affixed to each container identifying contents

Contact Packaging Representative for recommendation.

