

Double Windrow Attachment – California Special

RC049028 (4995 Windrower s/n E04995X330677 and above)



Operator's Manual

Includes installation, operating, adjustment, maintenance, technical, repair parts and safety instructions for the double windrow attachment.



Please retain this document for future reference.

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RCI Engineering LLC
New Attachments for Agricultural Equipment
Warranty Statement

RCI Engineering LLC, hereinafter referred to as RCI, warrants new RCI attachments, to the Original Retail Purchaser to be free from defects in material and workmanship for a period of one (1) year from the date of sale.

RCI warranty includes:

Genuine RCI parts costs required to repair or replace equipment at the selling dealer's business location.

RCI MAKES NO REPRESENTATIONS OR WARRANTIES OF ANY KIND, EXPRESSED OR IMPLIED (INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE), EXCEPT AS EXPRESSLY STATED IN THIS WARRANTY STATEMENT.

RCI WARRANTY DOES NOT INCLUDE:

1. Transportation to the selling dealer's business location or, at the option of the Original Retail Purchaser, the cost of a service call.
2. Freight costs above standard shipping costs for the replacement parts.
3. Labor to make the repair or installation of the failed component.
4. Used equipment.
5. Components covered by their own non-RCI warranties, such as tires and trade accessories.
6. Repairs or adjustments caused by: improper use; non-intended use; failure to follow recommended maintenance procedures; use of unauthorized attachments; accident or other casualty.
7. Liability for incidental or consequential damages of any type, including, but not limited to lost profits or expenses of acquiring replacement equipment or damage to machines to which the attachment is installed.

No agent, employee, or representative of RCI has any authority to bind RCI to any warranty except as specifically set forth herein. Any of these limitations excluded by local law shall be deemed deleted from this warranty; all other terms will continue to apply.

Note regarding the belt used in the double windrow attachment:

The belt used in the double windrow attachment is warranted against defects in material and workmanship for the period stated above. This warranty does not include damaged caused to the belt by debris, foreign material, misalignment or other tracking issues, or from contact with other components that are misadjusted by the operator.

Double Windrow Attachment for John Deere 4995 Windrower



Intended Use:

For merging windrows with a 4995 in front of a Self-Propelled Forage Harvester or in conditions that do not require wide swaths for dry-down. This bundle can eliminate the need for an operation of raking or merging. This attachment works with 994 (4.5 m) and 995 John Deere Rotary Platforms.

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Safe Operation of Machine

Operator Authorization

The machine owner must provide the operator of the machine this manual and ensure that the operator reads and understands the contents. This must be performed before the machine is put into operation.

Safety Alert Symbol



This safety alert symbol is used to alert the operator to the potential for personal injury. Whenever this symbol is noticed in this manual or on the machine, be alert to the situation and read the message near the symbol. Always be alert for the potential for personal injury.

General Safety Precautions / Accident Prevention

Before operation of the machine each time, check the entire machine for operational and road safety. Refer to the Operator's Manual for the 4995 Self-Propelled Windrower for all information regarding the windrower. This manual is for the double windrow attachment and only covers items related to the operation of the attachment.

1. The warning and safety decals on the attachment provide important information to ensure safe operation of the machine. Read and follow these instructions at all times to remain safe.
2. Before operation of the machine, familiarize yourself with all controls of the machine and attachment as well as the function of the unit.
3. Check all guards and shields to make sure they are in place and functional. Replace any defective or missing guards, shields, or components before operation.
4. Avoid loose fitting clothing. The operator should always wear close-fitting clothing and sturdy footwear.
5. When traveling on public roads or transporting the machine, obey all regulations for the area. See TRANSPORTING THE MACHINE for more information on proper machine setup for transportation.
6. Before harvesting begins each time the machine is operated, inspect the area around the machine. Ensure that no one is close to the machine for bystander safety.
7. Keep clear of the working and danger area of the machine.
8. Use caution when working on moveable components of the machine. There are many pinch and shear points.

Safety Warning Signs

Safety Messages

Whenever the words and symbols shown below are used in this manual or on the machine, the instructions **MUST** be followed as they relate to personal safety.

DANGER in white letters on a red background indicates an imminently hazardous situation that, if not avoided, will cause death or very serious injury.

WARNING in black letters on an orange background indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION in black letters on a yellow background indicates a potentially hazardous situation that, if not avoided, may result in minor injury.

Safety Sign Locations

1



2



3

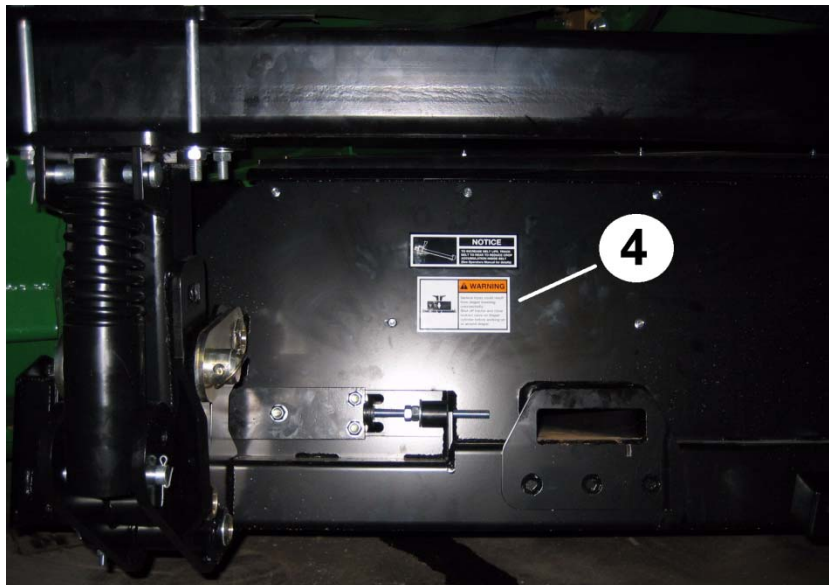
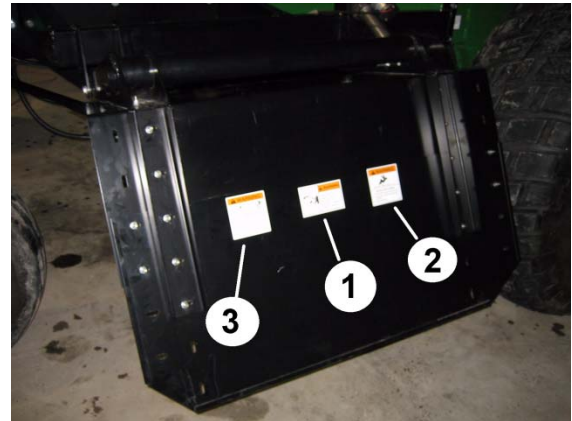


4



Safety Sign Locations

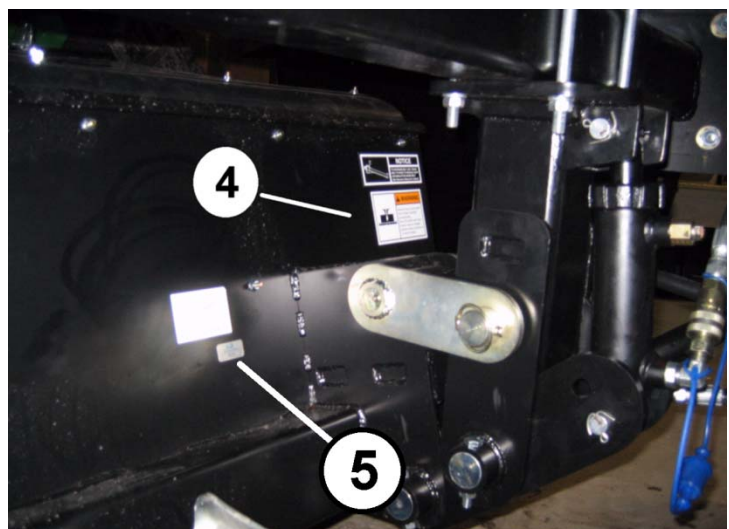
Side Deflector



Rear Left End of Belt Frame

Rear Right End of Belt Frame

Note: Key 5 indicates serial number decal for the attachment.



MACHINE TRANSPORT

This procedure is to be followed when transporting the machine with the tires removed.

Always follow all transportation procedures outlined in the 4995 Self-Propelled Windrower Operator's Manual.

First, raise and lock out the attachment (see **LOCKING THE BELT FRAME IN RAISED POSITION** in **ADJUSTMENTS** section in this manual).

Load the machine onto the transport trailer.

Secure machine properly.

Remove Pin (Key 1, Figure 1) to release the deflector from the actuator. Reinstall the pin with bushings on the deflector.

Secure the actuator as shown (Key 2, Figure 1).

Add padding to deflector to prevent damage to belt during transport (Key 3, Figure 1).

Secure the deflector as shown (Key 4, Figure 1) with proper strapping.

When it is time to reassemble the deflector, follow the steps above in reverse.

IMPORTANT: The jack on the belt frame can be removed or the chain on the retaining clip can be used to hold the handle up for transport and operation in the field. It is recommended to remove the jack for field use. **NEVER OPERATE THE MACHINE WITH THE HANDLE UNSECURED AS DAMAGE MAY RESULT.** (See Figure 2 and Figure 3.)



Figure 1. Transport

- 1 – Deflector Pin with Hitch Pin Clip
- 2 – Electric Actuator
- 3 – Padding on edge of Deflector
- 4 – Strapping for Deflector



Figure 2. Jack Stand

- 1 – Chain to secure handle

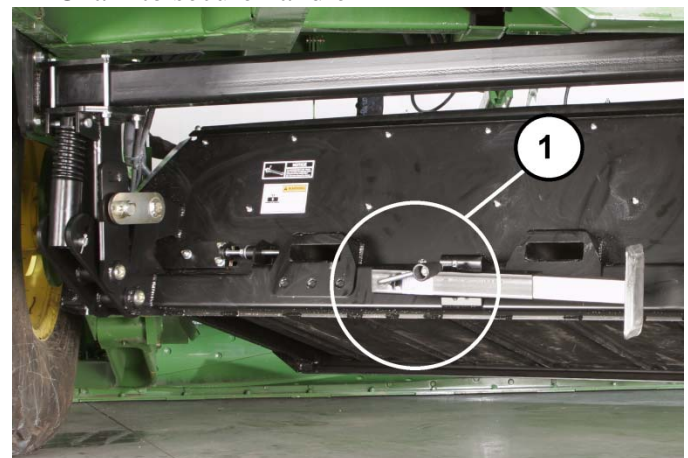


Figure 3. Proper Jack Installation On Belt Frame

OPERATING THE ATTACHMENT

Preparing for the Field

CAUTION: To avoid bodily injury, disengage platform and shut off windrower engine before starting prechecks.

