



MAGNA

Forward. For all.

Sustainability Triangle for Packaging

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2025



\$42.8B In Sales

338 Manufacturing
Assembling Facilities

164,000+ Entrepreneurial Employees



#1 North America
Market Position

#3 Global
Market Position

AS OF Q2 2025

By the Numbers

Sustainability

Phyto Sanitation



**Returnable
Containers**

Packaging Recycling

Sensor Technology

Sustainability

Phyto Sanitation



Objective Of “SWPM” Regulations Under The “ISPM-15” Requirements

To STOP the introduction and spread of pests, mold, moths and seeds across international borders - that can hurt and wipe out our country's agricultural system!



What Is The Cost Of Non-compliance?

1. Shipment denied entry into importing country
2. All costs incurred in the disposition of the noncompliant SWPM
3. Customs issued penalties
4. Customs Targeting as exporter and/or importer
5. Destruction of the product on the SWPM
6. Customs Seizure of SWPM and/or product
7. Customer Increased Requirements
8. Customer Non-Conformance Record
9. Border Security Program Requirement



Issues

Turkey

Counterfeit Pallets and Solid Wood

- Stamp is on wood
- Heat treatment process not followed



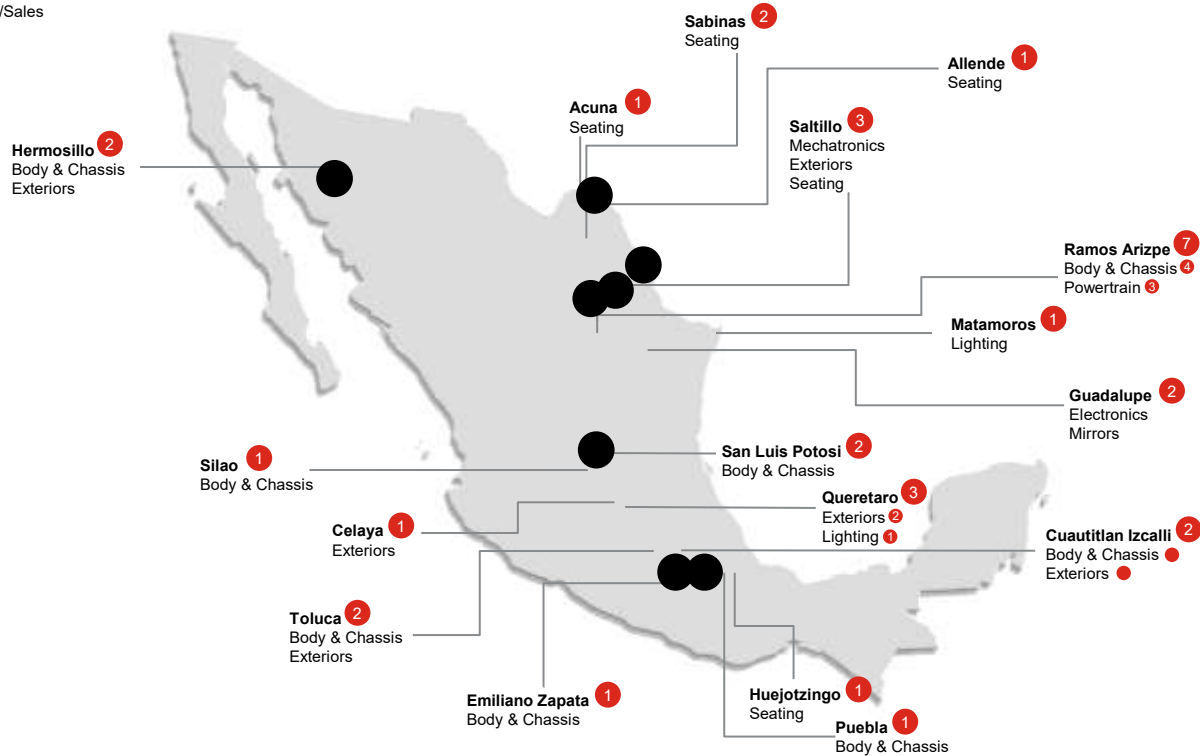
Magna in Mexico

North America, Mexico


Manufacturing – 33

- Manufacturing/Assembly
- ▲ Engineering/Product Development/Sales
- ★ In Progress Facility

