

Round Cotton Module Ginning Recommendations



JOHN DEERE

INSTALLATION INSTRUCTIONS Round Cotton Module Ginning Recommendations

KK69791 06OCT21 (ENGLISH)

**John Deere Des Moines Works
KK69791 (06OCT21)**

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A John Deere ILLUSTRATION™ Manual

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Introduction

While John Deere is not providing gin solutions for processing round seed cotton modules at gins, John Deere has an interest in recommending the proper means for ensuring quality and efficient processing of these modules.

The following information will briefly introduce the different components and advantages of the TAMA Round Module Wrap (RMW™) and is necessary to understand the ginning requirements of a John Deere round module. By describing the various components we hope to educate ginners on the advantages of the round module while encouraging the proper handling and removal of the Round Module Wrap.

RMW is a trademark of TAMA Plastic Industry

The following recommendations and guidelines shall apply to all feeder floor types unless otherwise stated.

IMPORTANT: Handling or ginning equipment should not puncture or tear module wrap causing loose pieces.

Modules should always be inspected before ginning. Any modules that are damaged must be handled and ginned with special care to prevent cotton contamination.

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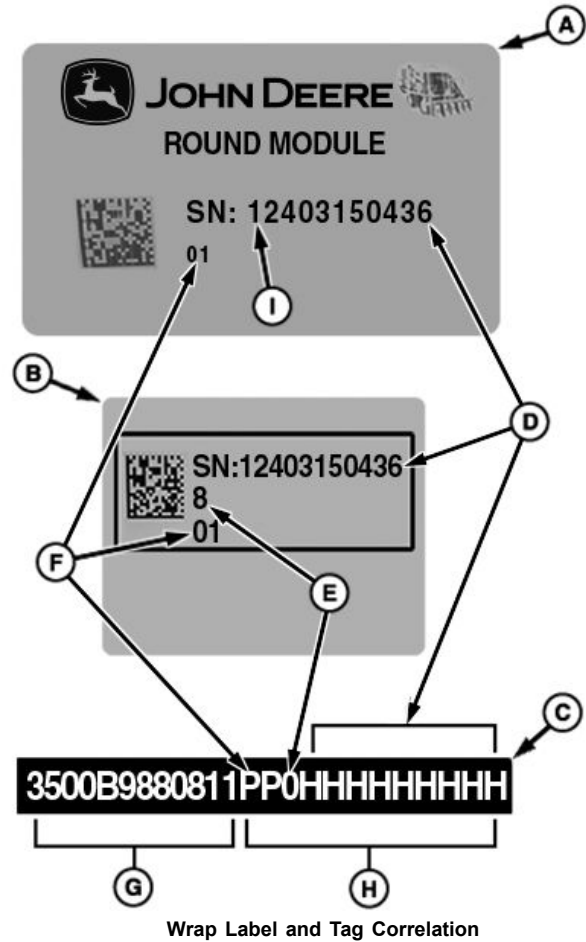
Round Module Components and Specifications

RMW Technical Specifications	
Description	Specification
Wrap Portion Width	270 cm (106 in.)
Wrap Portion Length	21 m (69 ft.)
Wrap Portions Per Roll	24
Approximate Roll Weight	100 kg (220 lbs.)
Roll Diameter	25 cm (10 in.)

- Z-Lock™: Secures tail of wrap under all conditions.
- COVER-EDGE™: Minimizes cotton waste and exposure to rainfall.
- UV Protection: Provides six months of UV protection in the field.
- RFID: Allows tracking of round module from field to gin. Also used in some ginning solutions to identify wrap cut position. See Wrap Label and Tag Correlation graphic for more detail.

A—White Metallic Label
 B—RFID Tag
 C—24 Digit String Read by RFID Reader
 D—Serial Number
 E—RFID Position

F—Portion Number on Roll
 G—Round Module Identifier
 H—Hexadecimal Digits
 I—Year of Manufacture



Wrap Label and Tag Correlation

*Z-Lock is a trademark of TAMA Plastic Industry
 COVER-EDGE is a trademark of Deere & Company*