1. Conveyor down stops are adjusted (See **BELT FRAME DOWN STOP** in **INITIAL SETTINGS** section).
2. Deflector panel is adjusted for proper ground clearance (See **DEFLECTOR PANEL** in **INITIAL SETTINGS** section).
3. Trash and debris is removed from the machine, especially around bearings and above top deflector.
4. All shields and guards are properly installed and tightened. Replace any damaged or missing shields and guards.
5. Belt speed is adjusted for crop conditions (See **ADJUSTING BELT SPEED** in this section).
6. Deflector position is adjusted for crop conditions and mode of harvesting (See **DEFLECTOR ACTUATOR** in **INITIAL SETTINGS** section.)
7. Service items are completed (See **MAINTENANCE** section).
8. Belt Condition and Tension are proper (See **BELT ADJUSTMENTS** in **ADJUSTMENTS** section).
9. Belt frame is properly installed and hardware is properly fastened (See **BELT FRAME INSTALLATION** in **SERVICE** section).
10. All warning labels and signs are visible and in place. Replace any warning labels that are missing or damaged (See **SAFETY SIGNS** at beginning of this manual).
11. Checklist for Windrower is complete (See **Operating Windrower, Preparing for the Field** section of **Windrower Operator's Manual**).
12. Checklist for Platform is complete (See **Prestarting Checks** section of the **Platform Operator's Manual**).
13. All adjustments for crop conditions have been made (See **INITIAL SETUP CONDITIONS** in **PERFORMANCE** section).

Engaging the Conveyor Belt

Refer to the 4995 Self-Propelled Windrower Operator's Manual for operation of controls of Windrower.

Once the platform is engaged by using the engage switch (Key 1) on the armrest, the belt is engaged by pressing the DWA engage switch (Key 2) on the armrest to the "On" position.

Note: The belt will not engage if the platform is not engaged or if the operator presence is not attained.

When the belt is engaged, an amber light will illuminate the switch.

Turn off the belt by returning the DWA engage switch to the "Off" Position.

Raising or Lowering the Belt Frame

The belt frame lift mechanism uses a hydraulic cylinder independent of the platform lift circuit but is designed to automatically raise and lower at the same time as the platform.

If there is ever a need to raise or lower the belt frame independently of the platform, this can be achieved by pressing the belt frame raise / lower switch (Key 3) in the appropriate direction for the desired effect.

Note: After the belt frame is moved independent of the platform, the belt frame will resume automatic position control with the next platform position control.



Figure 1. Armrest for 4995 s/n 330677 and above

- 1 – Platform Engage Switch
- 2 – DWA Conveyor Belt Engage
- 3 – Belt Frame Raise/Lower Switch

Adjusting Belt Speed

Belt speed is adjusted by turning the dial (Key 4) clockwise for an increase in belt speed or counterclockwise for a decrease in belt speed.

Belt speed will affect windrow formation and the distance that the windrow is moved to the side of the windrower.

Important: Lower belt speeds will tend to increase the life of the belt. Use the slowest acceptable belt speed for the conditions the machine is operating in to produce the desired windrow effect.

Adjusting the Deflector

The side deflector is adjusted to prevent crop from contacting standing crop in the first pass of a double-windrow formation as well as to assist in windrow formation in some crop conditions.

The side deflector position is adjusted by pressing the deflector raise / lower switch on the armrest in the appropriate direction for the desired result (Key 5).

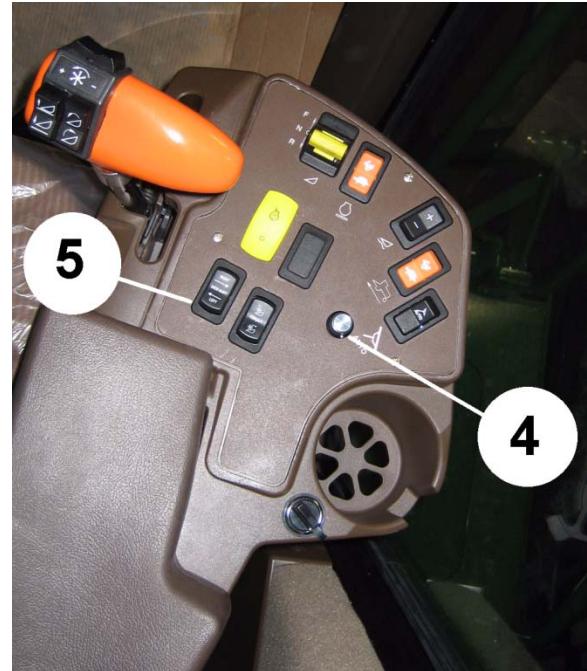


Figure 2. Armrest for 4995 s/n 330677 and above

4 – Belt Speed Control Dial

5 – Deflector Raise/Lower Switch

FIELD OPERATION

Note: Refer to the 4995 Self-Propelled Windrower Operator's Manual for operation of controls of Windrower.

Summary

This following describes operation of the machine with the DWA bundle installed for three modes of harvesting

- a. Swathing
- b. Single Windrowing
- c. Double Windrowing
 - i. Side-by-side
 - ii. Two-in-one

Swathing

The belt frame can remain installed for swathing operations.

Raise the platform completely and shut off the engine.

Engage the platform lock.

Lock the belt frame in the raised position (see LOCKING BELT FRAME IN RAISED POSITION in ADJUSTMENTS section).

Lower swath board behind conditioning rolls.

Proceed with swathing operation.

Single Windrowing

If smaller windrows are required and side forming shields are needed for windrow formation, the DWA belt frame can be removed in approximately 15 minutes (on hard surface) for normal windrowing.

See BELT FRAME REMOVAL in the Maintenance section.

Refer to the Windrower Operator's Manual for proper windrowing operation.

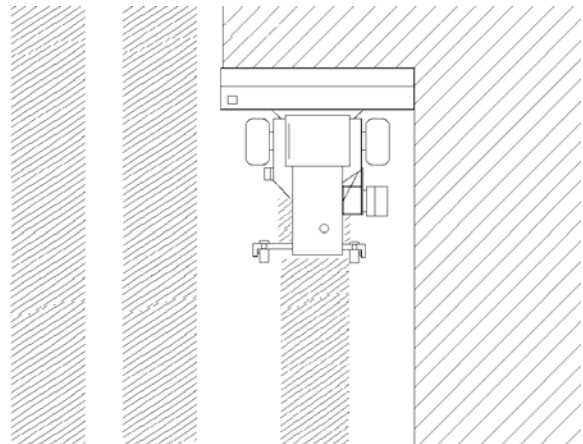


Figure 1. Swathing

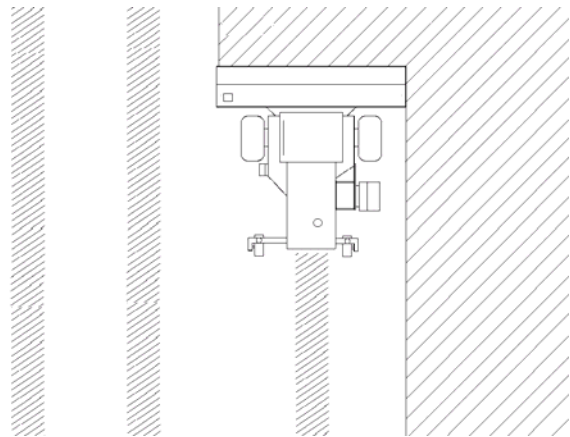


Figure 2. Single Windrowing

Double Windrowing

Two harvesting patterns are possible when double windrowing:

- a/ Side-By-Side
- b/ Two-In-One

Side-By-Side Double Windrowing

Side-by-side double windrowing is achieved when two windrows are merged to be placed next to each other without overlap. This windrowing method is used when drying time is needed for proper dry-down of the windrowed materials.

In light conditions, adjust the belt speed alone to reach the desired windrow. The deflector may not be needed and can remain in the raised position.

In heavy conditions, increase the belt speed as high as necessary for the conditions.

Important: Slower belt speeds increase the life of the belt.

In heavy conditions, adjust the deflector to produce the desired windrow spacing.

Two-In-One Double Windrowing

Two-in-one double windrowing is achieved by the following steps.

- a/ In the first pass, set the deflector down (heavy conditions) or slow the belt speed (light conditions) to prevent the harvested crop from contacting standing crop (see Figure 4).
- b/ In the second pass, raise the deflector (heavy conditions) or increase the belt speed (light conditions) to deliver the second windrow on top of the first windrow (See Figure 5).

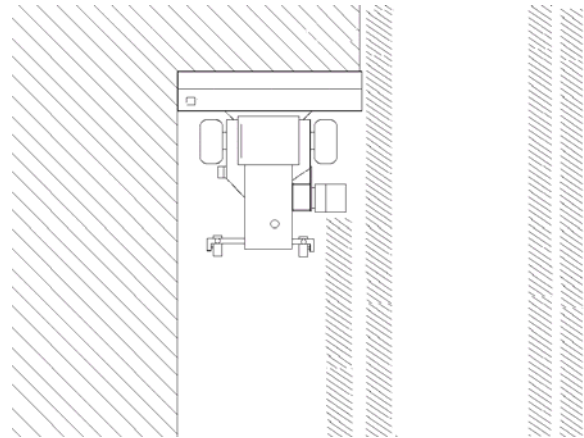


Figure 3. Double Windrowing, Side-by-side

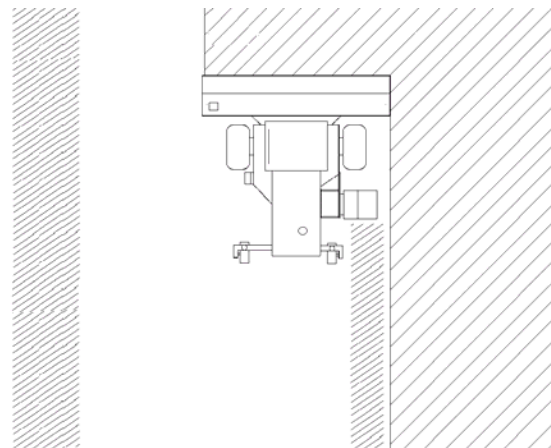


Figure 4. Double Windrowing, First Pass
(Two-in-one)

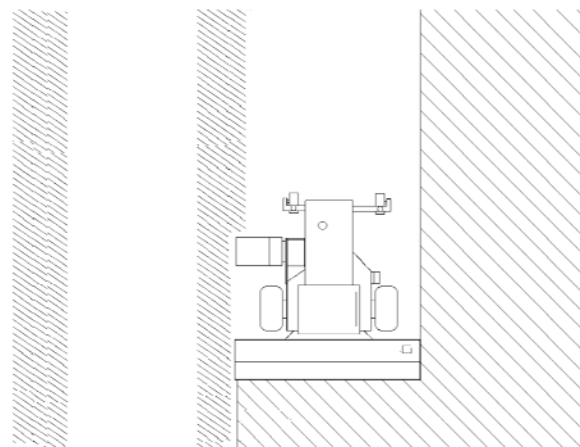


Figure 5. Double Windrowing, Second Pass
(Two-in-one)

INITIAL SETTINGS

Deflector Actuator

There are four mounting holes in the deflector for the actuator. These are used for fine adjustments of deflector position at the extents of the actuator travel. The recommended position for most conditions is the bottom, outer-most hole from the machine.