● Approved Suppliers



Phyto Sanitation w/Script

	<p>Finally, it is important to recognize that our customers may have additional ISPM15 requirements over and above the published standards. For example, Ford does not allow used SWPM such as pallets to move their product across international borders.</p>
<p>Slide #8</p>  <p>What type of wood (SWPM) is regulated?</p> <p>NON PROCESSED WOOD or COMBINATION OF NON PROCESSED WOOD & PROCESSED WOOD</p> <ul style="list-style-type: none"> - Pallets - Bracing - Damage - Gases - Crating - Lash Boards - Spacers - Shims - Stow-tight wood (if not processed) - All wood or wood products used in supporting, protecting or carrying a good restricted of raw processed wood material <p>NOTE "Processed" wood is defined as wood products constructed using glue and heat (Examples: plywood, particle board, oriented strand board, Glue lam, veneer, etc.)</p> <p>MAGNA</p>	<p>What type of wood (SWPM) is regulated?</p> <p>The ISPM-15 standards apply to all non-processed wood or a combination of non-processed and processed wood.</p> <p>For example, (read some of the examples on the slide)</p> <p>In a nutshell it includes ALL wood and products used to support, protect or carry a good that is constructed of wood packaging material that is not processed.</p> <p>Processed wood is defined as wood products made using heat and glue. For <u>example</u> plywood, particle board etc.</p> <p>Some of our divisions will go to Home Depot or another lumber store to purchase wood products to make a pallet or box or use as bracing for a container or skid. The pallet or box in this case could not be used for shipping across international borders because it has not been certified under the ISPM-15 standards.</p> <p>ASK: Would there be an exception to this scenario?</p> <p>Answer:</p> <p>No - not if it is non processed wood or a combination of processed and non-processed wood. It is also important to know that just because you buy the wood in a Canadian or U.S. store it does not make it Canadian or U.S. originating.</p>
<p>Slide #9</p>	<p>Are there wood type exceptions to the requirements?</p> <p>Are there wood exceptions to the requirements? Yes, we talked about country</p>

Program Manager Training

Phyto Sanitation awareness training

PDP Updates

Phyto Sanitation requirements added to work packages

- MG-31 Inbound Logistics Plan
- MG-41 Outbound Logistics Plan
- MG-60 Service Parts Plan

Phyto Sanitation requirements to be added

- MG-22 Equipment and Tooling Approval at Supplier Location

MAGNA WP# MG-031 Revision 1.2 20 June 2024
Magna Global PDP - Work Packages
MG-031

Inbound Logistics Plan

Description

- Inbound Logistics Plan aligns Magna and the supplier
- A comprehensive Inbound plan that details the implementation and execution of the following:
 - Packaging Design
 - Packaging Procurement
 - Supplier Monitoring
 - Inbound Transportation
 - EDI/Releases
 - Supplier Specific Requirements

Inputs

- Packaging Design Inputs
- Magna Global Packaging Guidelines and Magna Group Specific guidelines
- Packaging Sustainability Guidelines
- Ergonomic Guidelines
- Phyto-sanitation Requirements
- Lean Manufacturing Guidelines
- Project Packaging Study
 - Estimate Piece Price
 - Expendable vs. Returnable fleet size
 - Packaging Test requirements
 - Packaging Density confirmation
- Determine sourcing and routings (truck, ship, small package...)
- Transit time, ship frequency, country of origin, harmonized code.
- Look at ergonomics to make sure it fits the production intent.
- Supplier Releases (Preliminary)
 - Notify suppliers of what we think the route is going to be.
- Supplier Releases (Required)
 - Implement the routings
- Remove safety stock, minimize obsolete (Required)
- Program volumes, shift schedule
- Current PFEF
- MSCM
- Preferred Supplier List (Component & Packaging)
- Current supplier delivery schedule, or future state assumptions
- Current Dock Capacity Analysis
- Current Truck Lane Utilization
- Existing Supplier EDI Set-Up

Outputs

- Inbound Logistics Plan for Transportation (packaging, delivery frequency, truck pack sizes, returnable vs. disposable, etc.)
- Plan For Every Part
- Ergonomic Study
 - Future State Dock Capacity Study
- Future State Truck Lane Utilization (New Lanes)
- Packaging Design Approval, and Sign-off (Inn. Packaging Engineer, Quality, Manufacturing Engineer)
 - Packaging Test Report
 - Line trial results (example: PTR)

RECOMMENDED DISCIPLINE	
Customer Management/Sales	
Finance	
Information Technology	
Logistics/Materials	
Manufacturing	
Product Engineering	
Program Management	
Purchasing	
Quality	

PHASE REQUIREMENTS	
0	Preliminary
1	Preliminary
2	Preliminary
3	Final
4	Update
5	Update
6	Update
7	Final
8	Not Required

Page 1 of 2

Supplier Training

Phyto Sanitation training for all production suppliers

- Using eRFx to communicate
- Rosters not required for all except Turkey



Sustainability

Sensor Technology




Sensor Technology in the North American Automotive Industry

The use of Returnable Transport Items (RTI) in the Automotive Industry continues to increase, and the cost of sensor technology (RFID, BLE, and LPWAN), and the required infrastructure, continues to decrease. This situation brings new opportunities to use this technology to gain valuable information about container counts and locations throughout the supply chain. Industry leaders have identified significant reasons for coordinating efforts regarding digitalizing individual containers and depositing data events at critical locations throughout the process. Users of these guidelines, such as service providers, Original Equipment Manufacturers (OEM), and Tiered Suppliers, can reduce costs and increase the visibility of returnable container systems to gain continuity of data across the North American Automotive Industry.