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Prevent Wrap Damage

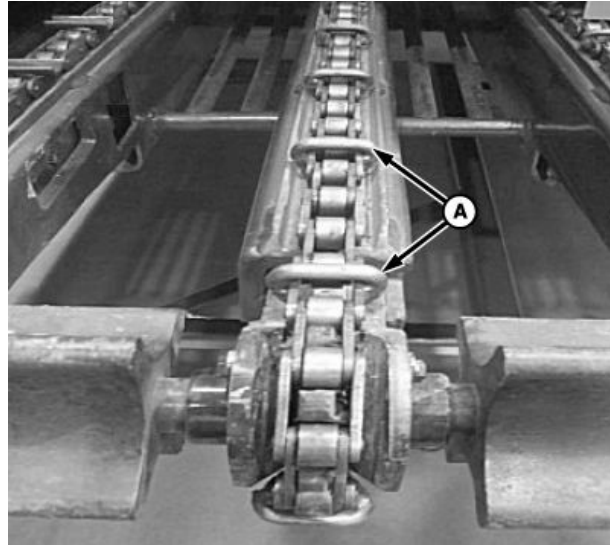
1. Wrapped module handling equipment with chains must be fitted with puncture and slit resistant lugs (A).

NOTE: Failure to modify chains may result in severely damaged or torn wrap.

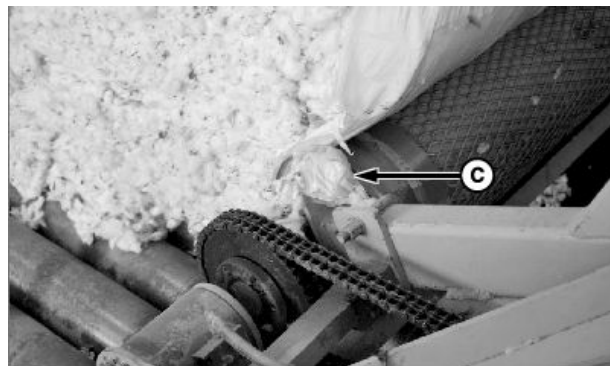
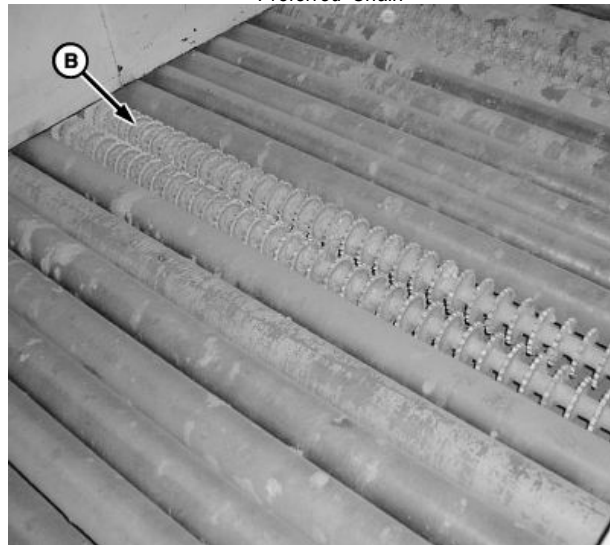
2. Prevent wrap punctures and tears by ensuring that wrapped modules do not directly pass over rock or debris removing rollers (B).
3. Identify possible wrap pinch areas. Inspect these areas regularly during ginning process.