Deflector Panel

The bottom sheet of the deflector can be adjusted to affect the distance from the bottom of the panel and the ground. To adjust, remove the appropriate hardware and move the bottom sheet to another set of holes in the desired direction.

IMPORTANT: DO NOT ADJUST THE DEFLECTOR PANEL SUCH THAT IT EXTENDS PAST THE END OF THE PLATFORM WHEN THE DEFLECTOR IS IN THE RAISED POSITION.

FAILURE TO DO SO MAY RESULT IN BYSTANDER INJURY OR MACHINE DAMAGE.

Belt Frame Down Stop

The down stop for the belt frame must be properly adjusted to ensure a balanced load on the belt frame and proper ground clearance for harvesting.

Proper ground clearance is measured at the bottom edge of the skid shoe relative to the ground when the machine is parked on a hard surface and the platform is resting on the ground.

Desired ground clearance is 125-150 mm (5-6"). Lower clearance may result in more contact with obstructions in the field and may lead to machine damage. Higher

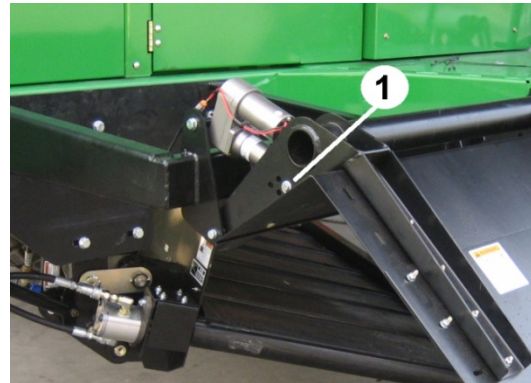


Figure 1. Deflector Actuator

1 – Pin Location



Figure 2. Deflector Panel

1 – Mounting hardware

2 – Panel

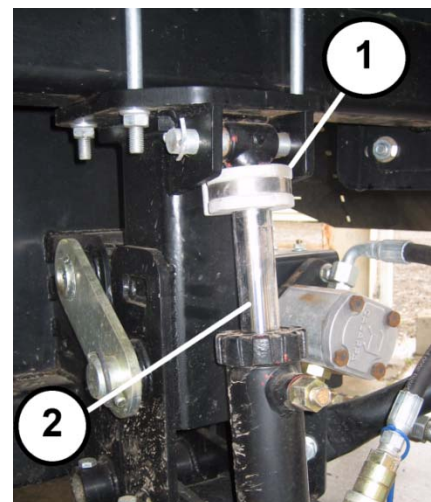


Figure 3. Cylinder Stop Install
1 – Cylinder Stop 2 – Cylinder

clearance may lead to issues with crop flow to the belt frame.

First, use the cylinder stops of varying sizes included in this bundle on the pivot cylinder to achieve the desired ground clearance on the machine.

Once ground clearance has been set at the cylinder, estimate the necessary chain setting at the front, left corner of the belt frame.

Raise the belt frame manually from the cab and then turn off the machine. Place the chain in the bracket to the desired link from the outside of the machine.

WARNING: DO NOT CLIMB ON OR AROUND THE BELT FRAME UNDER THE MACHINE WITH THE BELT FRAME IN THE RAISED POSITION. PERSONAL INJURY MAY RESULT.

With the chain at the desired link, lower the belt frame to the stops and verify the chain has tension when the belt frame is in the down position.

Fine adjustments of chain tension can be made by adjusting the carriage bolt in the slot at the end of the belt frame or by placing a half-twist in the chain before installation in the chain hook.

Important: The belt frame must be balanced between the chain and the cylinder stops in the lowered position.

Note: If the belt frame cannot be lowered to the desired ground clearance, slightly loosen the four (4) M16 bolts at each end of the cross tube and the single M12 bolt at the strut. This will allow the cross tube to rotate within the tolerances of the holes in the adapter plates to lower the front of the belt

frame closer to the ground. When completed, tighten all hardware properly.

Forming Shield Position

The side shields of the forming shields can be adjusted to optimize crop flow to the DWA.

With the belt frame in the raised position, the platform at a full tilt forward, on level ground, move the LH forming shield inward until there is 1" of clearance between the forming shield and the belt frame.

Note: It is important to maintain at least 1" of clearance so that the forming shield will not contact the belt or belt frame when passing through ditches while single swathing.

Using a permanent marker, indicate the maximum position that can be used with the DWA for future reference.

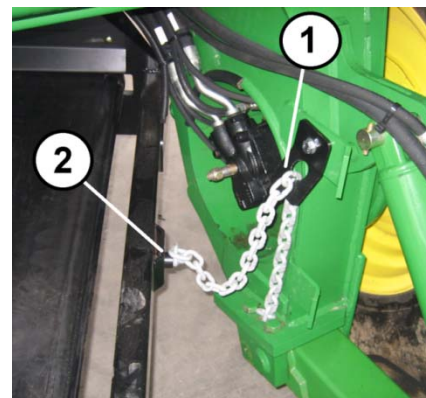


Figure 4. Chain Hook and Chain
1 – Chain Hook 2 – Carriage Bolt

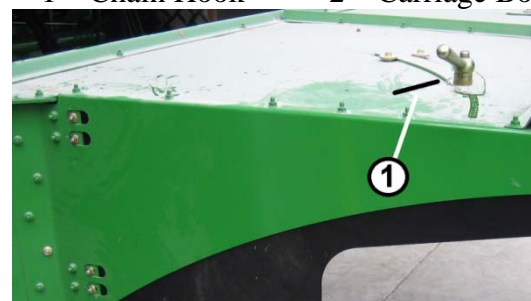


Figure 5. LH Forming Shield Handle
1 – Mark for future reference

The RH forming shield can be moved a small amount inward such that it is pointing at the RH edge of the rear plate of the belt frame. In this way, crop passing through the forming shields will be directed at the double windrow attachment and not past the end of the belt frame. Any crop directed past the end of the frame may adversely affect crop flow.

Swathboard Setting

The swathboard directly behind the conditioner of the platform must be properly adjusted (if adjustment device bundle is installed) such that crop can pass to the double windrow attachment.

For standard swathing, lower the swathboard completely and lock the belt frame in the raised position (see LOCKING THE BELT FRAME IN THE RAISED POSITION in the ADJUSTMENTS section).

For all double windrowing operations, raise the swathboard completely as indicated in Figure 7.

Deflector Installation

Some field conditions may require the installation of a deflector behind the conditioning rolls. This is typically required in very light crop conditions (see PERFORMANCE ADJUSTMENTS section).

These parts can be ordered through the John Deere parts system



Figure 6. RH Forming Shield

1 – RH Forming Shield

2 – RH Edge of rear plate of belt frame



Figure 7. Swathboard Adjustment

1 – Swathboard Handle

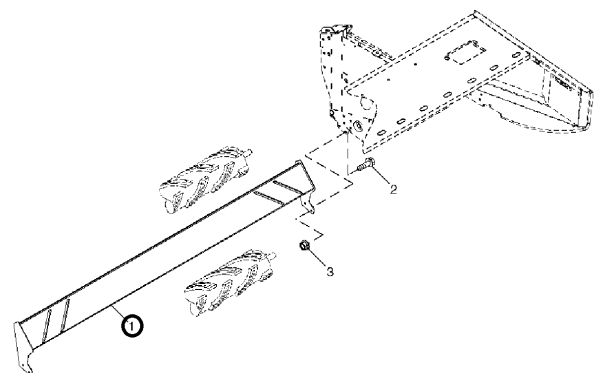


Figure 8. Deflector Install

1 - Deflector

Conditioner Speed-Up Pulleys

Some field conditions may require the installation of different pulleys to drive the conditioning rolls. This is typically required in very light crop conditions (see PERFORMANCE ADJUSTMENTS section).

These parts can be ordered through the John Deere parts system.

Conditioner Gap and Tension

The springs of the conditioner should be adjusted to factory specification such that the conditioner has enough pressure to contact the crop with enough force to eject the crop to the double windrow attachment. Conditioner roll clearance should be set as tight as possible for best performance. Recommended setting is $\frac{1}{2}$ (half) turn above “rumble” or contact point. See Operator’s Manual for the platform (header) for adjustment procedure.

Mirror – Right Side

Adjust the RH cab mirror for visibility of the deflector, top sheet of the double windrow attachment, and rear of the machine. Proper adjustment will allow the operator to see the performance of the attachment during harvesting while having visibility to the rear of the machine without having to turn in the seat to look out the rear window.

Belt Speed

Adjust the belt speed to at least half speed for starting harvesting. Failure to do so may result in poor performance of the machine.

Final belt speed adjustment is made while harvesting.

See OPERATING THE ATTACHMENT section of this manual for more information.

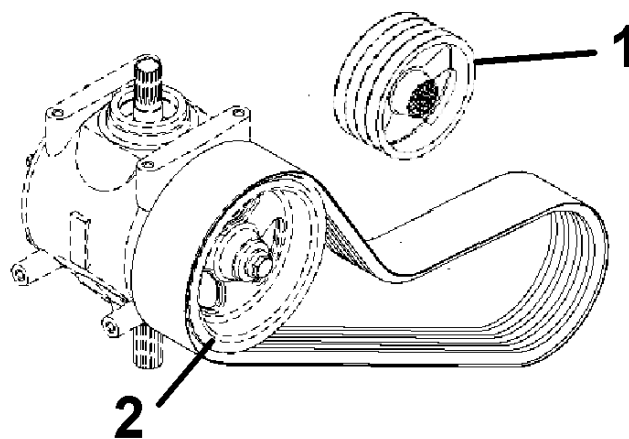


Figure 9. Speed-Up Pulleys



Figure 10. RH Mirror

1 – Mirror for adjustment

ADJUSTMENTS

Front Crop Guide Adjustment

The front crop guide of the belt frame prevents crop from entering the area at the front side of the belt.

Improper adjustment of this crop guide may result in premature wear and/or failure of the belt.

Always make sure area is free of debris before making adjustments.

To adjust, loosen the front bolts of the crop guide and slide fore or aft to adjust the distance between the guide and the belt.

Measurement: The distance between the guide and the belt must be 6 mm (0.25 in) at the closest point. Adjust the crop guide to be as level as possible, parallel to the belt.

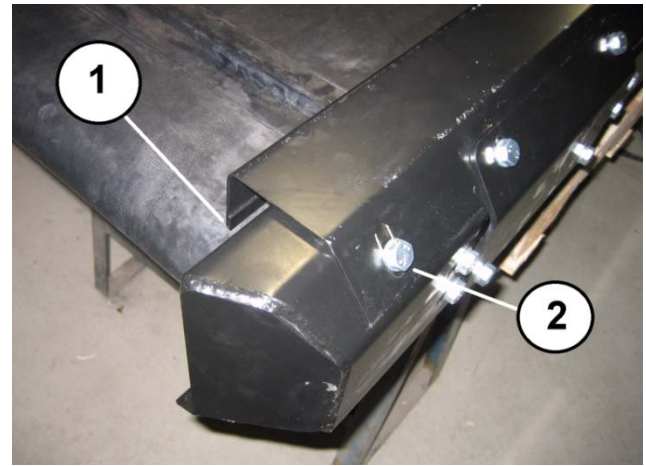


Figure 1. Front Crop Guide

1 – Area of measurement

2 – Front bolts

Rear Crop Guide Adjustment

The rear crop guide of the belt frame prevents crop from entering the area at the rear side of the belt.

