

Packaging and Labeling Requirements

PURPOSE:

This guide covers the packaging, shipping and labeling of parts, assemblies and materials supplied into Toro Manufacturing plants and Toro Distribution Centers (DC). Toro has multiple manufacturing locations and distribution centers for complete products and also one main DC for replacement parts and materials for worldwide parts distribution in Plymouth Wisconsin. The packaging requirements for ALL are critical to Toro and our customers. Not following these guidelines can result in QN's (Quality Notifications) and impact your supplier performance rating.

In today's global marketplace, customers have a very high expectation and demand for the product(s) they purchase. Each year, the loyalty of these customers is being contested and the competition for this loyalty is amplified daily. For Toro to continue to be an industry leader, meet the value and quality required for our customers and overshoot the competition, we need you, as a supplier, to abide by these requirements. YOU play an important role in Toro's ability to assure that the part or product meets the end customer with the same quality it had on the day it left your facility as well as our Toro facilities.

Product transportation and protection is integral to the success of any business. Improper packaging can lead to costly problems and loss of customers. Ultimately, Toro needs you to emulate the packaging stated in this guide to maintain our commitment to quality and continuous improvement.

General packaging requirements are critical for everyone in order to realize acceptable shipping performance, efficient processes, minimal waste, safe inventory practices and optimal transportation costs. It is unacceptable for the Supplier to present packaging solutions that do not perform to these expectations.

Packaging and Labeling Requirements

SCOPE:

As an approved Toro Supplier, please review the following “facility-based” packaging and labeling requirements to determine the section below (A, B or C) which best fits you as a supplier to Toro. Some packaging and labeling requirements vary based on the “TYPE” of Toro facility you supply: Manufacturing Plant, Replacement Parts Distribution Center or Complete Product Distribution Center.

A. MANUFACTURING PLANT

You are a supplier of parts and materials into a Toro MANUFACTURING PLANT.

*Refer to pages 4-16.

B. REPLACEMENT “PARTS” DISTRIBUTION CENTER

You are a supplier of replacement service parts or materials into the Toro worldwide DC (Distribution Center) in Plymouth Wisconsin.

*Refer to pages 17-28.

C. “COMPLETE PRODUCT” DISTRIBUTION CENTER

You are a supplier of a complete PRODUCT, ACCESSORY or ATTACHMENT into a Toro DC (Distribution Center).

*Refer to pages 29-36.

Packaging and Labeling Requirements

TABLE OF CONTENTS

A	Manufacturing Plant
A.1	Quoting and Packaging
A.2	Primary Packaging
A.3	Secondary Packaging-Pallets
A.4	Other Packaging Requirements
A.5	Returnable Packaging
A.6	Export Packaging
A.7	Hazardous Material
A.7.1	ESD Sensitive Components
A.8	Glass
A.9	Labeling
B	Distribution Center - Replacement Parts/Materials
B.1	Quoting and Packaging
B.2	Primary Packaging
B.3	Secondary Packaging-Pallets
B.4	Other Packaging Requirements
B.5	Export Packaging
B.6	Hazardous Material
B.7	Glass
B.7.1	ESD Sensitive Components
B.8	Returnable Packaging
B.9	Labeling
C	Distribution Center – Complete Product, Accessory or Attachment
C.1	Quoting and Packaging
C.2	Primary Packaging
C.3	Secondary Packaging-Pallets
C.4	Other Packaging Requirements
C.5	Export Packaging
C.6	Hazardous Material
C.7	Glass
C.8	Labeling

Packaging and Labeling Requirements

A. MANUFACTURING PLANT – Supplying a Toro Manufacturing Plant

Toro expects suppliers to respect the requests of individual plant representatives if they have specific needs for pallet/box sizes, box quantities, safety, cleanliness, weight restrictions, etc.

A.1 QUOTING AND PACKAGING

- Toro utilizes both disposable and returnable packaging. The decision to use returnable packaging is based upon a total cost impact study calculated by the Toro Packaging Engineer and the Sourcing teams.
- Upon request, the Supplier is required to submit a disposable packaging solution to the Toro sourcing contact at the time of quote.
- It is expected that the disposable packaging developed by the supplier, for quoting purposes, is compliant with all Toro Packaging requirements.

Supplier Responsibilities

- The Supplier must submit a packaging cost per part at the time of quote.
- The Supplier is responsible for all design, development and procurement of disposable packaging.
 - When disposable packaging is utilized, the Supplier is responsible for maintaining part quality throughout the entire supply chain process including warehousing, transportation, safety, cleanliness and material handling.
 - Disposable packaging designs must focus on right-sizing the packaging to maximize shipping density, minimize material and labor waste at the plant, and ensure the products are adequately protected.
- When returnable packaging is utilized, the Supplier is responsible to develop and maintain a disposable packaging backup option to maintain continuity of shipments in the event of a disruption of returnable packaging supply.
- Backup disposable packaging must equally match the standard pack quantity and shipping density as the primary returnable packaging unless permission otherwise is given by Toro.
- Suppliers may contact their Toro Packaging Engineer representative for any assistance needed to ensure standards are being met.
- The supplier must inform their Toro sourcing contact about ANY packaging deviations or changes from the approved production packaging for individual or bulk packed items.
- Costs incurred by Toro to resolve supplier packaging issues or excessive damage claims associated with the non-compliance to the requirements will be the responsibility of the supplier including cost of goods sold, transportation expense and material costs tied to the repackaging of product to meet Toro specifications.

Toro Responsibilities

- Toro is responsible for the analysis to determine if returnable packaging represents the best total cost decision.
- If returnable packaging is determined to be a good option, Toro will work with the supplier and Toro Mfg. to design, develop and procure the supply of returnable containers.
- Toro will provide Returnable Packaging specifications as necessary.
- As required, Toro may request first article review of any proposed packaging design.
- Toro manufacturing will continually monitor supplier packaging effectiveness. Improvements or changes deemed necessary by The Toro Company will be communicated to the supplier.

Packaging and Labeling Requirements


A.2 PRIMARY PACKAGING

Container Selection/Carton Closure

- Easy-open carton styles are preferred.
- Tape or plastic banding are the preferable closure methods.
- Staples should be avoided and used only when absolutely necessary.
- Balance weight distribution inside the package for optimal performance in order replenishment, shipping and handling.

Product Weight Considerations for Package Design

- When developing the package size, consider the ergonomics of handling large, awkward, and/or heavy products by following the guidelines listed below:

Package Weight or Size	Lifting Safety Symbol	Handles/Hand Holes	Description
0 – 24 lbs.	NONE	NONE	Standard Package - 1 Person Lift Package handling is not likely to cause harm during normal operations
25 - 35 lbs.	 25 - 35 lbs. (12 - 16 kg)	TWO	Heavy or Awkward Package – 1 Person Lift Applied when the package is in the range of 25-35 lbs. The package should have two handles or hand holes to make it easier for lifting/carrying.
36 - 70 lbs.	 36 - 70 lbs. (16 - 32 kg)	TWO-FOUR	Large Heavy Package – 2 Person Lift Applied when the package is in the range of 36-70 lbs. The package should have handles or hand holes at each end to make it easier for lifting/carrying.
>70 lbs. or conveyed by pallet	 over 70 lbs. (32 kg)	NONE	Very Heavy Package - Mechanical Lift Only Applied when the package exceeds 70 lbs. or is such a size as to be conveyed on a pallet.

Mixed Parts & Containers

- The mixing of different parts within the same container is prohibited unless authorized by Toro (kitting of parts, etc.).
- The mixing of containers of different parts on a pallet is permitted as long as they are for the same final destination and labeled as required in the labeling section.
- If involved with mixing part containers on a pallet, consider using modular container sizes to support secure and stable unitization.
- The mixing of manually handled, and non-manually handled containers on the same pallet is prohibited for the safety of the receiving dock material handler.

Packaging and Labeling Requirements

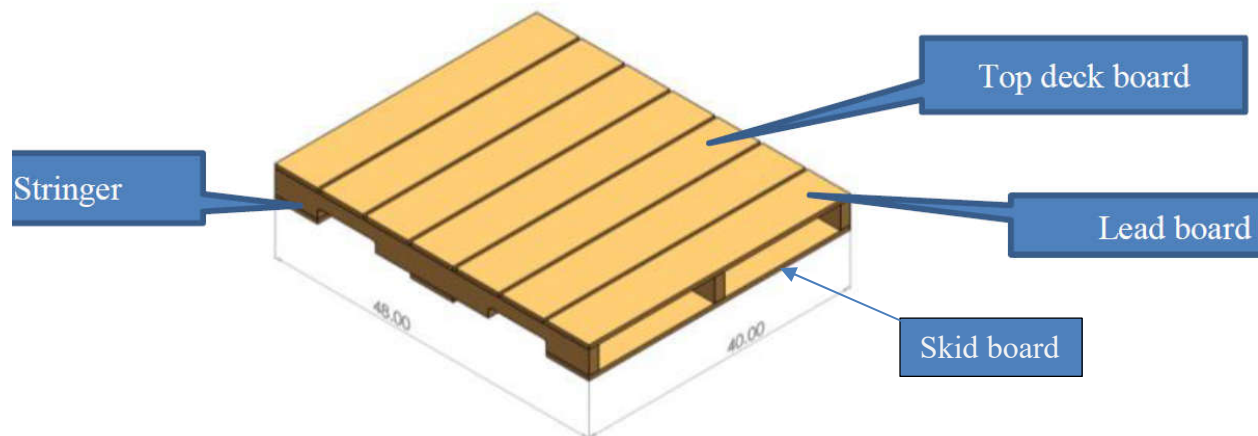
A.3 SECONDARY PACKAGING – PALLETS

Pallet Selection

- Toro requests that Suppliers adhere to a limited number of standardized pallet sizes (when possible) to support the effective utilization of trailers and shipping containers. The following pallet sizes (in order of preference) are what Toro defines as “standard”:
 - 48” x 40” • 48” x 45” • 32” x 30” • 57” x 45” • 67” x 45” • 78” x 45”
- Pallet size should be selected based on how well the product will utilize its surface area. The top surface of the shipping handling unit is expected to serve as a solid base for stacking additional product.

Pallet Construction and Quality:

- ALL pallets must be ISPM certified and marked accordingly. **No exceptions.** See F-102 Toro Wood Packaging Material Quality Standard for more information.
- GMA style 4 way entry pallets are preferred. See below.