Tag

- Bar Code
- Passive RFID
- Active RFID
- Bluetooth BLE
- LPWAN

RFID Tag	RFID Antennae	RFID Handheld Scanner
 <p data-bbox="722 710 846 751">RFID Chip and Antennae</p>		
<ul style="list-style-type: none">• Self adhesive label contains "passive" RFID chip• Unique design for both plastic and steel packaging	<ul style="list-style-type: none">• sRFID – Unique Industrial Design• Proprietary Wave Antenna Array• Tag acquisition rates in excess of 99%	<ul style="list-style-type: none">• MC9190-Z (Preferred)• RFID tag activation process• Container inventory verification count (cycle count)• "Seek and Find" a specific container serial number• Asset history look-up• Connects to COS database through plant WLEI

Recommended Tracker Quantity

GPS, WiFi, Cellular

- Determine how many trackers are needed for the 1900 Specialized 241514
 - How many empty 241514 hand totes would usually be on an empty return shipment?
 - Assume an empty return ship would bring approximately 1/3 of a trailer (500 totes)
 - We want to find the number of trackers that are needed within the 1900 fleet to give us a 98.5% Probability that any 1/3 trailer (500 totes) picked at random will have at least 1 tracked tote in the 500 chosen totes.
 - % Individual Container Fleet Tracked = $1 - (1 - 0.985)^{(1 / 500)} = 0.836\%$
 - If the typical empty return quantity per shipment is lower than 500, you could increase the amount of trackers within the fleet, but we would recommend capping it somewhere around 30 trackers for this individual container type.
 - In the table below, 1900 is used as a fleet quantity for other rack/container sizes to demonstrate how tracking rate varies by size/cube fill.

Full Trailer QTY - 53' Dry Van	Example Container at Full Trailer QTY	% Fleet Tracked	Quantity of Containers	Trailer Loads of Cont/Racks	Trackers Needed	Trackers/ Trailer
40	Specialized Metal Racks	9.97%	1900	48	189	4
144	64" x 48" x 34"	2.87%	1900	13	55	4
208	48" x 45" x 34"	2.00%	1900	9	38	4
500 (~1/3 Trailer Empty Returns)	24" x 15" x 14"	0.84%	1900	4	16	4

Sustainability

Packaging Recycling

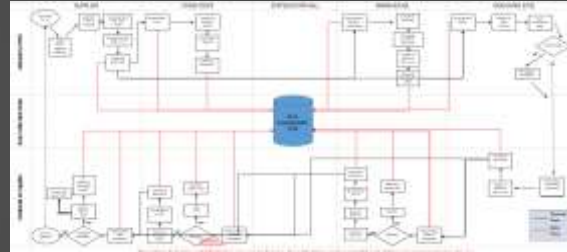


Table A. Directional Guidance on Ease of Visibly Recycling Common Automotive Packaging Designs in U.S. Region

The table displays 48 different automotive packaging designs arranged in a 6x8 grid. Each design is shown as a small image with a colored bar below it. The colors of the bars indicate the recycling guidance: green for 'Recycle', yellow for 'Recycle with Caution', and red for 'Do Not Recycle'. The designs include various types of boxes, bags, and containers used in automotive manufacturing.

Suppliers Partnership for the Environment

provides a leadership forum for global automakers and their suppliers to work together toward a shared vision of an automotive industry with **positive** environmental impact.



<https://www.supplierspartnership.org/sp-sustainable-packaging-work-group/>



SP Guidance: Automotive Packaging
Materials Collection & Handling Practices
July 2025



Material-Specific Handling & Collection Guidance

Handling recommendations are broken out by material type and facility volume. Recommendations reflect what are likely to be more effective and scalable methods for average automotive manufacturing, assembly and distribution sites based on industry experience, with color-coded container guidance and staging logistics. Please note additional recommendations can vary based on business, operational, and other needs at an individual site.

Plastics – Identifying Waste Volume & Collection Needs

Note: For certain materials like polyethylene, baling and densification serve different operational and financial purposes. **Baling** is generally more suitable for clean, thin-gauge flexible packaging and is favored by recyclers due to its uniformity and stackability. **Densification**, on the other hand, is used for bulky foams like EPE to reduce volume dramatically, enabling more cost-effective shipment. However, densified foam often has **lower recycling market value** than clean, baled film and may limit downstream applications. Choose the method based on available infrastructure, volume, and end-market requirements.