Improper adjustment of this crop guide may result in premature wear and/or failure of the belt.

Always make sure area is free of debris before making adjustments.

To adjust, loosen the carriage bolts of the crop guide and slide up or down to adjust the distance between the guide and the belt.

Measurement: The distance between the guide and the belt must be 6 mm (0.25 in) at the closest point. Adjust the crop guide to be as level as possible, parallel to the belt.

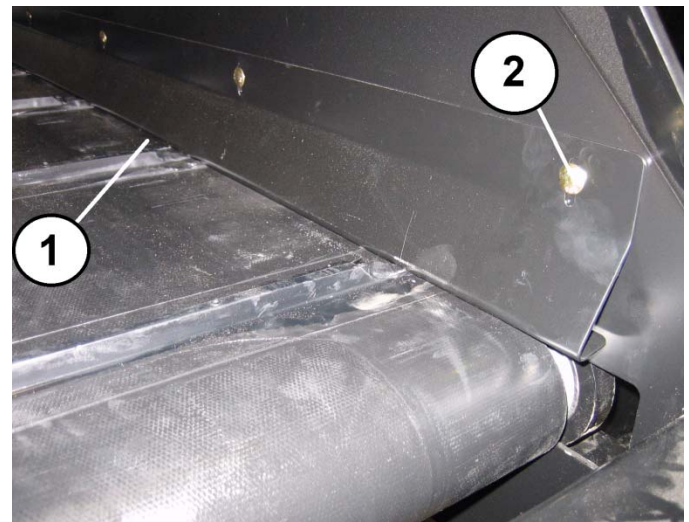


Figure 2. Rear Crop Guide

1 – Area of measurement

2 – Front bolts

Belt Roller Alignment

Proper alignment of both rollers of the belt frame is critical for proper belt tracking and tension.

Remove the access cover at the skid shoe by the drive roller.

Clear any debris in the adjustment area and under the crop guide at the rear plate of the belt frame.

Use a square to verify the belt roller is perpendicular to the belt frame. Make sure the square is against the rear plate of the belt frame and not against any other components or debris.

Adjust the adjustment bolt in or out to move the roller to be perpendicular to the rear plate of the belt frame.

Repeat this process for the idler roller.

Check belt tension (see BELT TENSION ADJUSTMENT in the ADJUSTMENTS section of this manual).

Check belt alignment (see BELT ALIGNMENT ADJUSTMENT in the ADJUSTMENTS section of this manual).

IMPORTANT: Adjust the hydraulic drive motor to align the chain couplers after adjusting the drive roller position. Failure to do so may result in excessive wear at the chain coupler.

Adjust the alignment by adjusting the position of the motor mount brackets using two sets of carriage bolts shown in Figure 5.

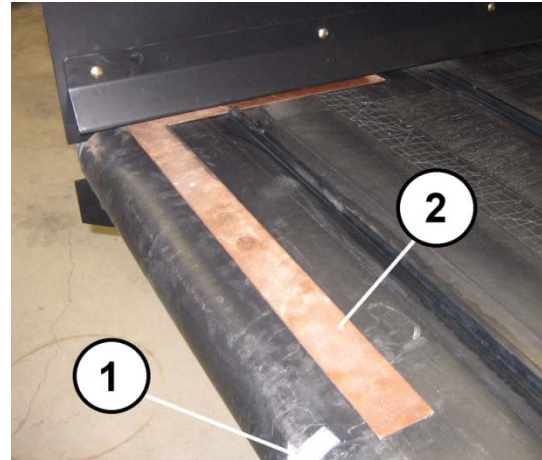


Figure 3. Drive Roller Alignment

1 – Reference: Arrow for proper installation

2 - Square

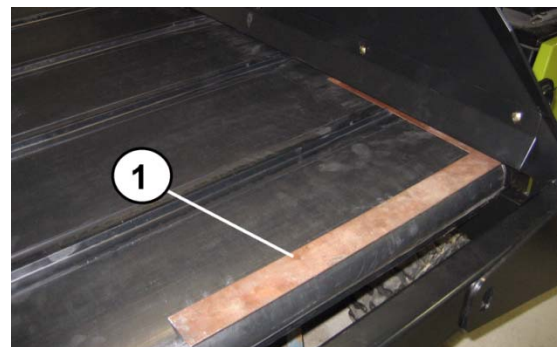


Figure 4. Idler Roller Alignment

1 - Square



Figure 5. Motor Alignment

1 – Motor 2 – Carriage Bolts (2 sides)

Belt Tension Adjustment

The belt tension is maintained by a set of springs on the idler roller of the belt frame assembly. These springs are used to apply a specific amount of load on the belt for proper tensioning.

First, always inspect the rollers to make sure they are clean of debris. Clean as necessary.

Note: : The three M12 Lock nuts that retain the bearing carrier to the belt frame must be tightened such that the washer under the lock nut cannot freely turn and the bolt head is completely engaged in the slot (approximately 10 lbf-ft (14 N-m)).

Over-tightening will not allow the bearing carrier to slide in the slots of the belt frame, which will lead to improper adjustment of belt tension. Do not tighten the bolts further after the belt tension adjustment is made as the bearing carrier must be able to slide along the frame as the belt stretches over time.

Note: Failure to maintain proper belt tension may result in poor belt tracking, belt slippage, and overall shortened belt service life.

Important: Once tensioned, only relieve the belt tension for service work. Do not relieve the belt tension when the double windrow attachment is not in use (i.e. in the off-season). Releasing belt tension and then re-tensioning may cause belt tracking issues.

Follow the steps below to adjust belt tension. Begin at the rear of the belt frame.

First, loosen the jam nut (Key 3) on the adjustment bolt (Key 2).

Tighten the adjustment nut (Key 1) to compress the spring and move the idler roller (Key 4) outward to tension the belt.

Continue to tighten the adjustment nut (Key 1) until the stop bushing (Key 5) can no longer freely turn by hand. Tighten the jam nut (Key 3).

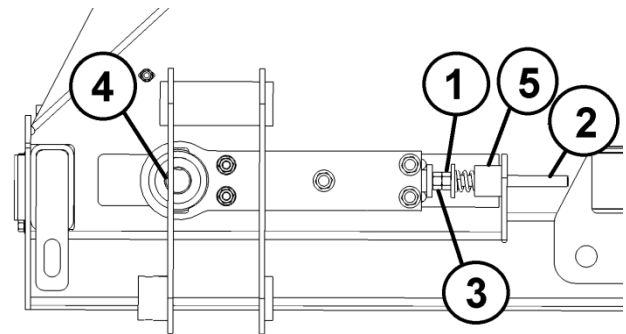


Figure 6. Roller Adjustment

- | | |
|--------------------|---------------------|
| 1 – Adjustment Nut | 2 – Adjustment Bolt |
| 3 – Jam Nut | 4 – Idler Roller |
| 5 – Stop Bushing | |

Repeat process on the front side of the belt frame at the idler roller only.

Always check the belt tracking immediately after adjusting the belt tension (see BELT TRACKING in this section.)

Important: If belt tracking is not adjusted after the belt tension is changed, belt damage may result.

Check the belt roller alignment after tension has been set and adjust as needed (see BELT ROLLER ALIGNMENT in this section.)

NOTICE:

This double windrow attachment has been equipped with a factory-installed update for improved belt tracking feature over previous generations of double windrow attachments.

Purpose of Bundle

The purpose of this bundle is to change the belt to that of a style using a groove for improved tracking. A new skid shoe is also included that is of lower profile for improved crop flow in light crop conditions.

Maintenance:

Upon completion of the bundle, belt tension will need to be monitored and adjusted in the same manner as with the standard endless belt, as indicated on the previous pages..

With the updates, belt tracking adjustments are not needed, so long as the drive roller is installed perpendicular to the back edge of the belt frame.

Locking Belt Frame In Raised Position

The following procedure is used when locking the belt frame in the raised position for single windrowing.

Raise the belt frame manually from the cab and then turn off the machine.

WARNING: DO NOT CLIMB ON OR AROUND THE BELT FRAME UNDER THE MACHINE WITH THE BELT FRAME IN A RAISED POSITION. PERSONAL INJURY MAY RESULT.

Install all cylinder stops on the belt frame lift cylinder as shown in Figure 13. From the cab, lower the belt frame to the cylinder stops.

Remove the quick coupler and install the dust caps at the belt frame lift cylinder indicated in Figure 13.

Secure the hose for transport around the hydraulic valve or insert the hose in the main frame of the machine such that the hose is no longer hanging below the frame of the machine.

Unlocking Belt Frame From Raised Position

To unlock the belt frame, shut off the engine and reconnect the hydraulic line to the belt frame lift cylinder. Raise the belt frame manually from the cab and then turn off the machine.

WARNING: DO NOT CLIMB ON OR AROUND THE BELT FRAME UNDER THE MACHINE WITH THE BELT FRAME IN A RAISED POSITION. PERSONAL INJURY MAY RESULT.

Remove the hydraulic cylinder stops indicated in Figure 13. Resume normal double windrowing operations.

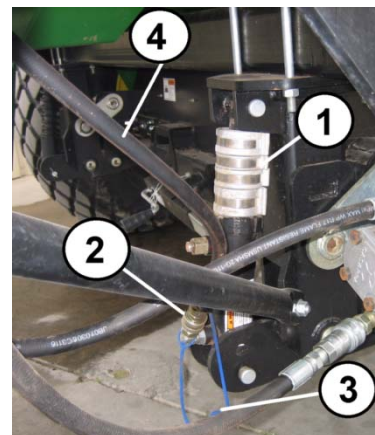


Figure 13. Locking the Belt Frame

1 – Cylinder Stops 2 – Quick Coupler
3 – Dust Caps 4 – Hydraulic Hose

MAINTENANCE

Lubrication

The following is a list of all required lubrication points on the Double Windrow Attachment.

Refer to the 4995 Self-Propelled Windrower Operator's Manual for lubrication requirements of the windrower.

<u>Location</u>	<u>Frequency</u>	<u>Requirement</u>
Pivot Pins (Belt Frame)	50 hours	4 per side, 8 total
Chain*	200 hours	Cover with lubricant
Spring Rod**	200 Hours	Cover with lubricant

* Also cover chain at start and end of season. This chain is part of the drive coupler from the hydraulic motor at the end of the belt frame.

** Also perform at end of season. Coat inner rod of float spring mechanism to prevent wear and rust.

Note: For grease, use same grease as recommended with the 4995 and platform.

Fire Prevention

Due to the environment that this attachment operates in, the risk of fire is present. Regular inspection and cleaning can reduce the risk of fire.

Keep the attachment free of debris to limit the risk of fire.

Inspect the machine daily for any signs of damage or failed components. This includes but is not limited to sounds that may indicate an early warning of a failure and unusual wear patterns that indicate misalignment or an early sign of failure.

IMPORTANT: Keep rollers and drive components clear of debris. Clean as necessary.