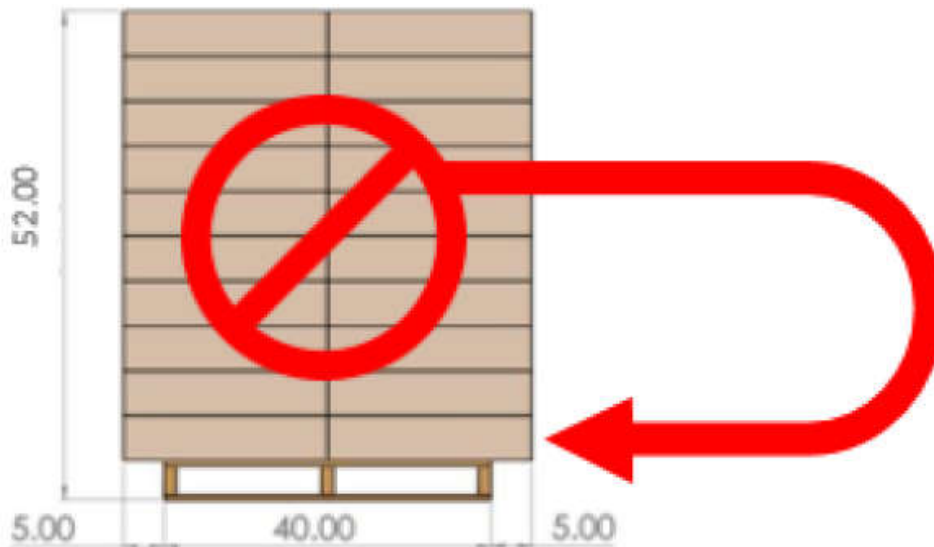


- Stringers are preferred to be flush style as shown above, where top lead (deck) board is flush with the edge of the stringer.
- Minimum stringer height is 3.50”.
- Skid boards are required and must provide a safe and stable means of multiple “floor- stacking” of pallet load bundles in inventory.
- Maximum deck board spacing (between deck boards) is 3.50” (unless custom-designed for a specific product).
- Minimum notch height (including the bottom skid board is 2.00”).
- Re-use of pallets is permitted only if there are no missing, damaged or repaired boards.

Packaging and Labeling Requirements

Pallet Unitization (Creating Pallet Loads)

- Balance weight distribution left to right on each pallet to maintain safe lifting. In addition, stack heavier items on the bottom of the pallet and lighter items on the top.
- Containers must be stacked and secured to the pallet to form a sturdy handling unit
- No product overhang allowed. When creating pallet loads, product overhanging any edge of the pallet is prohibited. See below.

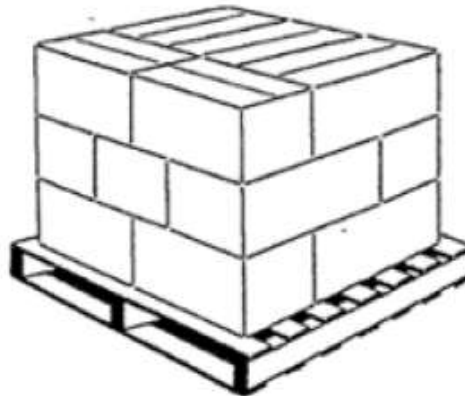


- Pallet height. The preferred pallet height (including pallet) MUST not exceed 52". The 52" height still allows double stacking of pallets for efficient shipping density and DC racking.
- When creating pallet loads, the preferred method is **column stacking**. Column stacking method may require additional layers of stretch-wrap for improved load security. See below.



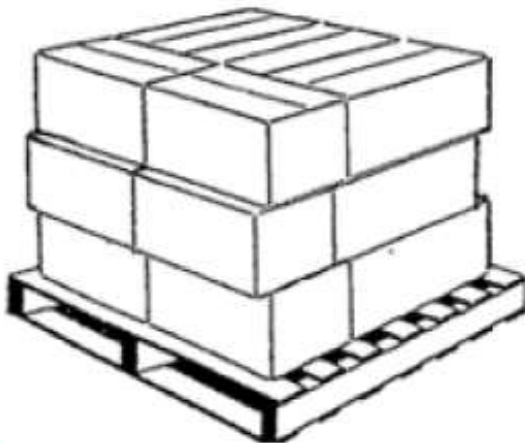
Packaging and Labeling Requirements

- The Interlock (brick) stacking method is known to reduce structural integrity of expendable containers. This load configuration can be used when the packaging system was designed to handle the compromised stacking pattern. See below.

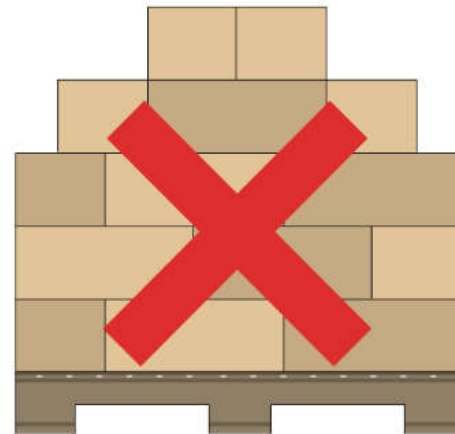


Interlock (brick) stacking

- Misaligned and Pyramid stacking of product is prohibited. See examples below.



Misaligned stacking



Pyramid stacking

- Securing pallet loads. Stretch-wrap (LLDPE clear in color) or plastic banding should be used to secure the product load to the pallet. Stretch film must have enough clarity to enable bar code scanning of labels. Prohibited materials for securing loads to pallets: nails, screws, metal staples, metal strapping, metal clips, banding buckles, glue or PVC film.
- Less than a 2.00" of gap between the edge of the pallet and the package on any side is ideal to ensure that the top package layer provides an adequate stackable and stable surface.
- The use of any non-standard pallet size will be permitted only for awkward, long, tall or oversized product. The packaging concept and quoted cost must be approved by the Toro sourcing contact or department.

Packaging and Labeling Requirements

Minimum Standards for Shipping Performance

- Product packaging must be stackable during transport and for the purpose of inventory.
- Unit loads (pallet loads) must be able to endure floor stacking of units 3-high in warehouse conditions.
- Avoid full-pallet or crate heights over 52" (for domestic trailer shipments). **Ideally, if product will ship internationally, do not exceed pallet load or crate height of 50"**. Shipping heights exceeding 50" can limit stacking at the tail end of export containers due to a minimum door opening height of 101".

A.4 OTHER PACKAGING REQUIREMENTS

Corrosion/Rust Prevention

- The Supplier is responsible for adding Volatile Corrosion Inhibitors (VCI) where necessary to ensure product integrity through changing environmental conditions all the way to final delivery.
- If VCI coatings are used directly on the product, it is the responsibility of the Supplier to ensure materials used do not interfere with the Toro manufacturing process, including washings and coatings, and that they do not introduce any chemicals that prevent global shipment of the Toro products.

A.5 RETURNABLE PACKAGING

- When returnable packaging is used, Toro will work jointly as necessary with the supplier to develop the returnable packaging materials including trial shipments. For Toro-owned materials, the engineering documentation drawings will include reference to all required returnable packaging specifications and quantity per container information.
- Toro will utilize supplier-owned returnable packaging. Any cost for use of supplier-owned returnable packaging must be included on the quote for that part or assembly as stated in section A.1 of this document.
- When returnable packaging is implemented, the Supplier is responsible to maintain a backup supply of expendable packaging at all times to provide continuity of shipments in the event of a supply disruption.
- The Supplier is responsible to develop the expendable backup packaging so that it matches the standard order quantities and shipping configuration of the returnable.
- The Supplier must never ship product in damaged returnable containers if there is a potential for quality or safety issues.
- Returnable containers are never to be shared with sub-tier suppliers, used on accounts other than Toro, or for in-house storage of WIP inventory or for **prototype parts shipments into any Toro facility**. Returnable containers are to be used between the product supplier and the intended Toro plant(s) only.
- The Supplier must agree to store returnable containers at their facility when not in use.
- The supplier must always store returnable containers in a clean, dry area (within reason).
- The supplier must immediately notify their Toro manufacturing or sourcing contact when:
 - Containers are damaged or unusable
 - Containers were returned filled with debris
 - Containers were returned with product still inside
 - Containers are returned with labels for another supplier
 - Containers have missing or peeling identification labels

Packaging and Labeling Requirements

- Containers are not being returned frequently enough

A.6 EXPORT PACKAGING

Scope

The Export Packaging is intended for development of packaging that will be shipped across international borders. Suppliers developing export packaging are expected to comply with all previous packaging requirements. The Export Packaging Supplement guidelines are additional and, in the event of a conflict, supersede the non-export version of the guideline.

ISPM-15 Compliance

- Only ISPM-15 compliant or exempt packaging materials are to be used for export packaging.
- Proper wood material markings must be stamped on all wood packaging materials per the ISPM-15 requirements and the Toro Wood Packaging Material Quality Standard F-102.

Part Containers

- All materials must be fully enclosed and stackable top, cover or lid.

Pallets and Crates

- Pallet and crate sizes of 48" x 45" or smaller are preferred.
- Pallets and crates need to support optimal loading side-by-side in a standard ocean shipping container.
- Pallet loads and crate height should not exceed 50".

Pallet Unitization

- All packaging must be able to withstand stacking that fully utilizes the height of a standard ocean shipping container.
- Packaging must be developed to endure stacking with other product that may occur during the freight consolidation process.

Order Multiple

- Pallets should always be shipped full for optimal utilization and shipping costs.

Labeling Supplement Guideline for Exports

- Country of Origin must be printed on the container label.

A.7 HAZARDOUS MATERIAL

- The supplier is responsible for compliance with all regulations – local, state and federal – pertaining to dangerous, hazardous and /or toxic material packaging.
- The supplier is responsible for informing Toro sourcing of any packaging that contains materials that may render the packaging “hazardous” as defined by the laws of the country or countries where the packaging is used.
- The supplier is required to provide SDS (Safety Data Sheets) to the shipping and receiving location’s Environmental Health & Safety department.

