

Cotton Module Staging Instructions and Truck Requirements



JOHN DEERE

INSTALLATION INSTRUCTIONS Cotton Module Staging Instructions and Truck Requirements

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**John Deere Des Moines Works
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Introduction

IMPORTANT: Proper module staging affects the ability and reliability of module pickup, storage, and ginning.

This document demonstrates the recommended procedure for handling, staging and loading round modules for transport to the gin. Failure to follow these instructions can adversely effect the integrity of the modules. Refer to the operator's manual supplied with the module handler for tractor setup and proper operation.



Properly Staged Modules at Gin

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Round Module Handling

General Module Handling Information

- Use Cotton Module Handler to move modules (preferred method).
- The Cotton Module Handler design allows it to safely squeeze under round modules from the end. At the beginning of lift, ensure handler pans (lift arms) rest on ground so when the pans squeeze under the sides the wrap is not damaged and module is securely cradled.
- Attempting to re-squeeze when module is raised can cause excessive stress on wrap.
- Transport speed of the tractor with a module on the handler shall not exceed 16 km/h (10 mph).
- To prevent drag tearing the wrap's underside during module transit and staging, the gap between the underside of the module and the ground should never be less than 15 cm (6 in.).
- A masted-style handler is recommended when transporting modules down harvested rows.

- When transporting modules through harvested rows, the module should be carried high enough to minimize contact with standing stalks.
- Fully raising the three point hitch is recommended when transporting with non-masted handlers.
- When loading or unloading flatbed trailers, drive straight away from the trailer (perpendicular to bed axis) to prevent handler contact with adjacent modules.
- Significant wrap tears must be repaired in the field before module pickup to prevent further wrap damage, storage issues, and ginning problems.
- Loose outer tails must be secured with 3M 90 spray adhesive or reinforced cotton bale repair tape before being retrieved to prevent potential module wrap damage and ginning difficulties.

IMPORTANT: Proper tractor ballast is required when handling modules to ensure correct weight distribution.

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Round Module Staging

Choosing The Proper Staging Site

IMPORTANT: Do not stage or drop modules on cut or chopped stalks.

Modules should be staged on a high, flat, well drained surface. Staging on flat driveways, turn rows or disked surface is optimal.

If at all possible do not stage modules on top of rows, beds or field locations where module truck access is difficult. Modules tend to take the shape of the surface they are placed on (see Incorrect Staging Surface graphic). Setting on beds or uneven surfaces causes module truck chains to dig into the ground to get under the bottom of module.

When choosing staging locations, make sure modules can be retrieved from the location following rain events.

If module truck tires and/or tracks slip when retrieving the load, damage may occur to the underside of the module.



Incorrect Staging Surface

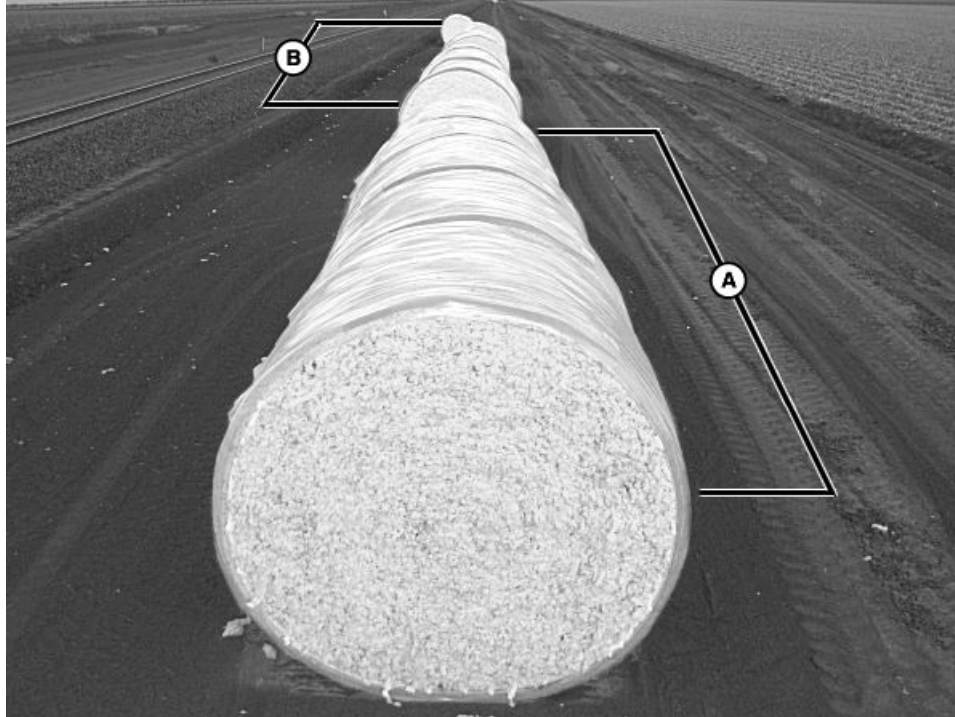
This kind of damage is result of pickup chain engaging the module bottom and moving the module forward at a speed that is faster than the backward speed of the module truck.