A—Modified Lugs
B—Rock/Debris Rollers

C—Wrap in Roller



Preferred Chain



Wrap in Roller

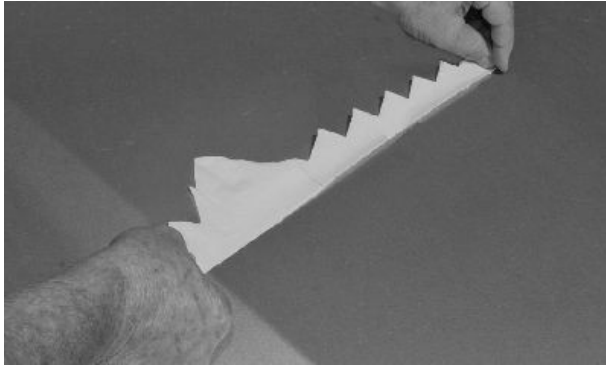
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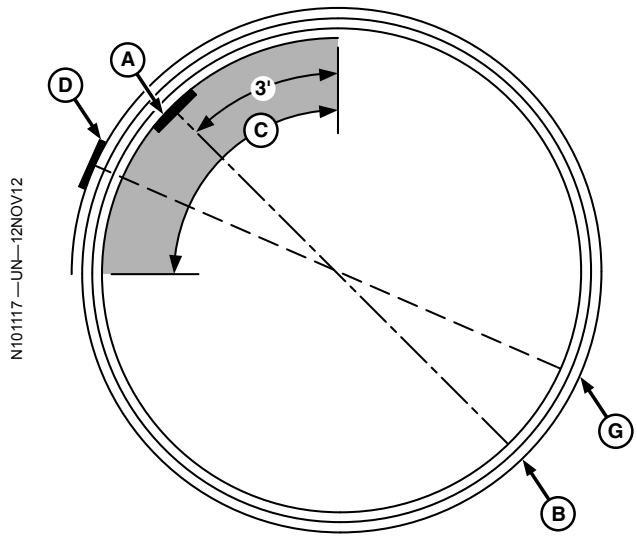
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Wrap Removal—Full Size Modules



Wrap Shard



Ideal Cut Location 228.6-243.8 cm (90-96 in.)

IMPORTANT: This procedure for identifying cut location **ONLY** applies to 228.6-243.8 cm (90-96 in.) modules. This procedure can not be used for other sized modules.

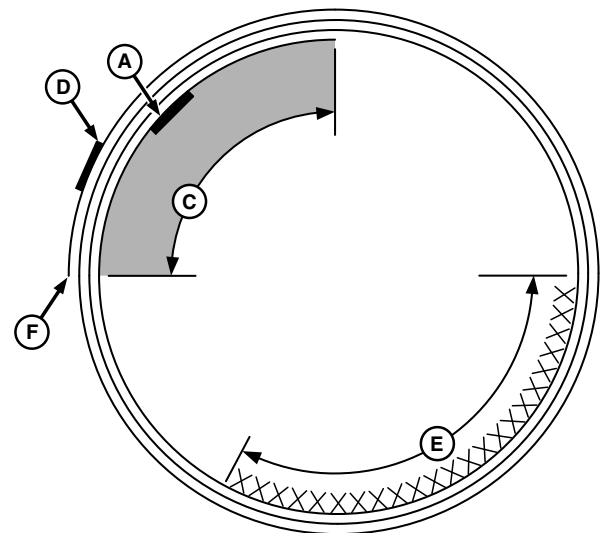
Wrap cut must be **ONLY ONE AXIAL** clean cut along the entire length of the module without leaving shards of plastic at the cut edge.

Module squat occurs due to external factors, and often times alters module size. Sizes referenced are an average of height and width. Verify module size before identifying ideal cut location.

Failure to cut wrap properly could result in loose shards of wrap as shown.

1. An RFID tag (A) is placed near the leading edge. This RFID has a position referred to as "tag position 8" (See Wrap Label and Tag Correlation graphic in Round Module Components and Specifications) and is the tag located closest to leading edge. It is covered with three layers of translucent wrap and is used by some round module unwrapping systems to identify the correct cut location (B).
2. Cut wrap at location (B) directly opposite of #8 RFID tag to prevent cutting through leading edge or RMW tail. Cutting through the leading edge can introduce a narrow strip of loose wrap that may stay in cotton. Follow these instructions to avoid loose wrap pieces.
3. For wrap cutting methods that do not read RFID tags cut the wrap directly opposite the white metallic label at location (G).

NOTE: 228.6-243.8 cm (90-96 in.) diameter modules can be cut at any location within acceptable cut zone (E).



Acceptable Cut Zone 228.6-243.8 cm (90-96 in.)

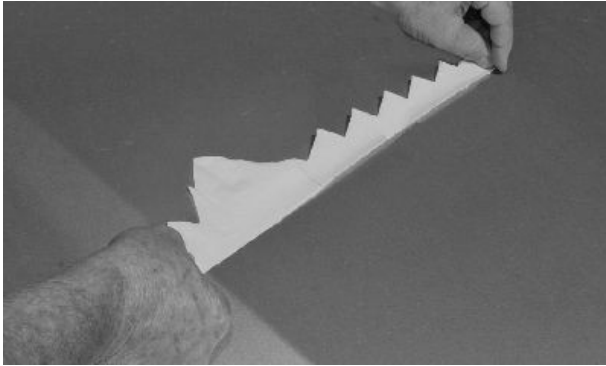
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|-----------------------------|----------------------------|
| A—RFID Tag | E—Acceptable Cut Zone |
| B—Safe Cut Location | 228.6-243.8 cm (90-96 in.) |
| C—RMW Tail and Leading Edge | only |
| Overlap (No Cut Zone) | F—RMW Tail |
| D—White Metallic Label | G—Cut Location |

When cutting from RMW tail side cut at the lowest possible location to avoid loose wrap pieces.