Packaging and Labeling Requirements

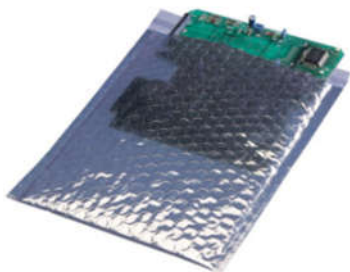
A.7.1 ESD SENSITIVE COMPONENTS

Bare PCB's (Printed Circuit Boards)

- The packaging of "Bare" PCB's (Printed Circuit Boards) must meet the **IPC-1601** Printed Board Handling and Storage Guidelines.
- Each bag should have a label with a part number, rev level and serial number.

PCBA's (Printed Circuit Board Assemblies) & other components sensitive to ESD

- Minimum packaging standards for shipment of ESD sensitive components into non-EPA Electrostatic Protected Areas at Toro.
- Each component to be packaged into a Silver or Black Metallized Bubble Shielding Bag or Envelope. Each bag must have ANSI approved ESD awareness symbol and markings.
- Minimum bubble size is 3/16".
- Bag closure must have either a self-sealed or zip-lock feature.
- Each bag should have a label with a part number, rev level and serial number.



Bubble Shielding Bag
or Envelope

- The preferred packaging method is a master shipping carton with dividers and individual "cells" for each printed board assembly as shown below.
- For labeling on the carton, see section "A.9 Labeling".



Master carton with individual
cells for each component.

Electronic Assemblies with Exposed Connector Pins:

- Any electronic product that houses an electronic assembly with exposed connector pins will have ESD protection. The protection required will be an ESD connector cover or black conductive foam. The ESD connector cover will protect against ESD, protect pins from bending, and keep foreign material out of the connector body.

The use of Low Charging (Antistatic) PINK ESD Bubble Material does **NOT meet the minimum packaging standards for the shipment of sensitive ESD components into non-EPA (Electrostatic Protected Areas).*

Packaging and Labeling Requirements

A.8 GLASS

- Product should never ship in packaging with glass-on-glass contact. Partitions or fillers are required for this type of packaging application.
- Partitions and layer barriers should be manufactured of materials capable of protecting the product from impact damage during normal handling and transportation.
- The package should be designed to protect this type of product from impact and handling damage in Full Truckload environments.
- Glass product should be packaged so they will not break and create a safety hazard during storage, shipment preparation or transportation into The Toro Company.
- Wood packaging containing glass must be designed to unpack and access the parts without having to remove nails or staples. Deck screws with a Phillips or square drive head fasteners are recommended for boards or materials meant to restrain glass panels or parts.
- Packaging containing fragile product should be clearly marked in a minimum of two places (largest package face) with a graphic icon depicting the fragility of the product. See the “Fragile Graphic” for glass below.



Fragile Graphic

A.9 LABELING

Scope

To provide the minimum acceptable label requirements for the identification of the delivered parts. The data on the label ties the contents of the shipment to the electronic Advanced Shipment Notice (ASN), thus enabling an efficient receiving process. There are three label types: **Container Label, Master Label, and Mixed Load Label**

1. **Container Label:** Used to identify each single container/unit holding identical parts, from the same purchase order and the same packing list numbers.
2. **Master Label:** Used to identify the total contents of a multiple single pack load holding identical parts, from the same purchase order and the same packing list numbers. This label contains advanced shipping notice information to allow Toro to track shipments.
3. **Mixed Master Label:** Used to identify a load of multiple single packs of different part numbers on the same advanced shipping notice and packing list.

Container Label: Size and Material

- Each parts container label must be a minimum of 4” x 6” in size.
- Each container must have part labels visible and affixed onto two adjacent faces of the article.
- If printing one longer label with duplicate information (a wrap-around corner label), one label is sufficient but must be visible on two faces of the article. See label location image on page 14.


Packaging and Labeling Requirements

- In no case shall the label be larger than the flat surface onto which it is placed with all data readable when container is placed on pallet. This becomes especially critical when using returnable totes or containers.
- The label paper shall be white in color with black printing.
- The adhesives used for labels on returnable containers shall be a removable type pressure sensitive elastomer. The adhesive should have a moderately high initial tack, high level of ultimate adhesive and clean removability.
- The adhesives used for labels on expendable containers may be pressure sensitive or dry gummed as long as adherence to the package substrate is assured and application is wrinkle free.

Container Label: Required ID Label Fields

- A. Toro Part Number (Code 39 bar code), Part Description, Supplier Date Code, Quantity.
IMPORTANT The PN field of the barcode will NOT scan without asterisks. The scannable PN field **MUST** include one asterisk * at the beginning of the PN as a "start" character and one asterisk * at the end as a "stop" character. The asterisks must not show in the printed human readable PN nor when scanned. Both asterisk characters must be "stripped" when created and configured.
- B. Serial Number(s) or Lot number as required
- C. 10 Digit Toro Purchase Order or Scheduling Agreement number
- D. Country of Origin: if exported to Toro location
- E. Weight and Dimensions (Length x Width x Height)

Container Label Sample (4" x 6" minimum)

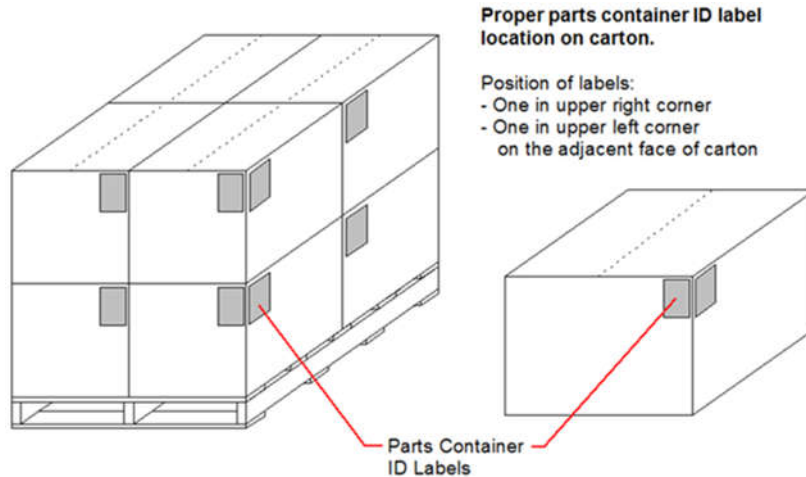
TORO PART #: 122-0138-B				A	
DESCRIPTION: ENGINE [120V, ALT] DATE CODE: 0422020 QUANTITY: 4					
SERIAL NUMBER(S):		B	PO #: 5500455483		C
555123 555124 555125 555126					
COUNTRY OF ORIGIN:		D	WEIGHT: 400 lbs. DIMS (L x W x H): 48 in x 40 in x 52 in		E

Packaging and Labeling Requirements

Container Label: Location

Each carton must have two identification labels (applied as shown below).

It is acceptable to apply one longer wrap-around duplicate information label from the upper right hand corner of each carton and around to the adjacent face of each carton.

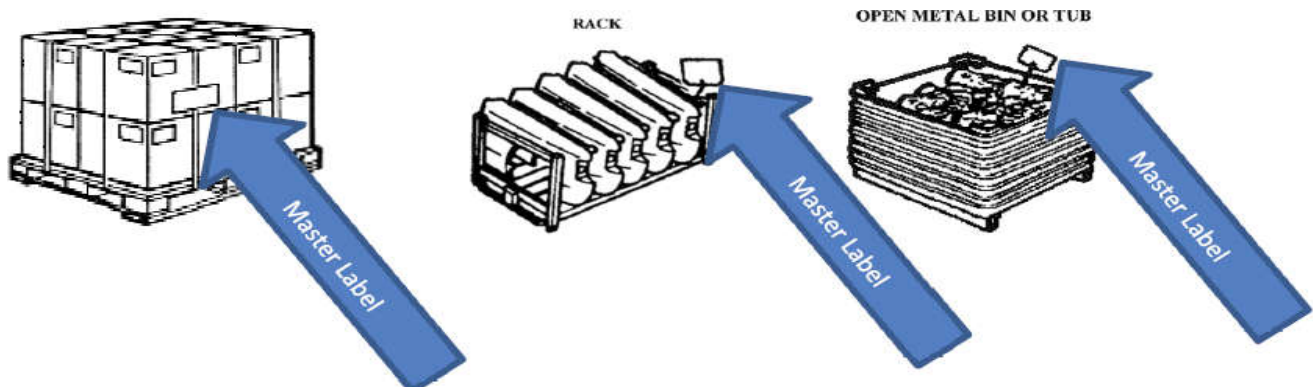


Hang Tags (for use on large non-stackable palletized parts)

- If used, the hang tag size should be a minimum of 3 x 6" in size, include a reinforced eyelet and light wire for ease of fastening to the part or container.
- The tag should be durable enough to withstand shipment and to assure readability at its destination.
- It is acceptable for an identification label to be affixed to the hang tag for the purpose of identification.

Master Label

A Master Shipping Label shall be used to identify the total contents of a multiple single pack load of the same part number. The label shall be placed on the unit load such that when the unit load is broken apart, the label is discarded (ex: affix Master Label to the outside of the stretch wrap). **One Master Label per individual part number on the pallet is required.** A sample Master Label is shown on the next page.





Packaging and Labeling Requirements

Master Label on Stretch Film

When a unit load is stretch wrapped, a Master Label shall be adhered to the outside of the stretch film, visible to the operators and readable for barcode scanning. This label is required for all stretch wrapped unit loads of single or multiple packs. This label may be removed with the stretch film making individual container labeling necessary. One Master Label per unique part number is required.

Required Master Label Fields

Note: Shown are the minimal barcode requirements. Barcodes must use **Code 39** bar code symbology as the standard.