Material	Volume Tier	Handling Suggestions
HDPE Polybags	Low (<500 lbs/wk)	Collect in color-coded brutes or gaylords labeled "HDPE Only." Store indoors.
	Medium (500-2,000 lbs/wk)	Collect in same containers. Stage dockside or bale if possible.
	High (>2,000 lbs/wk)	Bale onsite. Stage trailer for recurring pickup. Separate dirty vs. clean.
LDPE/LDPE, Clean VCI, Bubble Wrap, Stretch Film	Low (<500 lbs/wk)	Some as HDPE; emphasize contamination-free sorting.
	Medium (500-2,000 lbs/wk)	Bale if possible or consolidate gaylords for live load.
	High (>2,000 lbs/wk)	Bale by type (VCI, printed/unprinted). Maximize trailer weight via compaction.
EPP & EPE Foam	Low (<100 lbs/wk)	Stack in labeled bins or on pallets. Keep dry. Stage on pallets dockside for trailer live load.
	Medium (100-500 lbs/wk)	Palletize, stretch wrap. Consolidate for live load.
	High (>500 lbs/wk)	Density if available. If not, palletize and stage on trailer. Densified tends to generate more revenue per load.
Polypropylene/Polyester Fabric Bags	Low (<250 lbs/mo)	Collect in labeled gaylords/bins; not worth baling—store and reuse if possible.
	Medium (250-1,000 lbs/mo)	Baling may be justified if storage space is tight or shipping consolidation is needed. Consider outsourcing baling if no onsite equipment.
	High (>1,000 lbs/mo)	Bale and stage dockside or on trailer for live-load.

https://www.supplierspartnership.org/resources/Automotive_Materials_Collection-July2025Final.pdf

Automotive NA 48x45 Wood Stringer Pallet

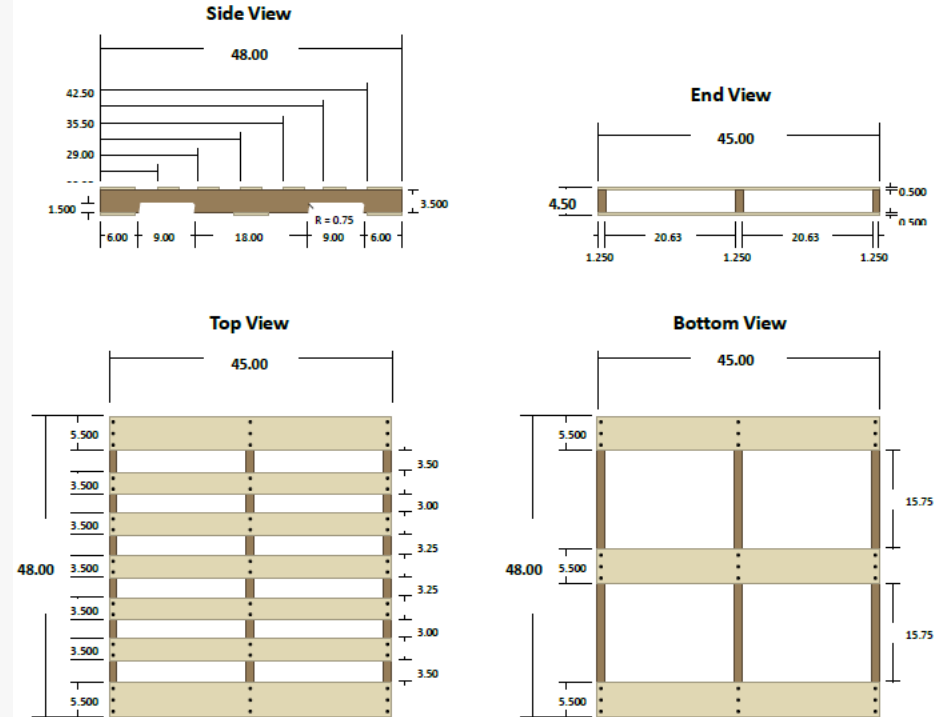
Voluntary Industry-developed
Recommendations

<https://www.supplierspartnership.org/48x45-stringer/>



II. Automotive NA 48 x 45 Wood Stringer Pallet Drawing

All dimensions in inches



Sustainability

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**Returnable
Containers**

Packaging Recycling

Sensor Technology

A silhouette of a man stands on the left, looking towards a car on the right. The car's rear light bar is illuminated with a red glow. The background is a sunset sky with a large, light gray arrow pointing right. The text "Forward. For all." is centered in the upper half of the image.

Forward.
For all.