Reference points shown correspond with **FULL SIZE** modules.

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Wrap Removal—Less Than Full Size Modules



Wrap Shard

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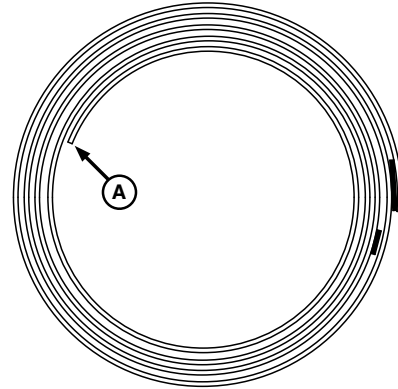


Figure A—167.6 cm (66 in.) Module

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IMPORTANT: Special care must be taken when cutting wrap on modules less than 228.6 cm (90 in.) in diameter to avoid cutting the leading edge.

Wrap cut must be **ONLY ONE AXIAL** clean cut along the entire length of module without leaving shards of plastic at cut edge.

Module squat occurs due to external factors, and often times alters module size. Sizes referenced are average height and width. Always verify module size before identifying ideal cut location.

Failure to cut wrap properly could result in loose shards of wrap as shown above.

NOTE: It is recommended to cut wrap on small modules on the upper half of module, this allows for easier inspection and removal of wrap shards that may be created in the cutting process.

Cutting on the bottom increases the possibility of loose shards being covered with cotton and not being removed before ginning.

Module wrap is a fixed length and as module size varies, so does the number of revolutions around the module. In figures A, B, and C, you can see the leading edge (A) can be positioned differently depending on module size. Special precautions are needed to ensure no loose material is left in cotton when removing wrap.

A—Leading Edge

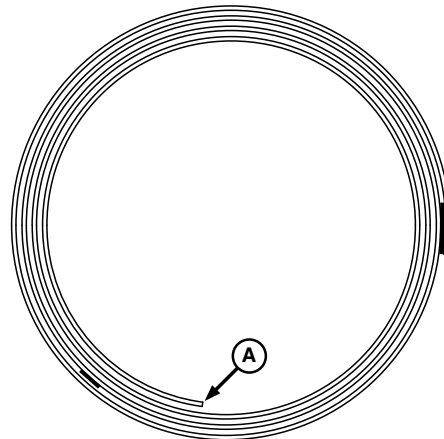


Figure B—198 cm (78 in.) Module

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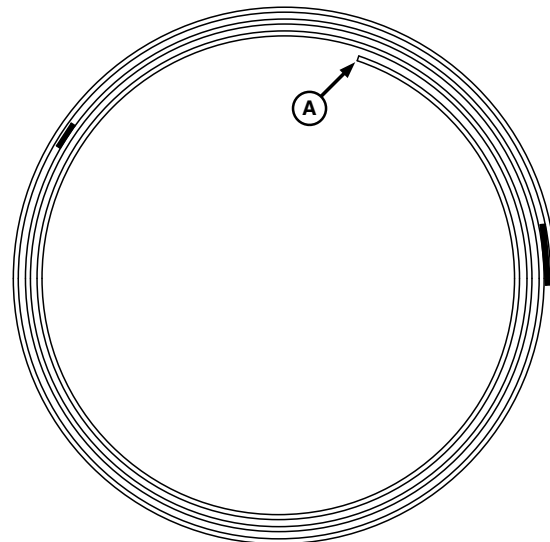


Figure C—228.6 cm (90 in.) Module

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Module Staging On Feeder Floor



Wrap in Feeder Head

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Modules Staged Parallel with Feed Direction