FROM: NAME STREET ADDRESS CITY, STATE ZIP CODE	TO: NAME BUILDING, RECEIVING LOCATION STREET ADDRESS CITY, STATE ZIP CODE
CARRIER INFO: ABC FREIGHT SCAC: ABCF PRO: PRO TEST 0000 B/L: 7747555 WEIGHT: DIMS (L x W x H): 48 in x 40 in x 52 in	
PO #: 5500001222	PART #: 123-4567 Rev A  DESCRIPTION: DATE CODE: QUANTITY: 50
PALLET NUMBER: 1 OF 1	SERIAL NUMBER(S):
ADVANCED SHIPPING NOTIFICATION NUMBER: 11368900 	


- A. Ship From Name and Address
- B. Ship to Toro Plant or DC and Address (should include the plant receiving location)
- C. Carrier Information: Carrier Name, SCAC Code, Bill of Lading, and PRO # (if available) and Dimensions (Length x Width x Height)
- D. 10 Digit Toro Purchase Order Number
- E. Toro Part Number (Code 39 bar code), Part Description, Supplier Date Code, Quantity
IMPORTANT The PN field of the barcode will NOT scan without asterisks. The scannable PN field **MUST** include one asterisk * at the beginning of the PN as a "start" character and one asterisk * at the end as a "stop" character. The asterisks must not show in the printed human readable PN nor when scanned. Both asterisk characters must be "stripped" when created and configured.
- F. Pallet Number (1 of X)
- G. Serial Number(s) as required
- H. ASN (Code 39 bar code)

Packaging and Labeling Requirements

Mixed Master Label

Used on each pallet (or each bundle) holding multiple part numbers on the same advanced shipping notice and packing list. The label shall be placed on the unit load such that when the unit load is broken apart, the label is discarded (ex: affix Master Label to the outside of the stretch wrap). **One Mixed Master Label per individual pallet is required.** A sample Master Label is shown below:

Mixed Master Label Sample (4" x 6")

FROM: NAME STREET ADDRESS CITY, STATE ZIP CODE	TO: NAME BUILDING, RECEIVING LOCATION STREET ADDRESS CITY, STATE ZIP CODE
CARRIER INFO: ABC FREIGHT SCAC: ABCF PRO: PRO TEST 0000 B/L: 7747555 WEIGHT: DIMS (L x W x H): 48 in x 40 in x 52 in	
PO #: 5500001222	PART #: MIXED DATE CODE: QUANTITY: 50
PALLET NUMBER: 1 OF X	SERIAL NUMBER(S):
ADVANCED SHIPPING NOTIFICATION NUMBER: 	

Required Mixed Part Master Shipping Label Fields

Note: Shown are the minimal barcode requirements. Barcodes must use **Code 39** bar code symbology as the standard.

- A. Ship From Name and Address
- B. Ship to Toro Plant or DC and Address (should include the plant receiving location)
- C. Carrier Information: Carrier Name, SCAC Code, Bill of Lading, and PRO # (if available) and Dimensions (Length x Width x Height)
- D. 10 Digit Toro Purchase Order Number
- E. MIXED, Quantity
- F. Pallet Number (1 of X)
- G. Serial Number(s) as required
- H. ASN (Code 39 bar code)

Packaging and Labeling Requirements

B. DISTRIBUTION CENTER - Replacement Parts/Materials

B.1 QUOTING AND PACKAGING

- Upon request, the Supplier is required to submit a disposable packaging solution to the Toro sourcing contact at the time of quote.
- Each part or assembly MUST be individually packaged. Small parts under .50 lbs. each may be supplied in a poly bag or padded envelope as the primary packaging inside a master carton. Parts over .50 lbs. MUST, at a minimum, each be packed in an individual carton to allow Toro to re-ship individually in the same package.
- It is expected that the disposable packaging developed by the supplier, for quoting purposes, is compliant with all Toro Packaging requirements.

Supplier Responsibilities

- The Supplier must submit a packaging cost per part at the time of quote.
- Toro may require the product to be shipped in plain, unbranded packaging. If so, this will be specified in the part drawing.
- The Supplier is responsible for all design, development and procurement of disposable packaging.
 - Supplier is responsible for maintaining the product/part quality throughout the entire supply chain process including warehousing, transportation, and material handling.
- When designing the package, take into account Toro may re-ship your product outbound using parcel shipping environments such as UPS. The supplier is responsible for product protection in this shipping environment.
- Suppliers may contact their Toro Packaging Engineer representative for any assistance needed to ensure standards are being met.
- The supplier must inform their Toro sourcing contact about ANY packaging deviations or changes from the approved production packaging for individual or bulk packed items.
- Costs incurred by Toro to resolve supplier packaging issues or excessive damage claims associated with the non-compliance to the requirements will be the responsibility of the supplier including cost of goods sold, transportation expense and material costs tied to the repackaging of product to meet Toro specifications.

Toro Responsibilities

- As required, Toro may request first article review of any proposed packaging design.

B.2 PRIMARY PACKAGING




Container Selection/Carton Closure

- Easy-open bags (zip-lock style) and carton styles are preferred.
- Tape or banding are the preferable closure methods for cartons.
- Staples should be avoided, used only when absolutely necessary.
- Balance weight distribution inside the package for optimal performance in order replenishment, shipping and handling.

Packaging and Labeling Requirements

Product Weight Considerations for Container Design

- When developing the container size, consider the ergonomics of handling large, awkward, and/or heavy products by following the guidelines listed below:

Package Weight or Size	Lifting Safety Symbol	Handles/Hand Holes	Description
0 – 24 lbs.	NONE	NONE	Standard Package - 1 Person Lift Package handling is not likely to cause harm during normal operations
24 - 40 lbs.	 25 - 35 lbs. (12 - 16 kg)	TWO	Heavy or Awkward Package – 1 Person Lift Applied when the package is in the range of 25-40 lbs. The package should have two handles or hand holes to make it easier for lifting/carrying.
41 - 70 lbs.	 36 - 70 lbs. (16 - 32 kg)	TWO-FOUR	Large Heavy Package – 2 Person Lift Applied when the package is in the range of 41-70 lbs. The package should have handles or hand holes at each end to make it easier for lifting/carrying.
>70 lbs. or conveyed by pallet	 over 70 lbs. (32 kg)	NONE	Very Heavy Package - Mechanical Lift Only Applied when the package exceeds 70 lbs. or is such a size as to be conveyed on a pallet.

Mixed Parts & Containers

- The mixing of different parts within the same container is prohibited unless authorized by Toro (kitting of parts, etc.).
- The mixing of containers of different parts on a pallet is permitted as long as they are for the same final destination and labeled as required in the labeling section.
- If involved with mixing part containers on a pallet, consider using modular container sizes to support secure and stable unitization.
- The mixing of manually handled, and non-manually handled containers on the same pallet is prohibited for the safety of the receiving dock material handler.

B.3 SECONDARY PACKAGING – PALLETS

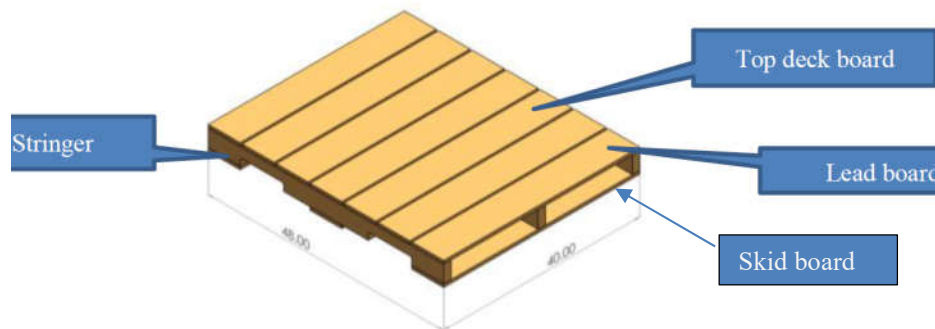
Pallet Selection

- Toro requests that Suppliers adhere to a limited number of standardized pallet sizes (when possible) to support the effective utilization of trailers and shipping containers. The following pallet sizes (in order of preference) are what Toro defines as “standard”:
- 48” x 40” • 48” x 45” • 32” x 30” • 57” x 45” • 67” x 45” • 78” x 45”
- Pallet size should be selected based on how well the product will utilize its surface area. The top surface of the shipping handling unit is expected to serve as a solid base for stacking additional product.

Packaging and Labeling Requirements

Pallet Construction and Quality:

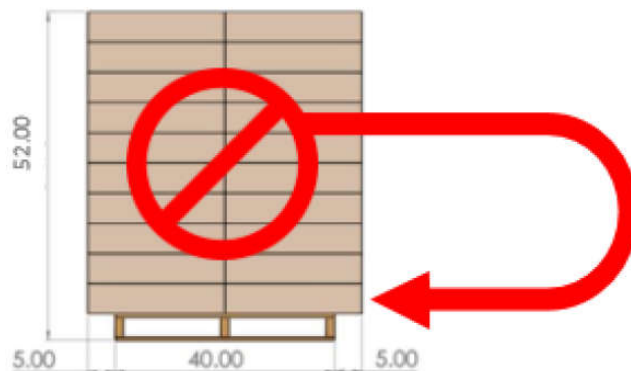
- ALL pallets must be ISPM certified and marked accordingly. **No exceptions.** See F-102 Toro Wood Packaging Material Quality Standard for more information.
- GMA style 4 way entry pallets are preferred. See below.



- Stringers are preferred to be flush style as shown above, where top lead (deck) board is flush with the edge of the stringer.
- Minimum stringer height is 3.50”.
- Skid boards are required and must provide a safe and stable means of multiple “floor- stacking” of pallet load bundles in inventory.
- Maximum deck board spacing (between deck boards) is 3.50” (unless custom-designed for a specific product).
- Minimum notch height (including the bottom skid board is 2.00”).
- Re-use of pallets is permitted only if there are no missing, damaged or repaired boards.

Pallet Unitization (Creating Pallet Loads)

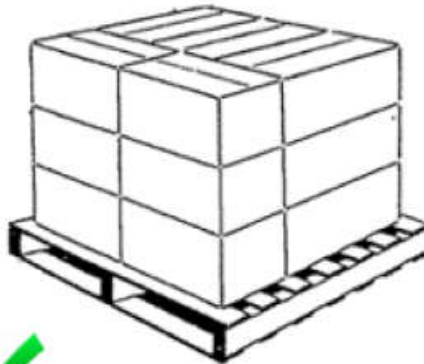
- Balance weight distribution left to right on each pallet to maintain safe lifting. In addition, stack heavier items on the bottom of the pallet and lighter items on the top.
- Containers must be stacked and secured to the pallet to form a sturdy handling unit
- No product overhang allowed. When creating pallet loads, product overhanging any edge of the pallet is prohibited. See below.



- Pallet height. The preferred pallet height (including pallet) **MUST** not exceed 52”. The 52” height still allows double stacking of pallets for efficient shipping density and DC racking.