Belt Care

The belt compound includes polyester-reinforced-rubber. Although designed for durability, the following is important to consider to maximize the life of the belt.

- 1/ Always store the unit out of direct sunlight in a cool, dry place free of rodents.
- 2/ Always keep the belt and rollers free of debris, moisture (when not in use), oil, grease, and any other chemicals that may affect the belt.
- 3/ Do not treat the belt with any belt dressing of any kind.
- 4/ Prevent damage to the belt by avoiding foreign objects that may cause cuts or damage to the belt.
- 5/ Make any necessary repairs to the edges of the belt if they are damaged by improper adjustment or any other outside force.
- 6/ Use the lowest belt speed allowable for the crop conditions. Higher belt speeds typically result in lower belt life.
- 7/ Keep the area under the crop guides clear of crop build-up. Over time, crop debris can accumulate and cause heavy wear on the belt.

- 8/ Regularly inspect and adjust belt tension as needed. Improperly tensioned belts can result in belt slippage on the driveroller or excessive wear.

- 9/ Regularly inspect the belt tracking. Adjust as necessary. It is important to maintain proper belt tracking to allow debris to pass through the slot at the front of the frame to clear the belt.

Inspect belt tracking after changes in crop conditions. An increase in crop moisture may lead to the rollers becoming wet. When wet, the friction on the rollers is reduced and the belt may tend to track to the area of least resistance. This may require adjustment to prevent belt damage.

- 10/ Only lift the belt frame using fork lift holes at the rear of the belt frame. Lifting by the bottom of the belt frame assembly can damage the belt on the bottom-side of the assembly.

SERVICE

Bolt Torque Values

Note: Bolt torque values can be found at the beginning of the INSTALLATION INSTRUCTIONS section of this manual.

Belt Replacement

Remove the skid plate by removing the twelve (12) bolts that retain the skid plate to the front of the belt frame as shown in Figure 1.

Release the belt tension (see BELT TENSION ADJUSTMENT in the ADJUSTMENTS section).

Move the front bearing carrier for the drive roller inward.

Remove the belt from the belt frame by sliding it off the front of the frame.

Install the replacement belt and note the arrow for belt travel. The arrow points in the direction of travel and should always be pointed towards the right side of the machine when on the top of the belt frame.

IMPORTANT: Only use endless belts with this attachment. Laced belts will have poor durability characteristics in this application due to high loads and speeds.

Readjust the belt roller alignment for both rollers (see BELT ROLLER ALIGNMENT in the ADJUSTMENTS section).

Adjust the belt tension (see BELT TENSION ADJUSTMENT in the ADJUSTMENTS section).

Install the skid shoe and bolts (Figure 1, Keys 1 and 2).

Adjust the belt tracking (see BELT TRACKING in the ADJUSTMENTS section).

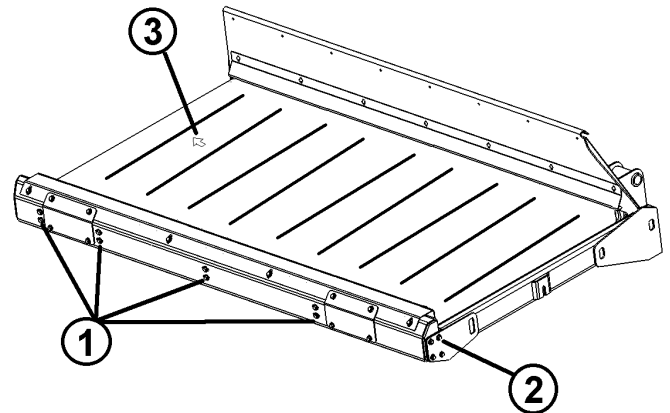


Figure 1. Skid Plate Removal

1 – Front Bolts (8)

2 – End Bolts (4)

3 – Arrow (belt direction)

Electrical Relay

Electrical relays (quantity of 2) are only used in harnesses used on 4995 Windrowers s/n E04995X330677 and above, located on the attachment wiring harness at the right hand side of the machine, behind the cab as shown in Figure 2 . These relays are used for the automatic function of raising and lowering the deflector (see THEORY OF OPERATION section of this manual).

Electrical Diode

Diodes are used for the automatic function of raising and lowering the attachment at the same time as the platform (see THEORY OF OPERATION section of this manual). They prevent current from the manual switches of the attachment from powering the functions of the base machine. Three diodes are used and are located inside the wire harness in the approximate area shown in Figure 3.

IMPORTANT: Never sharply bend the harness in the area of the diodes as damage may result.

Timer Module

A timer module is used on all machines to delay the on-function for the belt lower circuit when the platform is put into *Float-Mode*. When in float, the belt frame lower function is active for 3.5 seconds. During this time, the manual raise switch will raise the belt frame slightly, but the frame will lower until the timer has completed its cycle (see THEORY OF OPERATION section of this manual). The timer module is protected with a red cover and is located as shown in

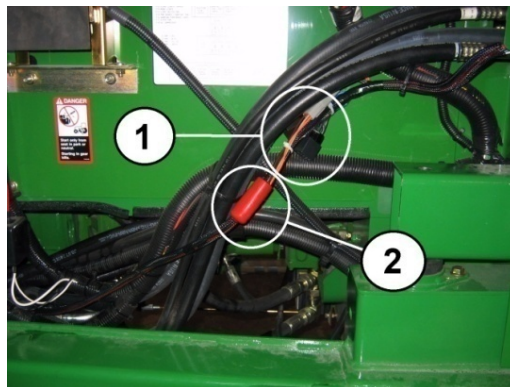


Figure 2. Relay Location
(s/n E04995X330677 and above)
1 – Relay Location (2 used)
2 – Timer Module Location

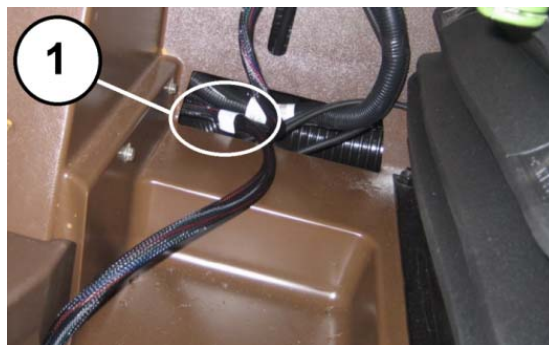


Figure 3. Diode Location
1 – Diode Location

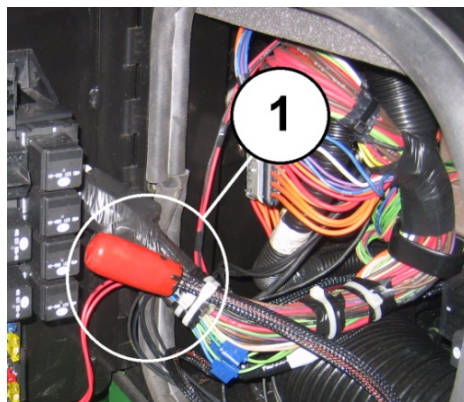


Figure 4. Timer Module Location
(s/n up to E04995X33066)
1 – Timer Module

Electrical Fuse

For 4995 Windrowers s/n up to E04995X33066, the fuse is located in the power lead located in the double windrow attachment wire harness at the compartment on the right side of the machine, behind the cab, as shown in Figure 5.

For 4995 Windrowers s/n E04995X330677 and above, the fuse is located at position F22 in the main fuse panel of the 4995 Windrower. For the application of the double windrow attachment, a 20 amp fuse is used.

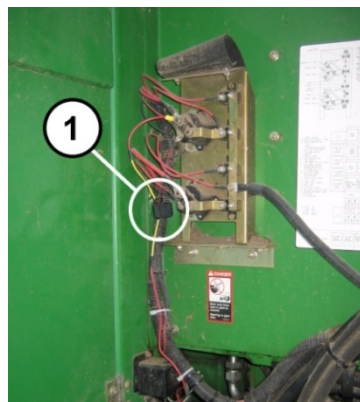


Figure 5. Fuse Location, early 4995

1 – 20 amp fuse

Remove Belt Frame

To remove the belt frame from the machine for service or single windrowing, first park the machine in a clean area on a hard surface.

Raise the belt frame manually from the cab and then turn off the machine. Remove the large chain on the left, front side of the belt frame from the outside of the machine.

WARNING: DO NOT CLIMB ON OR AROUND THE BELT FRAME UNDER THE MACHINE WITH THE BELT FRAME IN A RAISED POSITION. PERSONAL INJURY MAY RESULT.

With the belt frame in the raised position, remove the lift spring device with the hitch pin clip at the barrel end.

Note: A tie band can be installed in the small hole to retain the assembly on the machine during the removal.

Lower the belt frame manually from the cab.

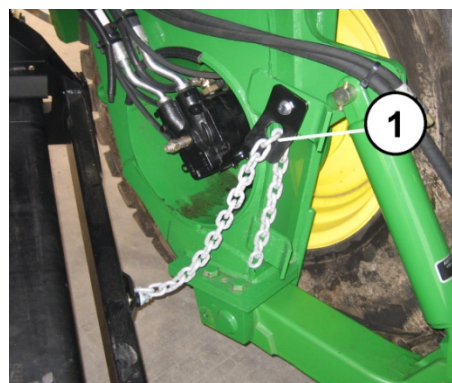


Figure 6. Front Chain Removal

1 – Chain at Bracket

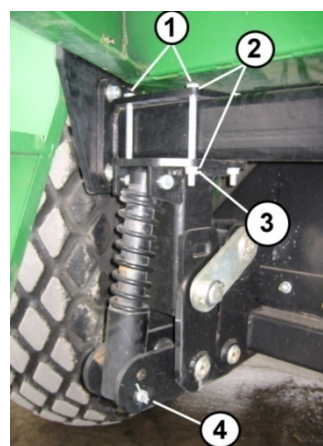


Figure 7. LH Pivot Assembly

1 – M12 Bolts

2 – M12 Washer

3 – M12 Nuts

4 – Hitch Pin Clip

Remove the hook at the small chain on the top deflector above the belt frame as shown in Figure 8.



Figure 8. Chain Hook Removal

1 – Chain Hook

Disconnect the quick couplers at the hydraulic motor on the belt frame.
Reconnect the hose from the motor to the opposite side of the motor to keep foreign material out of the system during removal.

Reconnect the hose from the valve block to the coupler at the hydraulic valve block to complete the circuit.

Use the jack to remove the pressure on the belt frame by lowering the jack pad to the ground.

Place blocks under the front of the belt frame skid plate to support the front of the frame during removal in the next steps.

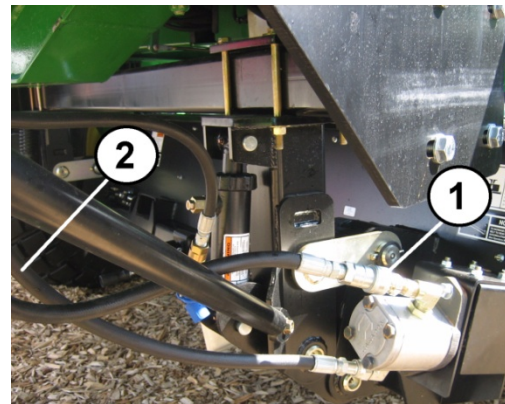


Figure 9. Quick Coupler

1 – Quick Coupler

2 – Hydraulic Line To Valve

Note: It may be advantageous to use a set of car dollies to move the belt frame on a concrete surface under the machine. If dollies are used, ensure the belt frame is properly secured to the wheels and use caution around the belt frame.