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Module Staging for Module Trucks



A—Proper Center Alignment **B—Improper Center Alignment**

Center-line of individual modules staged for loading must fall in a +/- 13 cm (5 in.) band width (straight line) of the composite center-lines of all four modules. Because all modules are not the same diameter, do not simply align one side of all modules.

Modules (A) are properly center aligned, modules (B) are not.

Improper alignment increases the chance of module wrap tear and damage to the integrity of the module.

Misaligned modules result in interruptions in module loading because the truck driver must stop and realign the truck before loading another round module. These loading interruptions may result in more wrap damage caused by modules scrubbing the hauler walls.

Utilize GPS capability when available to form straight lines. The proper use of GPS will aid in properly aligning modules for pickup.

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Modules must be staged for module truck pickup with gaps between 102 mm (4 in.) and 203 mm (8 in.) at module cores as shown (Figure A).

Modules staged too close (Figure B), can cause wrap tearing as modules travel up inclined module truck bed due to contact with adjacent modules. Module ends that contact each other during long-term storage can increase chances of trapped moisture damage to seed cotton such as fungus and mold growth. Gaps between modules allow ventilation.

Modules staged too far apart (Figure C), can cause four modules to be too long for legal module truck bed lengths.

IMPORTANT: Do not run first round module tight against front of truck bed (headboard) for any reason.

Stalling travel of first loaded module by contacting the module truck's headboard will cause wrap cutting due to continuous movement of loading chains and will close the gap between the next module.

If modules are not staged properly, do not use module truck to correct the staging.

Tip—An easy way to achieve the correct gap is to bump against a previously staged module and then determine the number of tractor tire lugs that must pass forward from a line of sight before a proper gap is achieved.



Figure A



Figure B

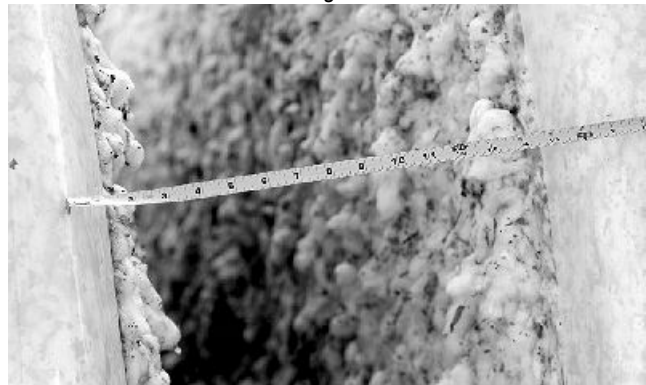


Figure C

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Round Module Loading

Loading and Transporting with Module Trucks

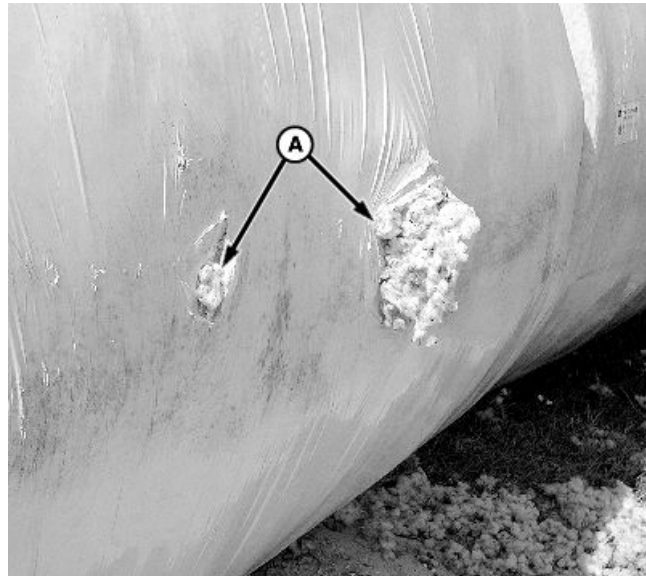
NOTE: Maximum recommended module size for module truck transport is 228.6 cm (90 in.). Larger modules may be damaged in transport as shown, always size module according to transportation method and ginner recommendations.