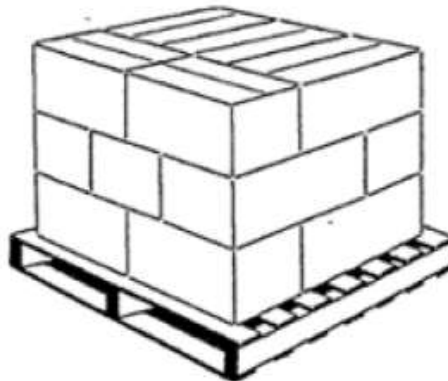
Packaging and Labeling Requirements

- When creating pallet loads, the preferred method is **column stacking**. Column stacking method may require additional layers of stretch-wrap for improved load security. See below.



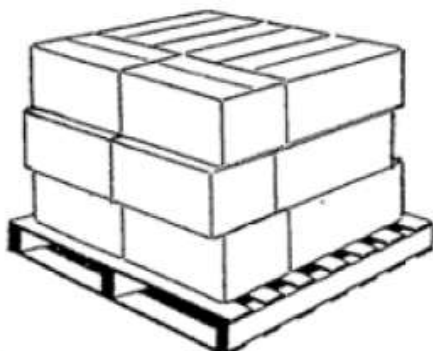
Column stacking

- The Interlock (brick) stacking method is known to reduce structural integrity of expendable containers. This load configuration can be used when the packaging system was designed to handle the compromised stacking pattern. See below.

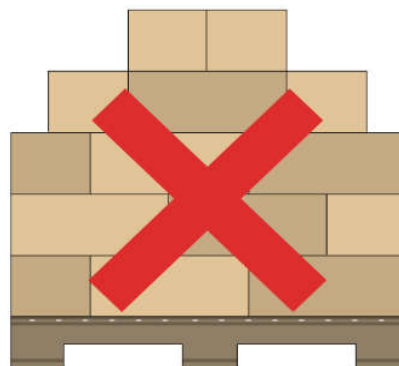


Interlock (brick) stacking

- Misaligned and Pyramid stacking of product is prohibited. See examples below.



Misaligned stacking



Pyramid stacking

Packaging and Labeling Requirements

- Securing pallet loads. Stretch-wrap (LLDPE clear in color) or plastic banding should be used to secure the product load to the pallet. Stretch film must have enough clarity to enable bar code scanning of labels. Prohibited materials for securing loads to pallets: nails, screws, metal staples, metal strapping, metal clips, banding buckles, glue or PVC film.
- Less than a 2.00" of gap between the edge of the pallet and the package on any side is ideal to ensure that the top package layer provides an adequate stackable and stable surface.
- The use of any non-standard pallet size will be permitted only for awkward, long, tall or oversized product. The packaging concept and quoted cost must be approved by the Toro sourcing contact or department.

Minimum Standards for Shipping Performance

- Product packaging must be stackable during transport and for the purpose of inventory.
- Unit loads (pallet loads) must be able to endure floor stacking of units 3-high in warehouse conditions.
- Avoid full-pallet or crate heights over 52" (for domestic trailer shipments). **Ideally, if product will ship internationally, do not exceed pallet load or crate height of 50"**. Shipping heights exceeding 50" can limit stacking at the tail end of export containers due to a minimum door opening height of 101".

B.4 OTHER PACKAGING REQUIREMENTS

Corrosion/Rust Prevention

- The Supplier is responsible for adding Volatile Corrosion Inhibitors (VCI) when necessary to ensure product integrity through changing environmental conditions all the way to final delivery. The minimum protection life against rust and corrosion is one year from date of receipt.
- If VCI coatings are used directly on the product, it is the responsibility of the Supplier to ensure materials used do not interfere with the Toro manufacturing process, including washings and coatings, and that they do not introduce any chemicals that prevent global shipment of the Toro products.

B.5 EXPORT PACKAGING

Scope

The Export Packaging is intended for development of packaging that will be shipped across international borders. Suppliers developing export packaging are expected to comply with all previous packaging requirements. The Export Packaging Supplement guidelines are additional and, in the event of a conflict, supersede the non-export version of the guideline.

ISPM-15 Compliance

- Only ISPM-15 compliant or exempt packaging materials are to be used for export packaging.
- Proper wood material markings must be stamped on all wood packaging materials per the ISPM-15 requirements and the Toro Wood Packaging Material Quality Standard F-102.

Part Packaging

- All materials must be fully enclosed and include a stackable top surface.

Packaging and Labeling Requirements

Pallets and Crate Sizes

- When feasible, pallet and crate sizes should allow side by side loading in a standard 40' high cube shipping container.
- When feasible, pallet loads and crate height should not exceed 50".
- 40' high-cube container dimensions of 473" long x 92" wide should be considered to attain optimal shipping density.

Pallet Unitization

- All packaging must be able to withstand stacking that fully utilizes the height of a standard ocean shipping container.
- Packaging must be developed to endure stacking with other product that may occur during the freight consolidation process.

Order Multiple

- Pallets should always be shipped full for optimal utilization and shipping costs.

Labeling Supplement Guideline for Exports

- Country of Origin must be printed on the container label.

B.6 HAZARDOUS MATERIAL

- The supplier is responsible for compliance with all regulations – local, state and federal – pertaining to dangerous, hazardous and /or toxic material packaging.
- The supplier is responsible for informing Toro sourcing of any packaging that contains materials that may render the packaging “hazardous” as defined by the laws of the country or countries where the packaging is used.
- The supplier is required to provide SDS (Safety Data Sheets) to the shipping and receiving location’s Environmental Health & Safety department.

B.7 GLASS

- Product should never ship in packaging with glass-on-glass contact. Partitions or fillers are required for this type of packaging application.
- Partitions and layer barriers should be manufactured of a material capable of protecting the product from impact damage during normal handling and transportation.
- The package should be designed to protect this type of product from impact and handling damage in Full Truckload, LTL and a Parcel shipping environment.
- Glass product should be packaged so they will not break and create a safety hazard during storage, shipment preparation or transportation to the customer.
- Packaging containing glass must be designed to ship in any orientation (any side of the package). Products that are large and flat such as doors, windshields, roofs or hoods should have the packaging designed to ship on any of the four narrow edges of the carton to allow vertical, not a flat shipment orientation. This is the optimal manner for Toro to ship single quantities of these types of products.

Packaging and Labeling Requirements

- If included, hardware kits must be secured or segregated inside the package to prevent excessive movement. Tape is insufficient to hold a hardware kit or bag inside a package. Care should be taken to design the placement of the hardware bag or carton within the package to stay segregated from any glass part or product.
- Packaging containing fragile product should be clearly marked in a minimum of two places (largest package face) with a graphic icon depicting the fragility of the product. See the “Fragile Graphic” for glass below.



Fragile Graphic

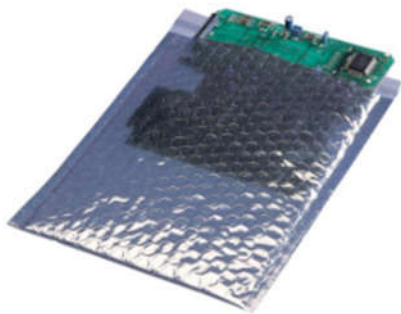
B.7.1 ESD SENSITIVE COMPONENTS

Bare PCB's (Printed Circuit Boards)

- The packaging of “Bare” PCB's (Printed Circuit Boards) must meet the **IPC-1601** Printed Board Handling and Storage Guidelines.
- Each bag should have a label with a part number, rev level and serial number.

PCBA's (Printed Circuit Board Assemblies) & other components sensitive to ESD

- Minimum packaging standards for shipment of ESD sensitive components into non-EPA Electrostatic Protected Areas at Toro.
- Each component to be packaged into a Silver or Black Metallized Bubble Shielding Bag or Envelope. Each bag must have ANSI approved ESD awareness symbol and markings.
- Minimum bubble size is 3/16”.
- Bag closure must have either a self-sealed or zip-lock feature.
- Each bag should have a label with a part number, rev level and serial number.



Bubble Shielding Bag
or Envelope

Packaging and Labeling Requirements

- The preferred packaging method is a master shipping carton with dividers and individual “cells” for each printed board assembly as shown below.
- For labeling on the carton, see section “B.9 Labeling”.



Master carton with individual cells for each component.

Electronic Assemblies with Exposed Connector Pins:

- Any electronic product that houses an electronic assembly with exposed connector pins will have ESD protection. The protection required will be an ESD connector cover or black conductive foam. The ESD connector cover will protect against ESD, protect pins from bending, and keep foreign material out of the connector body.

The use of Low Charging (Antistatic) PINK ESD Bubble Material does **NOT meet the minimum packaging standards for the shipment of sensitive ESD components into non-EPA (Electrostatic Protected Areas).*

B.8 RETURNABLE PACKAGING

- Returnable packaging is NOT typically used for shipments into the Toro replacement parts or materials distribution center. If returnable packaging is used, understand that the package, container or pallet will likely NOT be returned.
- All parts and assemblies shipped into the replacement parts DC (Distribution Center) MUST be individually packaged.
- Multi-Part packaging such as steel shipping racks or containers are prohibited and will be returned to supplier for re-packaging into individual disposable packaging.

B.9 LABELING

Scope:

To provide the minimum acceptable label requirements for the identification of the delivered parts. The data on the label ties the contents of the shipment to the electronic Advanced Shipment Notice (ASN), thus enabling an efficient receiving process. There are three label types: **Container Label, Master Label, and Mixed Load Label**

1. **Container Label:** Used to identify each single container/unit holding identical parts, from the same purchase order and the same packing list numbers.
2. **Master Label:** Used to identify the total contents of a multiple single pack load holding identical parts, from the same purchase order and the same packing list numbers. This label contains advanced shipping notice information to allow Toro to track shipments.
3. **Mixed Master Label:** Used to identify a load of multiple single packs of different part numbers on the same advanced shipping notice and packing list.

Packaging and Labeling Requirements


Container Label: Size and Material

- Each parts container label must be a minimum of 4" x 6" in size.
- Each part package must have part labels visible and affixed onto two adjacent faces of the article.
- If printing one longer label with duplicate information (a wrap-around corner label), one label is sufficient but must be visible on two faces of the article. See label location image on page 26.
- In no case shall the label be larger than the flat surface onto which it is placed with all data readable when container is placed on pallet. This becomes especially critical when using returnable totes or containers.
- The label paper shall be white in color with black printing.
- The adhesives used for labels on returnable containers shall be a removable type pressure sensitive elastomer. The adhesive should have a moderately high initial tack, high level of ultimate adhesive and clean removability.
- The adhesives used for labels on expendable containers may be pressure sensitive or dry gummed as long as adherence to the package substrate is assured and application is wrinkle free.