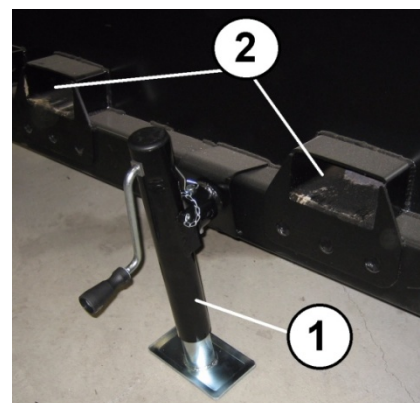


Figure 10. Jack Stand

1 – Jack Stand

2 – Fork Lift Holes

With the pressure on the frame removed, the lift spring device disconnected, and chains removed, the belt frame can be removed from the machine.

Remove the M12 hardware that connects both drop frames to the toolbar as indicated in Figure 10.

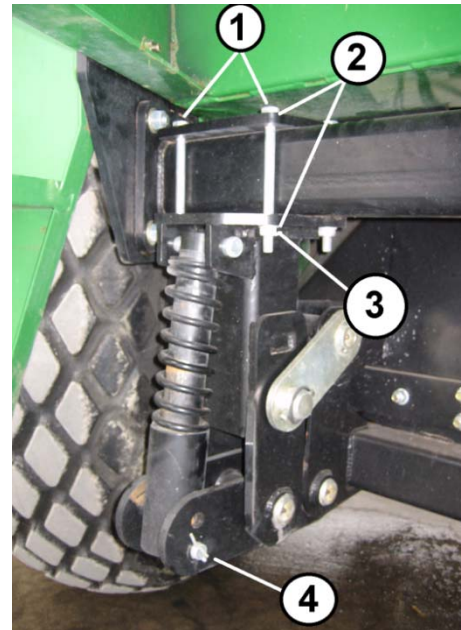


Figure 10. LH Pivot Assembly

- | | |
|---------------|--------------------|
| 1 – M12 Bolts | 2 – M12 Washer |
| 3 – M12 Nuts | 4 – Hitch Pin Clip |

Disconnect both ends of the strut support as indicated in Figure 11.

Lower the belt frame from the toolbar and remove the frame from under the machine.

The fork lift holes in the rear of the belt frame are provided to allow lifting of the belt frame without damaging the belt.

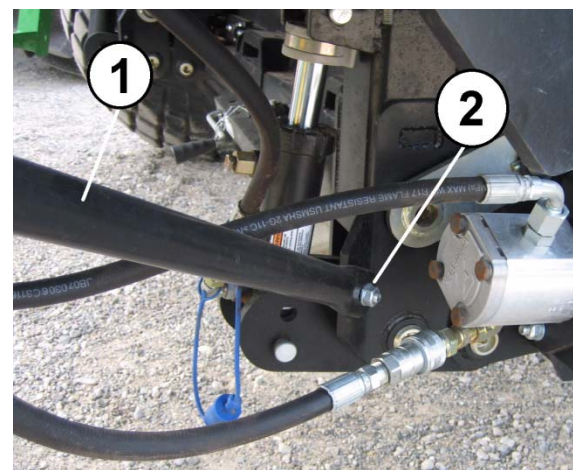


Figure 11. Strut Support Location

- | |
|--------------------------|
| 1 – Strut Support |
| 2 – Hardware (both ends) |

Install Belt Frame

Note: It may be advantageous to use a set of car dollies to move the belt frame on a concrete surface under the machine. If dollies are used, ensure the belt frame is properly secured to the wheels and use caution around the belt frame.

Move the belt frame under the machine such that the drop frames are aligned under the cross tube.

Using the jack, adjust the height of the belt frame so the top of the drop frame contacts the cross tube.

Install the RC0452 Top Plate on top of the cross tube using four (4) M12 x 160 bolts, hardened washers, and M12 Nuts for each drop frame.

Do not tighten the hardware completely, but draw up the drop frame to the cross tube.

The hydraulic cylinder must always be installed in the lower hole of the pivot arm .

Note: The upper hole is used so that the pivot arm may be flipped for extended wear life of the pivot components.

The belt frame must not extend past the wheel drop of the windrower. Before tightening the hardware of the drop frames of the belt frame, slide the belt frame so that the edge of the belt frame (Key 2, Figure 13) aligns with the edge of the wheel drop frame (Key 1, Figure 13).

Important: DO NOT tighten drop frame hardware completely at this time.

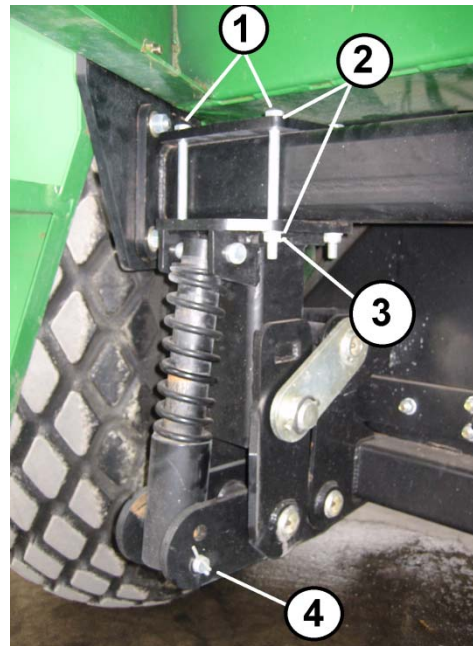


Figure 12. Drop Frame Installation

1 – M12 x 160 Bolts

2 – M12 Hardened Washers

3 – M12 Nuts

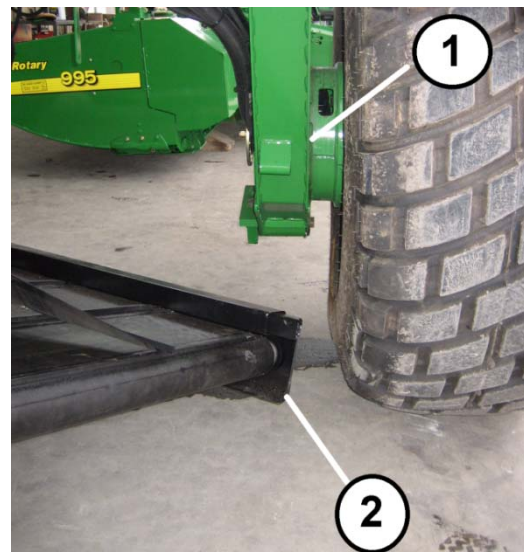


Figure 13. Lateral Placement

1 – Frame of wheel drop

2 – Outer edge of belt frame

Install RC0470 Support Arm on the RH drop frame and rear support bracket using two (2) M12 x 40 bolts, four (4) M12 Washers and two (2) M12 Nuts as shown in Figure 14. DO NOT tighten hardware completely.

Adjust the position of the drop frames along the toolbar as needed to fit the support arm. Maintain the general relationship indicated in Figure 13.

Tighten all hardware properly.

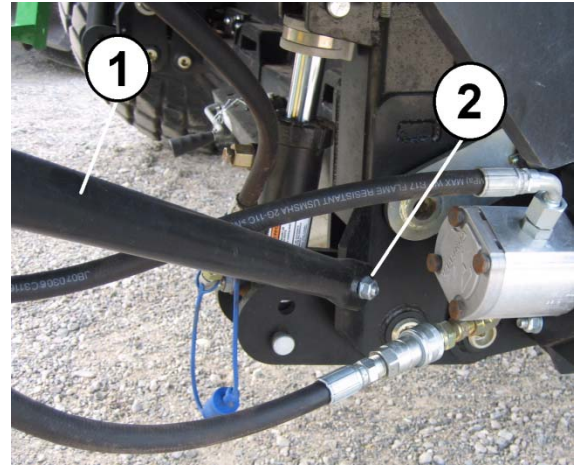


Figure 14. Support Arm Installation

1 – RC0470 Support Arm

2 – M12 Hardware

Connect all hydraulic connections at the motor and cylinder as indicated in Figure 15.

Install dust caps into each other at the cylinder connection.

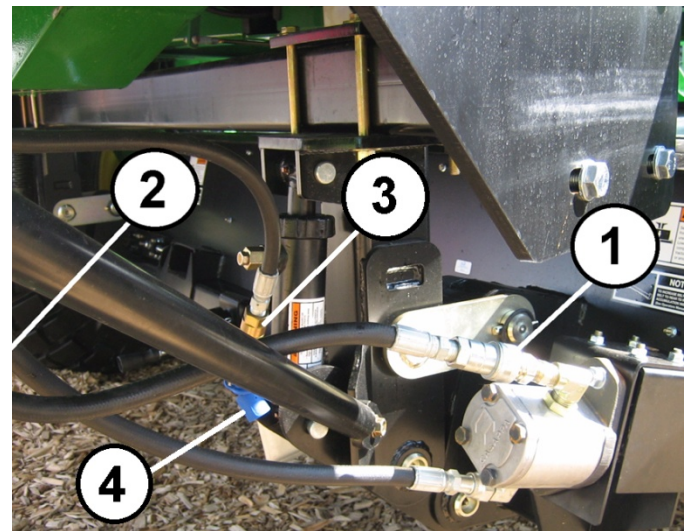


Figure 15. Hydraulic Connections

1 – Motor Connection

2 – Valve Connection

3 – Cylinder Connection

4 – Dust Cap Connection

Place the large chain at the left-front side of the belt frame in the hook to set the lowered position as indicated in Figure 16. See **BELT FRAME DOWN STOP** in the **INITIAL SETTINGS** section.

IMPORTANT: The down-stop must be adjusted properly with the platform installed on the machine.



Figure 16. Front Chain Installation

1 – Chain at Bracket

Install the small hook at the top deflector of the belt frame.



Figure 8. Chain Hook Removal

1 – Chain Hook

Verify the forming shield settings to provide clearance around the belt frame (see **FORMING SHIELD POSITION** in the **INITIAL SETTINGS** section of this manual).

IMPORTANT: Improper adjustment of forming shields can result in machine damage during operation.

Verify all initial settings as outlined in the **INITIAL SETTINGS** section of this manual.

PERFORMANCE ADJUSTMENTS

The use of the double windrow attachment on the 4995 requires adjustments of base machine components and settings for effective harvesting with the attachment.

It is important for the operator to understand that harvesting settings of the machine must accommodate the attachment and that function of the double windrow attachment must be achieved before changes to affect stubble height or cut quality can be made.

The operator should use the right side cab mirror to see the performance of the double windrow attachment while harvesting and to view the windrow formation behind the machine. (See MIRROR – RIGHT SIDE in the INITIAL SETTINGS section). The side deflector and top sheet of the double windrow attachment should also be visible from the cab through the mirror. In this way, the operator can determine where the deflector is positioned and if the belt frame is in a raised or lowered position from the cab.