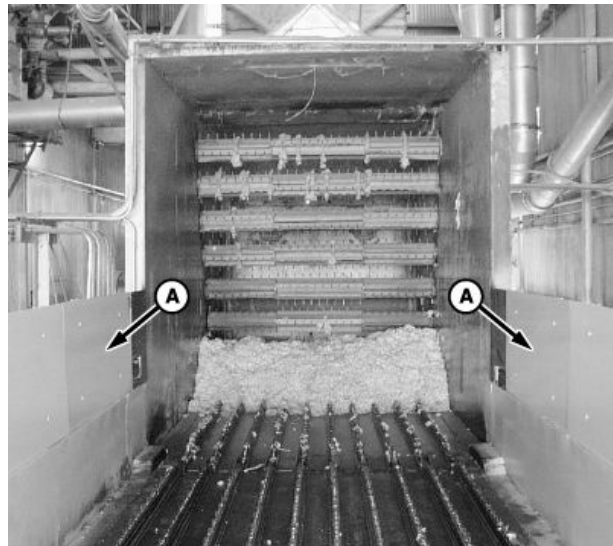
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CAUTION: Avoid serious injury or death. Before removing foreign material from module feeder, follow manufacturer's instructions to put feeder in safe state.

1. Starting at the module feeder, check the entire ginning system at regular intervals for module wrap and other debris.
2. Discard any loose material to prevent wrap in feeder head (as shown) and lint contamination during the ginning process. See Wrap Disposal in this instruction for methods of properly disposing of wrap.

All non-wrap foreign materials should be placed in secure containers away from module feeders and gin equipment.

3. Modules must be placed **close together without gaps** on feeder floor to ensure constant feeding into gin.
4. If modules are placed with axis oriented parallel to the feeder floor travel direction, **feeder side walls (A)**, approximately 5 feet high, may be needed to contain unwrapped modules.



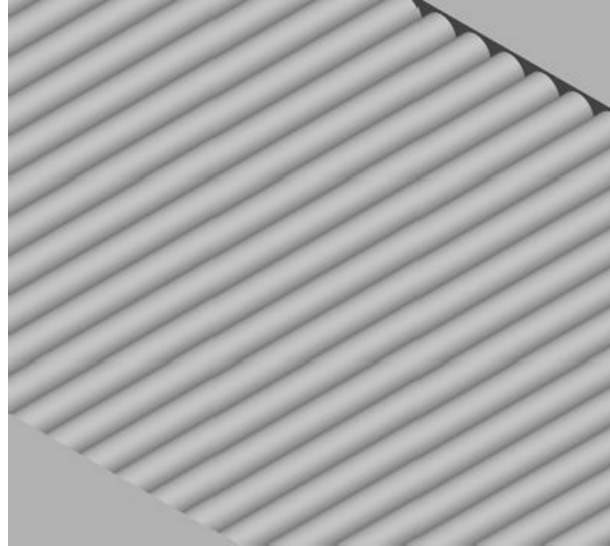
A—Feeder Side Walls

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5. Modules placed onto a roller style feeder floor with the axis oriented parallel to the floor travel direction may need **increased friction** between the rollers and the unwrapped modules. Welding iron rods to every other roller to maintain clearance or applying slip resistant paint may be required.
6. Modules placed with axis oriented perpendicular to the feeder floor travel direction should have suitable **feed rate control or an accumulator** to compensate for the peaks and valleys of the modules.



Roller Feeder



Modules Placed Perpendicular to Feed Direction

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7. For **moving head feeders**, modules should be placed on the concrete slab with the module axis oriented perpendicular to the travel direction to control seed cotton spillage.



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Wrap Disposal

A compactor is recommended near the unwrapping location to package all plastic from the round module ginning process.

Deposit all plastic fragments from gin yard and feeder floor entrance in compactor to reduce chance of plastic contamination.

NOTE: See Round Module Wrap Recyclers Guide found at www.Deere.com for a list of available recyclers in the United States.



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General Wrap Cleanliness

IMPORTANT: If wrap damage has occurred, any loose or torn pieces should be immediately gathered up and properly disposed.

Recommended Inspection Areas:

- During picker cleaning and general maintenance

- Field staging area around modules
- Tail wheels/chains of module trucks
- Surface/edges of flat bed trailers
- Gin yard module staging area
- Feed floor entrance
- Wrap removal location
- Wrap recycling/compactor location

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