Container Label Required ID Label Fields

- A. Toro Part Number (Code 39 bar code), Part Description, Supplier Date Code, Quantity.
IMPORTANT The PN field of the barcode will NOT scan without asterisks. The scannable PN field **MUST** include one asterisk * at the beginning of the PN as a "start" character and one asterisk * at the end as a "stop" character. The asterisks must not show in the printed human readable PN nor when scanned. Both asterisk characters must be "stripped" when created and configured.
- B. Serial Number(s) or Lot number as required
- C. 10 Digit Toro Purchase Order or Scheduling Agreement number
- D. Country of Origin if product is exported to Toro location
- E. Weight and Dimensions (Length x Width x Height)

Container Label Sample (4" x 6" minimum)

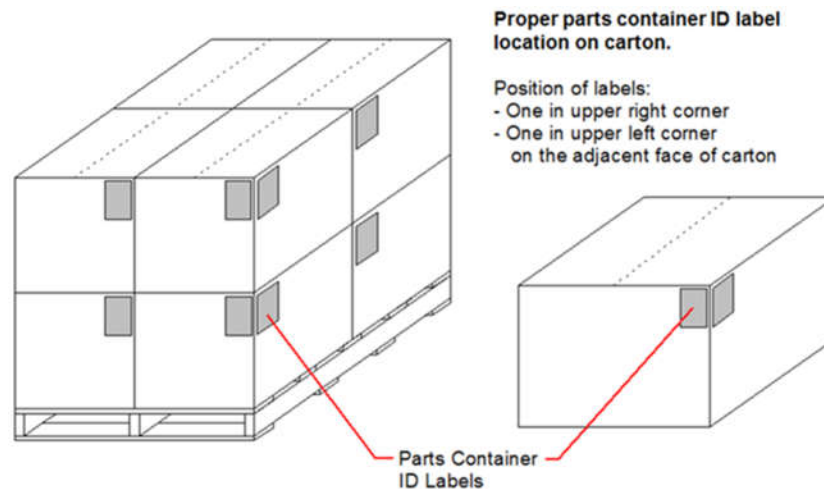
TORO PART #: 122-0138-B				A
DESCRIPTION: ENGINE [120V, ALT]				
DATE CODE: 0422020				
QUANTITY: 4				
SERIAL NUMBER(S):		B	C	
555123		PO #: 5500455483		
555124				
555125				
555126				
COUNTRY OF ORIGIN:		D	E	
		WEIGHT: 400 lbs. DIMS (L x W x H): 48 in x 40 in x 52 in		

Packaging and Labeling Requirements

Container Label Location

Each container must have two identification labels (applied as shown below).

It is acceptable to apply one longer wrap-around duplicate information label from the upper right hand corner of each carton and around to the adjacent face of each carton.

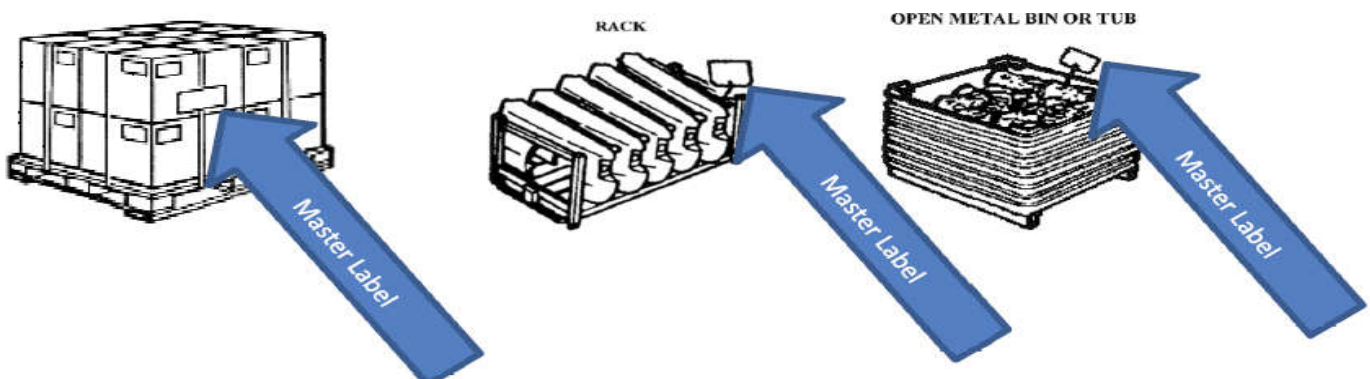


Hang Tags (for use on large non-stackable palletized parts)

- If used, the hang tag size should be a minimum of 3 x 6" in size, include a reinforced eyelet and light wire for ease of fastening to the part or container.
- The tag should be durable enough to withstand shipment and to assure readability at its destination.
- It is acceptable for an identification label to be affixed to the hang tag for the purpose of identification.

Master Label

A Master Shipping Label shall be used to identify the total contents of a multiple single pack load of the same part number. The label shall be placed on the unit load such that when the unit load is broken apart, the label is discarded (ex: affix Master Label to the outside of the stretch wrap). **One Master Label per individual part number on the pallet is required.** A sample Master Label is shown on the next page.



Packaging and Labeling Requirements

Master Label on Stretch Film

When a unit load is stretch wrapped, a Master Label shall be adhered to the outside of the stretch film, visible to the operators and readable for barcode scanning. This label is required for all stretch wrapped unit loads of single or multiple packs. This label may be removed with the stretch film making individual container labeling necessary. One Master Label per unique part number is required.

Required Master Label Fields

Note: Shown are the minimal barcode requirements. Barcodes must use **Code 39** bar code symbology as the standard.

Master Label Sample (4" x 6")	
FROM: NAME STREET ADDRESS CITY, STATE ZIP CODE	TO: NAME BUILDING, RECEIVING LOCATION STREET ADDRESS CITY, STATE ZIP CODE
CARRIER INFO: ABC FREIGHT SCAC: ABCF PRO: PRO TEST 0000 B/L: 7747555 WEIGHT: DIMS (L x W x H): 48 in x 40 in x 52 in	
PO #: 5500001222	PART #: 123-4567 Rev A DESCRIPTION: DATE CODE: QUANTITY: 50
PALLET NUMBER: 1 OF 1	SERIAL NUMBER(S):
ADVANCED SHIPPING NOTIFICATION NUMBER: 11368900	

- A. Ship From Name and Address
- B. Ship to Toro Plant or DC and Address (should include the plant receiving location)
- C. Carrier Information: Carrier Name, SCAC Code, Bill of Lading, and PRO # (if available) and Dimensions (Length x Width x Height)
- D. 10 Digit Toro Purchase Order Number
- E. Toro Part Number (Code 39 bar code), Part Description, Supplier Date Code, Quantity
IMPORTANT The PN field of the barcode will NOT scan without asterisks. The scannable PN field **MUST** include one asterisk * at the beginning of the PN as a "start" character and one asterisk * at the end as a "stop" character. The asterisks must not show in the printed human readable PN nor when scanned. Both asterisk characters must be "stripped" when created and configured.
- F. Pallet Number (1 of X)
- G. Serial Number(s) as required
- H. ASN (Code 39 bar code)

Packaging and Labeling Requirements

Mixed Master Label


Shall be used on each pallet (or each bundle) holding multiple part numbers on the same advanced shipping notice and packing list. The label shall be placed on the unit load such that when the unit load is broken apart, the label is discarded (ex: affix Master Label to the outside of the stretch wrap). **One Mixed Master Label per individual pallet is required.**

Required Mixed Master Shipping Label Fields

Note: Shown are the minimal barcode requirements. Barcodes must use **Code 39 bar code** symbology as the standard.

- A. Ship From Name and Address
- B. Ship to Toro Plant or DC and Address (should include the plant receiving location)
- C. Carrier Information: Carrier Name, SCAC Code, Bill of Lading, and PRO # (if available) and Dimensions (Length x Width x Height)
- D. 10 Digit Toro Purchase Order Number
- E. MIXED, Quantity
- F. Pallet Number (1 of X)
- G. Serial Number(s) as required
- H. ASN (Code 39 bar code)

Mixed Master Label Sample (4" x 6")

FROM: NAME STREET ADDRESS CITY, STATE ZIP CODE	TO: NAME BUILDING, RECEIVING LOCATION STREET ADDRESS CITY, STATE ZIP CODE
CARRIER INFO: ABC FREIGHT SCAC: ABCF PRO: PRO TEST 0000 B/L: 7747555 WEIGHT: DIMS (L x W x H): 48 in x 40 in x 52 in	
PO #: 5500001222	PART #: MIXED DATE CODE: QUANTITY: 50
PALLET NUMBER: 1 OF X	SERIAL NUMBER(S):
ADVANCED SHIPPING NOTIFICATION NUMBER: 	

Packaging and Labeling Requirements

C. DISTRIBUTION CENTER – Complete Product, Accessory or Attachment

C.1 QUOTING AND PACKAGING

- Upon request, the Supplier is required to submit a disposable packaging solution to the Toro sourcing contact at the time of quote.
- It is expected that the disposable packaging developed by the supplier, for quoting purposes, is compliant with all Toro Packaging requirements.

Supplier Responsibilities

- The Supplier must submit a packaging cost per product at the time of quote.
- The Supplier is responsible for all design, development and procurement of disposable packaging.
 - Supplier is responsible for maintaining the product/part quality throughout the entire supply chain process including warehousing, transportation, and material handling.
- Suppliers may contact their Toro Packaging Engineer representative for any assistance needed to ensure standards are being met.
- The supplier must inform their Toro sourcing contact about ANY packaging deviations or changes from the approved production packaging for individual or bulk packed items.
- Costs incurred by Toro to resolve supplier packaging issues or excessive damage claims associated with the non-compliance to the requirements will be the responsibility of the supplier including cost of goods sold, transportation expense and material costs tied to the repackaging of product to meet Toro specifications.

Toro Responsibilities

- As required, Toro may request first article review of any proposed packaging design.

C.2 PRIMARY PACKAGING



Container Selection/Carton Closure

- Easy-open carton styles are preferred.
- Tape or banding are the preferable closure methods.
- Staples should be avoided, used only when absolutely necessary.
- Balance weight distribution inside the package for optimal performance in order replenishment, shipping and handling.