The goal of adjusting the machine for the function of the double windrow attachment is to direct the crop flow as indicated in Figure 1. The crop flow should gently glide from the conditioning rolls (Keys 4 and 5), over the deflector (Key 6, if installed), along the top of the forming shields (Key 7) to the double windrow attachment (Key 8).

If crop flow is too high as shown in Figure 2, the crop may deflect from the forming shields and accumulate on the front edge of the double windrow attachment (Figure 2, Key 8).

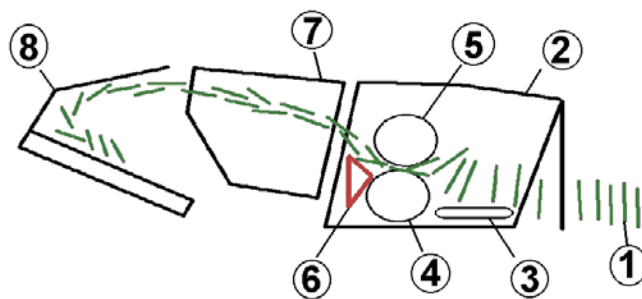


Figure 1. Proper Crop Flow (RH View)

- | | |
|---------------------|-----------------------|
| 1 – Standing crop | 2 – Header (Platform) |
| 3 – Cutting area | 4 – Lower roll |
| 5 – Upper roll | 6 – Deflector (opt.) |
| 7 – Forming Shields | 8 – DWA |

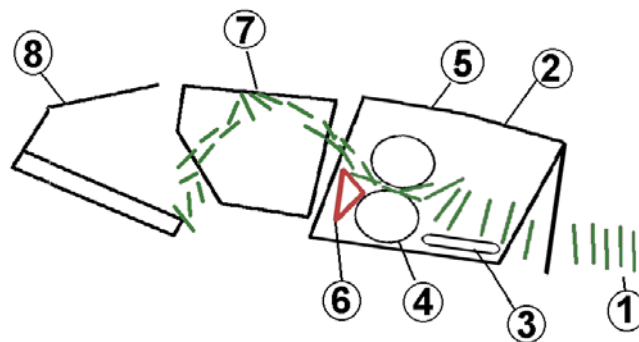


Figure 2. High Crop Flow (RH View)

- | | |
|---------------------|-----------------------|
| 1 – Standing crop | 2 – Header (Platform) |
| 3 – Cutting area | 4 – Lower roll |
| 5 – Upper roll | 6 – Deflector (opt.) |
| 7 – Forming Shields | 8 – DWA |

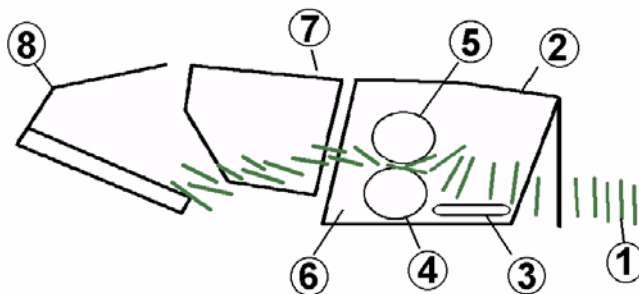


Figure 2. Low Crop Flow (RH View)

- | | |
|---------------------|-----------------------|
| 1 – Standing crop | 2 – Header (Platform) |
| 3 – Cutting area | 4 – Lower roll |
| 5 – Upper roll | 6 – Def. removed |
| 7 – Forming Shields | 8 – DWA |

If crop flow is too slow or too low as shown in Figure 3, the crop may accumulate on the front edge of the double windrow attachment (Figure 3, Key 8).

Initial settings for the machine can be made based on general crop conditions before harvesting. Use the first chart to determine what settings may be needed. Depending on crop conditions, a speed-up pulley set and/or deflector for the conditioning rolls may be necessary (see DEFLECTOR INSTALLATION and CONDITIONER SPEED-UP PULLEYS in the INITIAL SETTINGS section of this manual.

There are a few conditions where it may be necessary to lock the double windrow attachment in the raised position or remove it from the machine. These conditions are typically where extremely large volumes of crop are harvested such as in dry, tall forage mixes and grasses.

For all other conditions, adjust the machine as described before beginning the windrowing operation. Once harvesting, correct any specific harvesting issue that may occur by using the following charts to determine what adjustments are necessary.

To correct the specific harvesting problems listed in the columns on the right of the adjustments charts on the following pages, follow and complete only the adjustments described at the top of each column that has a number. The number indicates the sequence in which each adjustment should be made. If a symbol or letter appears with a number, this indicates the type of adjustment action to be performed.

Only perform one adjustment at a time and note the change in performance. Making multiple changes at one time may cause undesirable results.

Note: Remember to always use the slowest belt speed possible for harvesting to extend belt life.

IMPORTANT

995 Platforms built after January, 2008, may feature a new design of geometry of conditioner that results in higher crop flow to the double windrow attachment.

Platforms featuring this new design should not require the use of the crop deflector or speed-up pulleys for the conditioner.

Keep in mind that if crop is not reaching the belt frame with this conditioner that it is more likely that the conditioner is ejecting the crop too high, such that it is reflecting off of the top forming shield and dropping before the double windrow attachment. In this condition, use the adjustable swathboard (field-installed option) to direct the crop flow just below the top forming shield.

Initial Crop Settings for Ideal Double Windrow Attachment Performance						
Crop	Platform Angle (deg)	Platform Speed	Deflector installed	DWA Belt Speed	Roll Speed-Up Kit Installed	Notes
Heavy Wheat	6-8	Full	No	Full	No	Adjust skid shoe height for stubble height.
Light Wheat	4-6	Full	No	Med	No	Adjust skid shoe height for stubble height.
Dry Wheat	0-4	Full	No	Full	No	
Heavy Alfalfa	4-6	~2200	Yes	Full	No	Adjust skid shoe height for stubble height.
OR (based on platform angle needed)						
Heavy Alfalfa	0-4	<2100	Yes	Full	Yes	
Light Alfalfa	4-6	~2200	Yes	Med	Yes	Adjust skid shoe height for stubble height.

Crop: Wheat		Adjustments					
Harvest Condition		<div>Platform Angle (deg)</div> <div>Platform Speed</div> <div>Deflector installed</div> <div>DWA Belt Speed</div> <div>Roll Speed-Up Kit Installed</div> <div>Skid Shoe Height</div>					
							Notes
Plugging In Front of DWA							
Low Crop Trajectory		1/+	2/+	3/+		4/+	4/ Install Roll Speed-Up Kit
High Crop Trajectory		1/-	2/-	3/-			If crop is deflected down by top pan
Plugging on Belt					1/+		
Plugging at Conditioning Rolls		1/-		2/-			
Stubble Height too High		2/-				1/-	
Stubble Height too Low		2/+				1/+	
Windrow not Uniform		2/+			1/+		Adjust belt speed and deflector

Crop: Alfalfa		Adjustments					
Harvest Condition		<div>Platform Angle (deg)</div> <div>Platform Speed</div> <div>Deflector installed</div> <div>DWA Belt Speed</div> <div>Roll Speed-Up Kit Installed</div> <div>Skid Shoe Height</div>					
							Notes
Plugging In Front of DWA							
Low Crop Trajectory		1/+	2/+	4/+		3/+	3/ Install Roll Speed-Up Kit
High Crop Trajectory		1/-	2/-	3/-		4/-	If crop is deflected down by top pan
Plugging on Belt					1/+		
Plugging at Conditioning Rolls			1/+	3/-		2/+	2/ Install Roll Speed-Up Kit
Stubble Height too High		2/-				1/-	
Stubble Height too Low		2/+				1/+	
Windrow Not Uniform		2/+			1/+		Adjust belt speed and deflector

THEORY OF OPERATION

Electrical System

The electrical system for the double windrow attachment is integrated to the electrical system of the 4995 Windrower.

The system uses 12 volts and has a 20 amp fused limit.

This electrical system is designed such that the belt frame will raise and lower automatically with the platform. This is accomplished with a set of diodes.

Current from the 4995 platform raise/lower circuit is used to power the hydraulic valve of the double windrow attachment. The diodes prevent current from the manual switches of the attachment from powering the functions of the base machine. Three diodes are used and are located inside the wire harness.

IMPORTANT: Never sharply bend the harness in the area of the diodes as damage may result.

A timer module is used on all machines to delay the on-function for the belt lower circuit when the platform is put into float. When in float, the belt frame lower function is active for 3.5 seconds. During this time, the manual raise switch will raise the belt frame slightly, but the frame will lower until the timer has completed its cycle.

Belt speed is controlled through a potentiometer on a proportional flow control valve controller circuit. Power to this proportional controller is supplied from the platform-engage circuit of the base machine

through the on/off switch for the double windrow attachment.

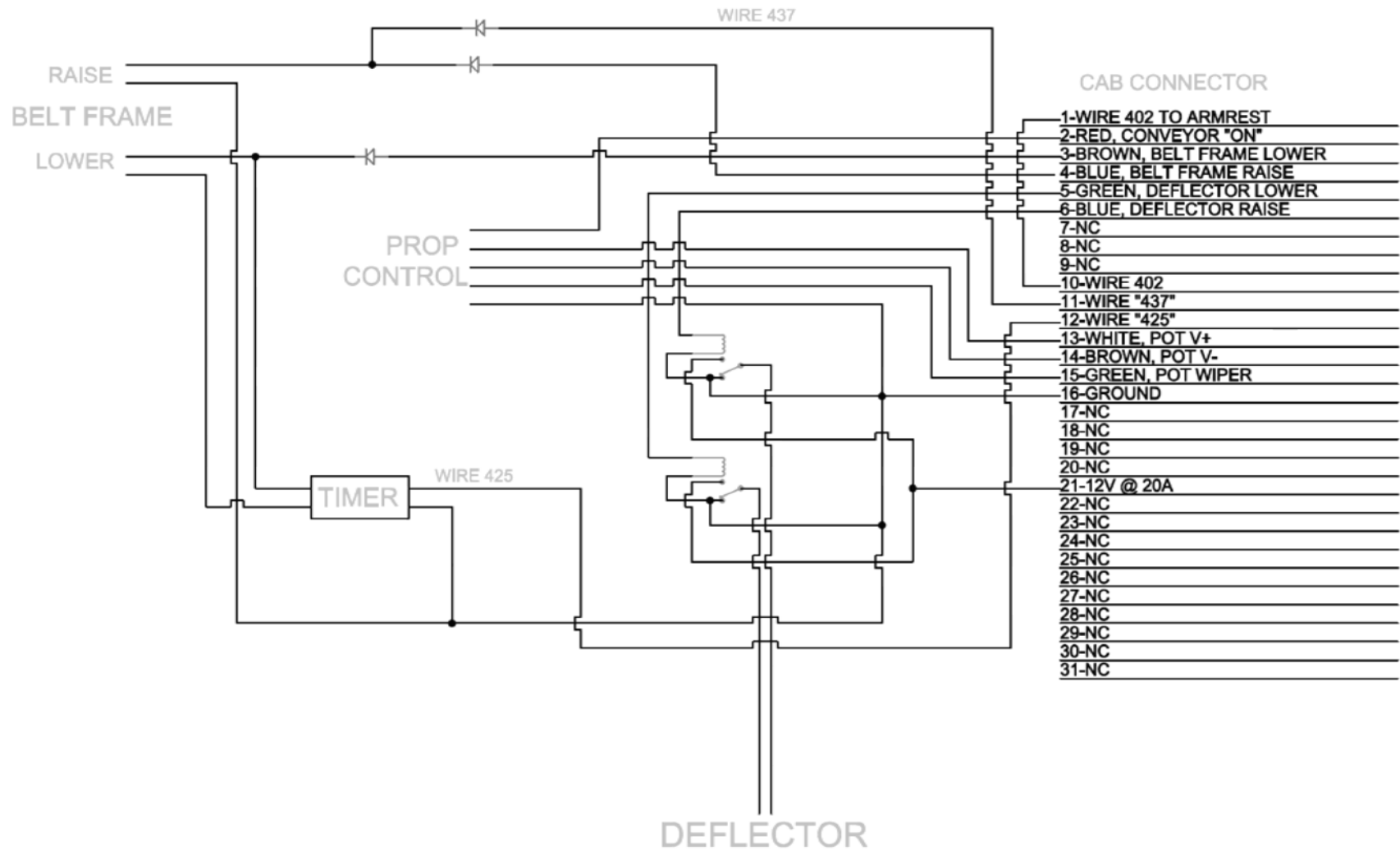
Power to the potentiometer is supplied by the proportional controller.