Consult with your gin to determine the available methods of transport.

1. Load or unload modules with continuous and even truck speed. Starting, stopping, and varying speed will cause slip of the modules relative to the chains.
2. Chain tail wheels should clear ground surface by approximately 25 mm (1 in.). Excessive digging is not required and causes more foreign matter to be brought to the gin. Many module truck operators compensate for the shifting of the bed angle as a conventional module is loaded by starting with the chains significantly off the ground at the start of the load cycle. Because a module truck is picking up four individual entities instead of one continuous module, the bed deflection is less.

IMPORTANT: Do not run first round module up tight against the front of truck bed (headboard) for any reason. Stalling the travel of first module against the headboard may cause cutting of the wrap due to relative motion of chains against the module bottom and will also close up the gap to the next module. If modules are not staged properly, do not use the module truck as the means to correct incorrect staging.

A—Damaged Wrap



Module Truck Damage



Module Truck Unloading

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Module Truck or Moon Buggy Requirements

IMPORTANT: Proper module truck loading and unloading of round modules impacts the ability and reliability of subsequent ginning of these modules. Be sure to share this important information with all truck drivers and use the following check list to verify they have the proper equipment to handle the modules.

- Module trucks with 12 bed chains **must have inside eight chains fitted with “preferred chain”** as shown to prevent damage to the module wrap.
- Module trucks with 11 bed chains **must have inside seven chains fitted with “preferred chain”** to prevent damage to the module plastic wrap.
- As a final check, non-preferred chain is only allowed within 43 cm (17 in.) of module truck inside wall surfaces.
- If chain tail wheels are the sprocket style, paddle style with sharp points, or narrower than 5 cm (2 in.), replace with wide smooth paddle style tail wheels.
- For moon buggies, enough strands of chains must be replaced to the middle of the width to accommodate a 1.5 m (5 ft.) flat portion of a module, regardless of the side to side placement of the module. As with a module truck, no more than 43 cm (17 in.) of non-preferred chain is allowed from the extreme inside width of the moon buggy to prevent damage to the plastic wrap.
- Verify accurate synchronization of truck or moon buggy bed to ground speed per manufacturer’s owner’s manual.

IMPORTANT: Many module trucks have the chain speed biased to run slightly faster than the ground speed. This arrangement is not permissible with round modules and will cause cutting on the underside of the modules during loading and unloading.

- Do not attempt to load round modules if improperly staged.
- Verify that module group and individual modules have been identified per farmer and gin instructions before loading.
- Do not add 2”x 4” boards or other spacers to the troughs in between the module truck bed chains. The spacers



Preferred Module Truck



Preferred Chain

- can cause wrap damage due to added friction between the underside of the module and the truck bed.
- Daily inspections for and removal of sharp edges on the module truck side panels, floor or other areas where round modules directly contact the hauler are important.
 - Rubber or steel cleat tracks are highly recommended when handling round modules in wet or sandy conditions.

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Loading and Transporting with Flatbeds

IMPORTANT: When contemplating maximizing round module dimensions always consider available transportation methods and ginner recommendations. State and Federal laws or regulations governing seed cotton hauling and ginning may affect round module dimensions. Some important gin considerations are the types of available module yard handling equipment, module feeder limitations and procedures used for wrap removal.

Always read and follow guidelines in Cotton Module Handler's owner's manual.



Loading Flatbed

1. The Frontier Cotton Module Handler with optional mast is required to load modules on a flatbed trailer.
2. When loading or unloading flatbed trailers, drive straight away from the trailer (perpendicular to bed axis) to prevent handler contact with adjacent modules.

3. Properly secure modules to flatbed trailer before transporting to gin.

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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
- Feeder floor entrance
- Wrap removal location
- Wrap recycling/compactor location

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