Packaging and Labeling Requirements

Product Weight Considerations for Package Design

- When developing the package size, consider the ergonomics of handling large, awkward, and/or heavy products by following the guidelines listed below:

Package Weight or Size	Lifting Safety Symbol	Handles/Hand Holes	Description
0 – 24 lbs.	NONE	NONE	Standard Package - 1 Person Lift Package handling is not likely to cause harm during normal operations
24 - 40 lbs.	 25 - 35 lbs. (12 - 16 kg)	TWO	Heavy or Awkward Package – 1 Person Lift Applied when the package is in the range of 25-40 lbs. The package should have two handles or hand holes to make it easier for lifting/carrying.
41 - 70 lbs.	 36 - 70 lbs. (16 - 32 kg)	TWO-FOUR	Large Heavy Package – 2 Person Lift Applied when the package is in the range of 41-70 lbs. The package should have handles or hand holes at each end to make it easier for lifting/carrying.
>70 lbs. or conveyed by pallet	 over 70 lbs. (32 kg)	NONE	Very Heavy Package - Mechanical Lift Only Applied when the package exceeds 70 lbs. or is such a size as to be conveyed on a pallet.

Mixed Parts & Containers

- The mixing of different parts within the same container is prohibited unless authorized by Toro (kitting of parts, etc.).
- The mixing of containers of different parts on a pallet is permitted as long as they are for the same final destination and labeled as required in the labeling section.
- If involved with mixing part containers on a pallet, consider using modular container sizes to support secure and stable unitization.
- The mixing of manually handled, and non-manually handled containers on the same pallet is prohibited for the safety of the receiving dock material handler.

C.3 SECONDARY PACKAGING – PALLETS

Pallet Selection

- Toro requests that Suppliers adhere to a limited number of standardized pallet sizes (when possible) to support the effective utilization of trailers and shipping containers. The following pallet sizes (in order of preference) are what Toro defines as “standard”:

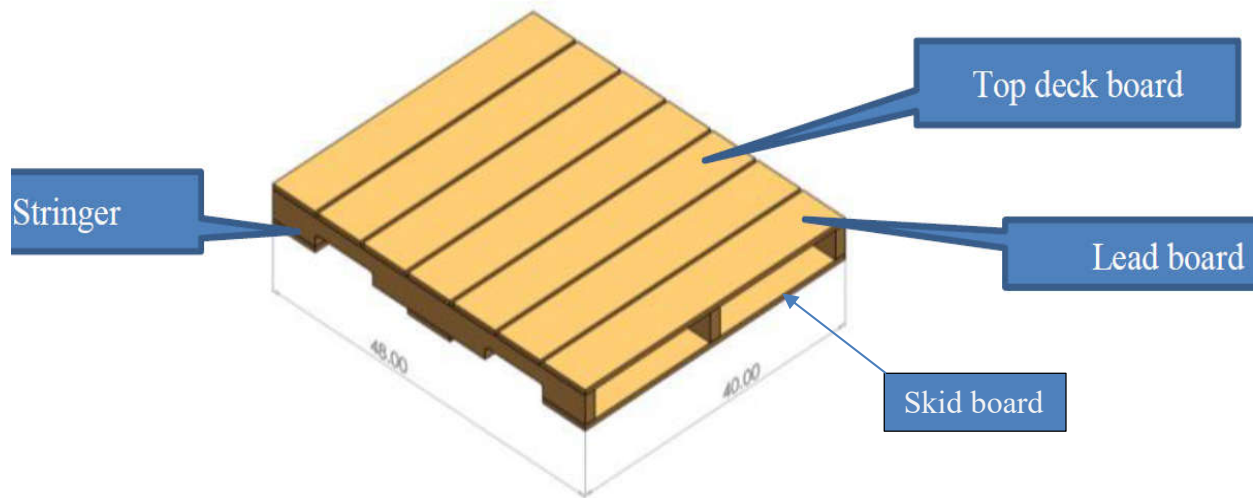
• 48” x 40” • 48” x 45” • 32” x 30” • 57” x 45” • 67” x 45” • 78” x 45”

- Pallet size should be selected based on how well the product will utilize its surface area. The top surface of the shipping handling unit is expected to serve as a solid base for stacking additional product.

Pallet Construction and Quality:

- ALL pallets must be ISPM certified and marked accordingly. **No exceptions.** See F-102 Toro Wood Packaging Material Quality Standard for more information.
- GMA style 4 way entry pallets are preferred. See below.

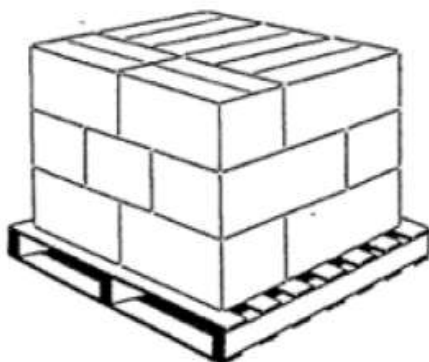
Packaging and Labeling Requirements



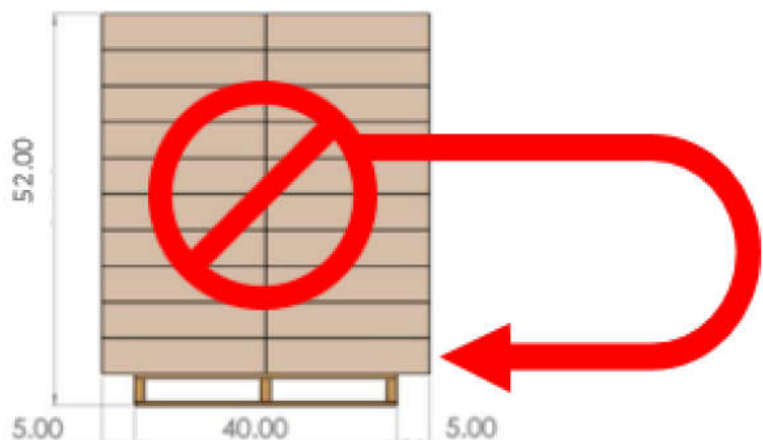
- Stringers are preferred to be flush style as shown above, where top lead (deck) board is flush with the edge of the stringer.
- Minimum stringer height is 3.50".
- Skid boards are required and must provide a safe and stable means of multiple "floor- stacking" of pallet load bundles in inventory.
- Maximum deck board spacing (between deck boards) is 3.50" (unless custom-designed for a specific product).
- Minimum notch height (including the bottom skid board is 2.00").
- Re-use of pallets is permitted only if there are no missing, damaged or repaired boards.

Pallet Unitization (Creating Pallet Loads)

- Balance weight distribution left to right on each pallet to maintain safe lifting. In addition, stack heavier items on the bottom of the pallet and lighter items on the top.
- Containers must be stacked and secured to the pallet to form a sturdy handling unit
- No product overhang allowed. When creating pallet loads, product overhanging any edge of the pallet is prohibited. See below.

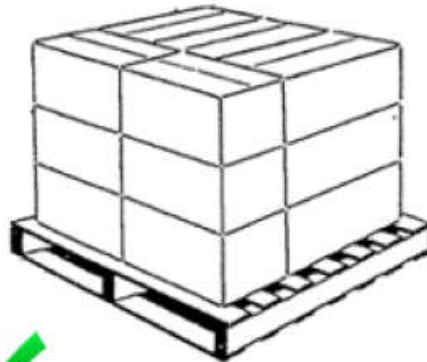


Interlock (brick) stacking



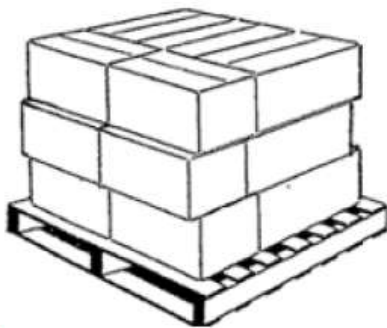
Packaging and Labeling Requirements

- Pallet height. The preferred pallet height (including pallet) **MUST** not exceed 52". The 52" height still allows double stacking of pallets for efficient shipping density and DC racking.
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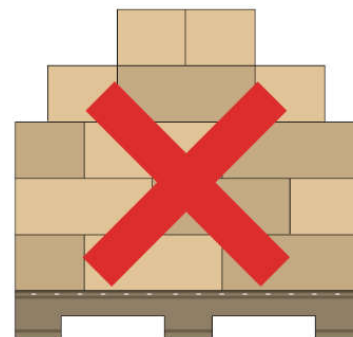


✓ Column stacking

- The **Interlock (brick) stacking** method is known to reduce structural integrity of expendable containers. This load configuration can be used when the packaging system was designed to handle the compromised stacking pattern.
- Misaligned and Pyramid stacking of product is prohibited. See examples below.



✗ Misaligned stacking



Pyramid stacking

- Securing pallet loads. Stretch-wrap (LLDPE clear in color) or plastic banding should be used to secure the product load to the pallet. Stretch film must have enough clarity to enable bar code scanning of labels. Prohibited materials for securing loads to pallets: nails, screws, metal staples, metal strapping, metal clips, banding buckles, glue or PVC film.
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- The use of any non-standard pallet size will be permitted only for awkward, long, tall or oversized product. The packaging concept and quoted cost must be approved by the Toro sourcing contact or department.

Packaging and Labeling Requirements

Minimum Standards for Shipping Performance

- Product packaging must be stackable during transport and for the purpose of inventory.
- Unit loads (pallet loads) must be able to endure floor stacking of units 3-high in warehouse conditions.
- Avoid full-pallet or crate heights over 52" (for domestic trailer shipments). **Ideally, if product will ship internationally, do not exceed pallet load or crate height of 50"**. Shipping heights exceeding 50" can limit stacking at the tail end of export containers due to a minimum door opening height of 101".

C.4 OTHER PACKAGING REQUIREMENTS

Corrosion/Rust Prevention

- The Supplier is responsible for adding Volatile Corrosion Inhibitors (VCI) where necessary to ensure product integrity through changing environmental conditions all the way to final delivery.
- If VCI coatings are used directly on the product, it is the responsibility of the Supplier to ensure materials used do not interfere with Toro manufacturing processes, including washing and coating, and do not introduce any chemicals that prevent global shipment of the Toro products.

C.5 EXPORT PACKAGING

Scope

The Export Packaging is intended for development of packaging that will be shipped across international borders. Suppliers developing export packaging are expected to comply with all previous packaging requirements. The Export Packaging Supplement guidelines are additional and, in the event of a conflict, supersede the non-export version of the guideline.

ISPM-15 Compliance

- Only ISPM-15 compliant or exempt packaging materials are to be used for export packaging.
- Proper wood material markings must be stamped on all wood packaging materials per the ISPM-15 requirements and the Toro Wood Packaging Material Quality Standard F-102.

Part Containers

- All materials must be fully enclosed and stackable top, cover or lid.

Pallets and Crate Sizes

- When feasible, pallet and crate sizes should allow side by side loading in a standard 40' high cube shipping container.
- When feasible, pallet loads and crate height should not exceed 50".
- 40' high-cube container dimensions of 473" long x 92" wide should be considered to attain optimal shipping density.

Pallet Unitization

- All packaging must be able to withstand stacking that fully utilizes the height of a standard ocean shipping container.
- Packaging must be developed to endure stacking with other product that may occur during the freight consolidation process.

Packaging and Labeling Requirements

Order Multiple

- Pallets should always be shipped full for optimal utilization and shipping costs.

C.6 HAZARDOUS MATERIAL

- The supplier is responsible for compliance with all regulations – local, state and federal – pertaining to dangerous, hazardous and /or toxic material packaging.
- The supplier is responsible for informing Toro sourcing of any packaging that contains materials that may render the packaging “hazardous” as defined by the laws of the country or countries where the packaging is used.
- The supplier is required to provide SDS (Safety Data Sheets) to the shipping and receiving location’s Environmental Health & Safety department.

C.7 GLASS

- Product should never ship in packaging with glass-on-glass contact. Partitions or fillers are required for this type of packaging application.
- Partitions and layer barriers should be manufactured of a material capable of protecting the product from impact damage during normal handling and transportation.
- The package should be designed to protect this type of product from impact and handling damage in Full Truckload, LTL and a Parcel shipping environment.
- Glass product should be packaged so they will not break and create a safety hazard during storage, shipment preparation or transportation to the customer.
- Packaging containing glass must be designed to ship in any orientation (any side of the package). Products that are large and flat such as doors, windshields, roofs or hoods should have the packaging designed to ship on any of the four narrow edges of the carton to allow vertical, not a flat shipment orientation. This is the optimal manner for Toro to ship single quantities of these types of products.
- If included, hardware kits must be secured or segregated inside the package to prevent excessive movement. Tape is insufficient to hold a hardware kit or bag inside a package. Care should be taken to design the placement of the hardware bag or carton within the package to stay segregated from any glass part or product.
- Packaging containing fragile product should be clearly marked in a minimum of two places (largest package face) with a graphic icon depicting the fragility of the product. See the “Fragile Graphic” for glass below.



Fragile Graphic

Packaging and Labeling Requirements

C.8 LABELING

Scope

To provide the minimum acceptable label requirements for the identification of a delivered product, accessory or attachment.

Size And Material

- Each label should be approximately 4" x 6" (or 4" x 12" when duplicate information is printed for wrap-around style label) when practical. See label location image on page 37.
- In no case shall the label be larger than the flat surface onto which it is placed with all data readable when container is placed on pallet. This becomes especially critical when using returnable totes or containers.
- The label paper shall be white in color with black printing.
- The adhesives used for labels on disposable containers may be pressure sensitive or dry gummed as long as adherence to the package substrate is assured and application is wrinkle free.
- Each package must have the label visible and affixed onto two adjacent faces of the article. If printing one longer 12" label with duplicate information (wrap-around corner label), one label is sufficient but must be visible on two faces of the article.

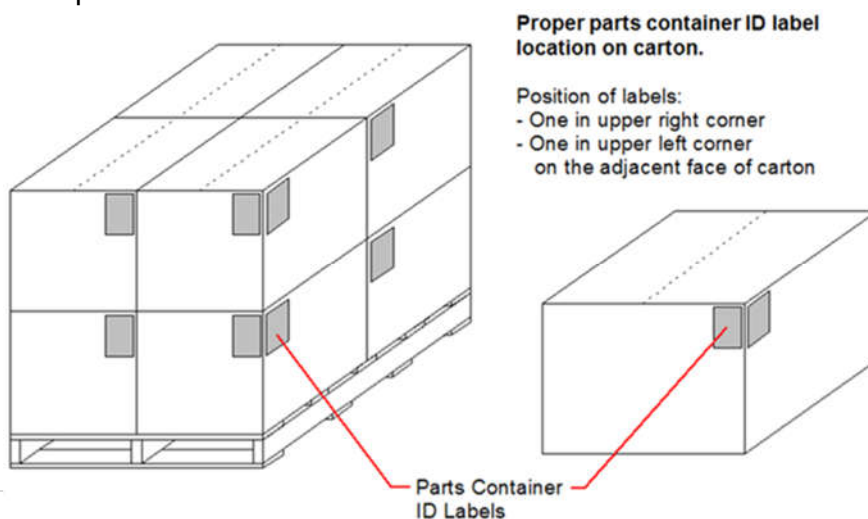
Hang Tags

- When used, the hang tag size should be a minimum of 3 x 6" in size, include a reinforced eyelet and light wire for ease of fastening to the part or container.
- The tag should be durable enough to prevent damage in shipment and to assure readability at its destination.
- It is acceptable for an identification label to be affixed to the hang tag for the purpose of identification.

Label Location

Each carton must have two identification labels (applied as shown below).

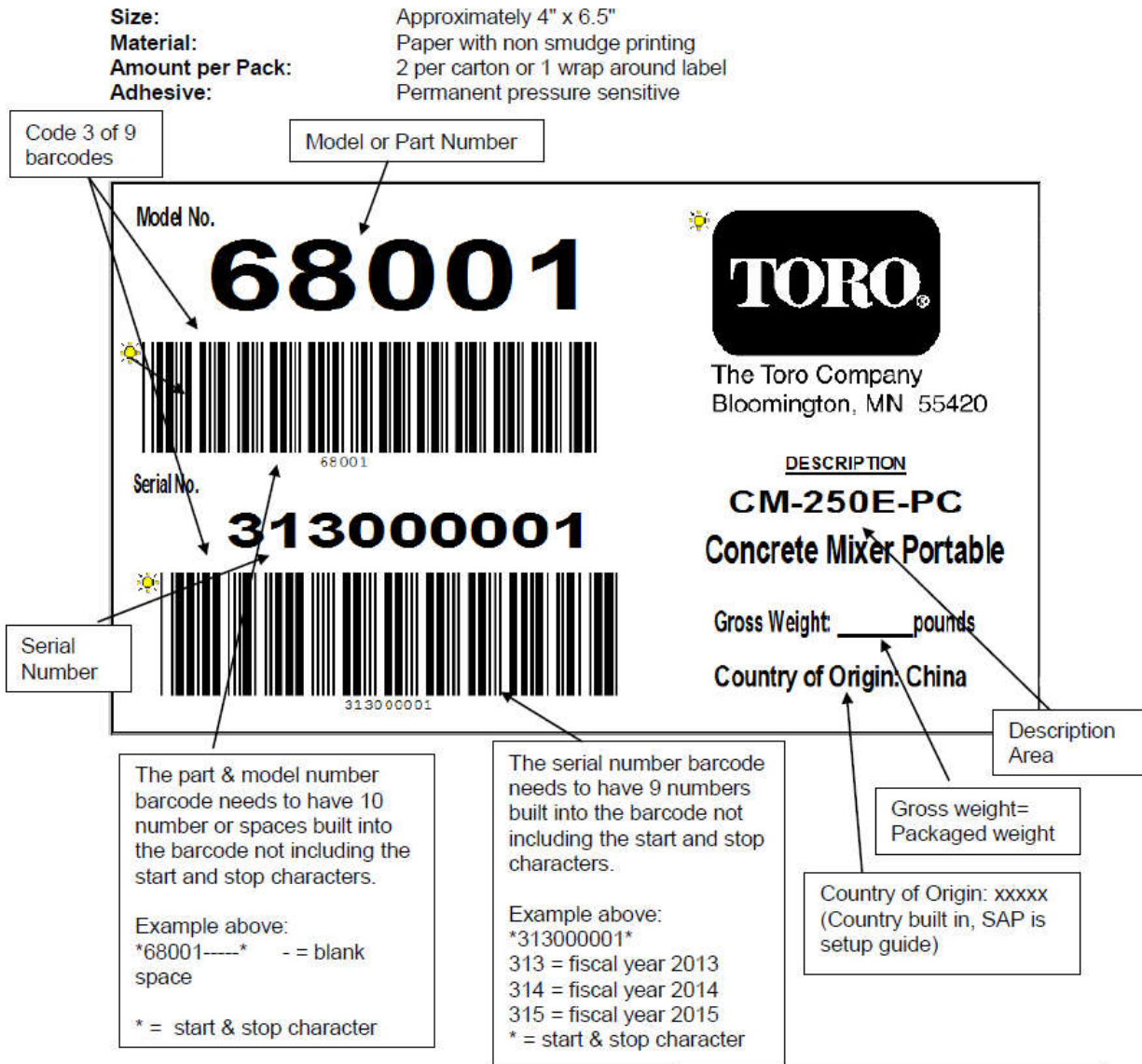
It is acceptable to apply one longer 4x12" wrap-around duplicate information label from the upper right hand corner of each carton and around to the adjacent face of each carton. Both label locations below are acceptable.



Packaging and Labeling Requirements

DISTRIBUTION CENTER – Bar Code Label Layout for Complete Product, Accessory or Attachment (non-retail layout)

- Label requirements and template for a non-retail product identification label, reference label specification #3342-974 via the Toro supplier portal.
- Label shown is for a Toro branded product. Contact Toro sourcing to verify which Toro brand, logo and address to use on the product and label you are providing the DC.
- Not all Toro products are serialized. Contact Toro Sourcing to determine if your product requires serialization and what serial number range(s) to use.
(copy of #3342-974 shown below)



Packaging and Labeling Requirements

Revision History

Date	Revision #	Description of change
July 22, 2020	B	Updated Standard to include more in-depth instructions for suppliers to deliver to plants and DC's
August 11, 2020	C	Added Country of Origin requirement to exported container packaging label.
February 26, 2021	D	Added A.7.1 and B.7.1 ESD packaging information.