The following diagrams are the functional schematics for the wire harnesses used in the attachment, depending on serial number of the machine.

Double Windrow Attachment Wire Harness

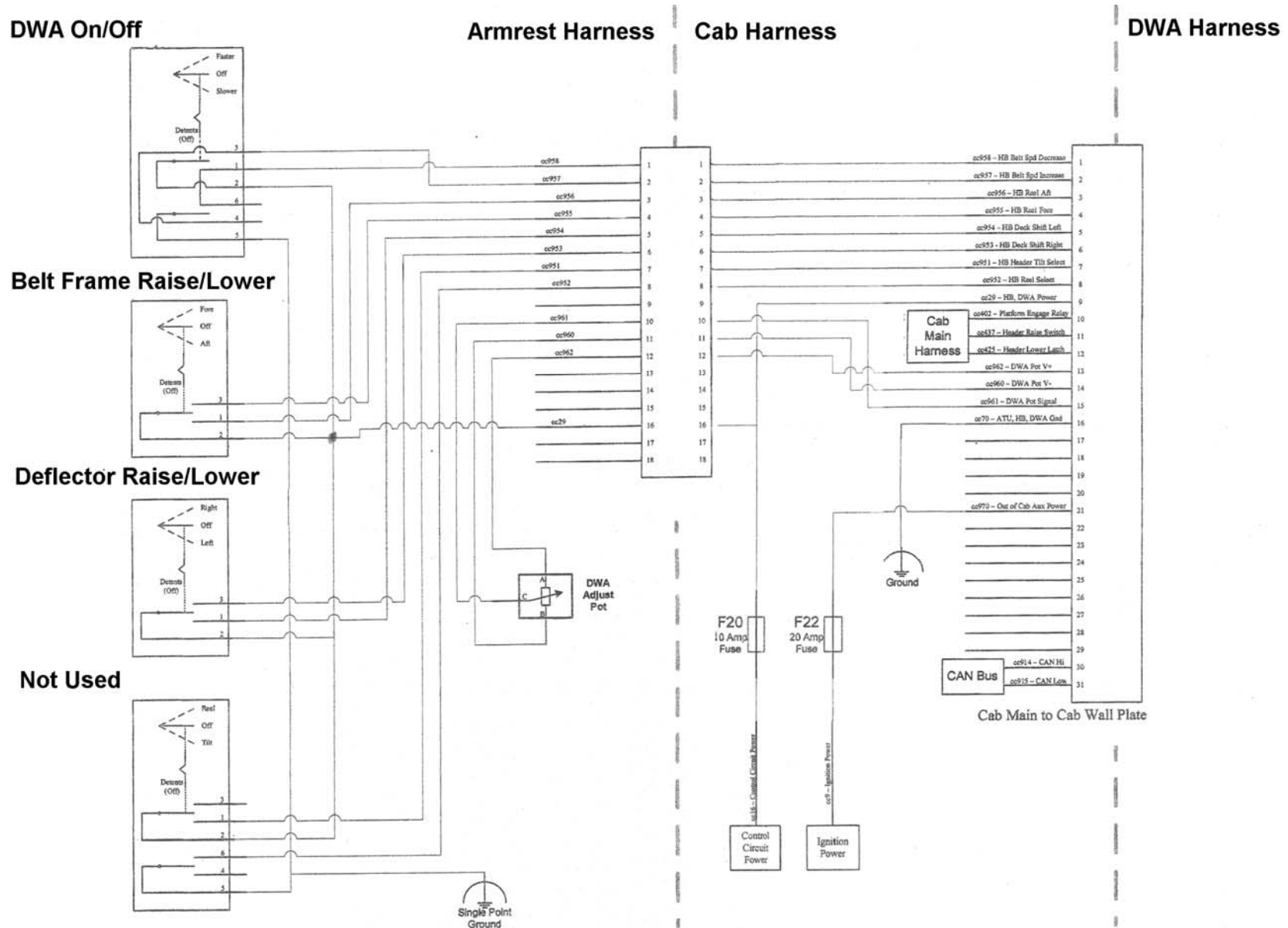
Functional Schematic

For 4995 Windrower s/n E04995X330677 and above.



Double Windrow Attachment Wire Harness Functional Schematic – In Cab Portion of 4995 Harness

For 4995 Windrower s/n E04995X330677 and above.



Hydraulic System

The hydraulic system of the double windrow attachment uses a dedicated circuit of the machine for all functions related to the attachment.

The circuit is supplied with oil from the second section of a two-section pump. The reservoir for the circuit is shared with the 4995 Windrower.

The major components of the system are shown in Figure 1. The oil from the pump (Key 1, Figure 1) passes through the hydraulic valve manifold (Key 2, Figure 1). Within the valve, oil flow is proportional controlled for belt speed at the gear motor (Key 3, Figure 1) and also used through a series of valves to lift the belt frame at the cylinder (Key 4, Figure 1).

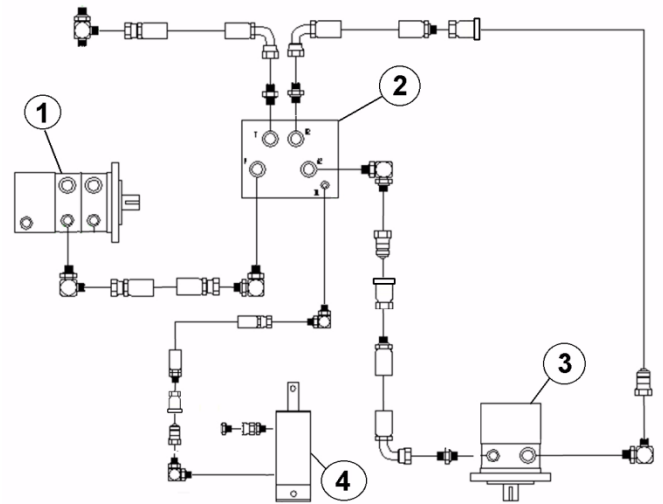


Figure 1. Hydraulic System Components

- 1 – Hydraulic Gear Pump
- 2 – Hydraulic Valve Manifold
- 3 – Hydraulic Gear Motor
- 4 – Hydraulic Cylinder

Oil enters the valve manifold at the “P – Port”. The oil then passes through a pressure compensator valve (EC1, Figure 2).

When raising the belt frame with the cylinder, oil passes through a spool valve (SV1, Figure 2) and then through an orifice (to control speed of raising), and then through a poppet in a second spool valve (SV2, Figure 2) to reach the cylinder connected to port B1.

When stalling the belt frame raise circuit, or when the belt frame raise/lower circuit is not operational, the pressure compensator valve shifts to divert excess oil flow to the belt drive motor.

When lowering the belt frame, a second spool valve is actuated (SV2, Figure 2), and the oil from the cylinder returns through the second spool valve, through the deactivated first spool valve, through a second, larger orifice to the tank via the “T – Port”.

Belt speed is controlled with a proportional controller on a spool valve (SP1, Figure 2). Oil flows to the spool valve from the pressure compensator valve (EC1, Figure 2). Pressure oil from the spool valve is also used through an orifice to control a pilot spool-type valve (EP1, Figure 2). This valve is used to divert excess oil to tank when the proportional valve (SP1, Figure 2) is turned off to stop the belt drive motor, or when operating the belt at slower speeds.

Two relief valves are used in the system. The system relief valve (RV1 – Figure 2) controls overall system relief pressure. The belt frame lift cylinder relief valve (RV2 – Figure 2) controls only the pressure on the lift circuit.

SPECIFICATION:

System relief pressure:

14480 kPa (2100 psi) maximum

Belt Frame Lift Cylinder Relief Pressure:

6895 kPa (1000 psi) maximum

Important: The belt frame lift cylinder relief pressure must always be at least 100 psi (7 bar) lower than the system pressure for proper operation of the pressure compensator valve.

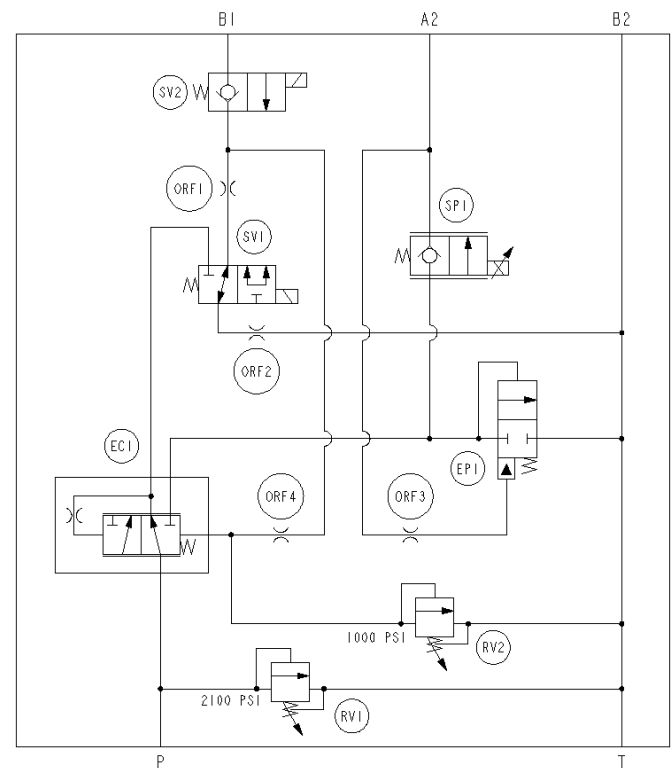
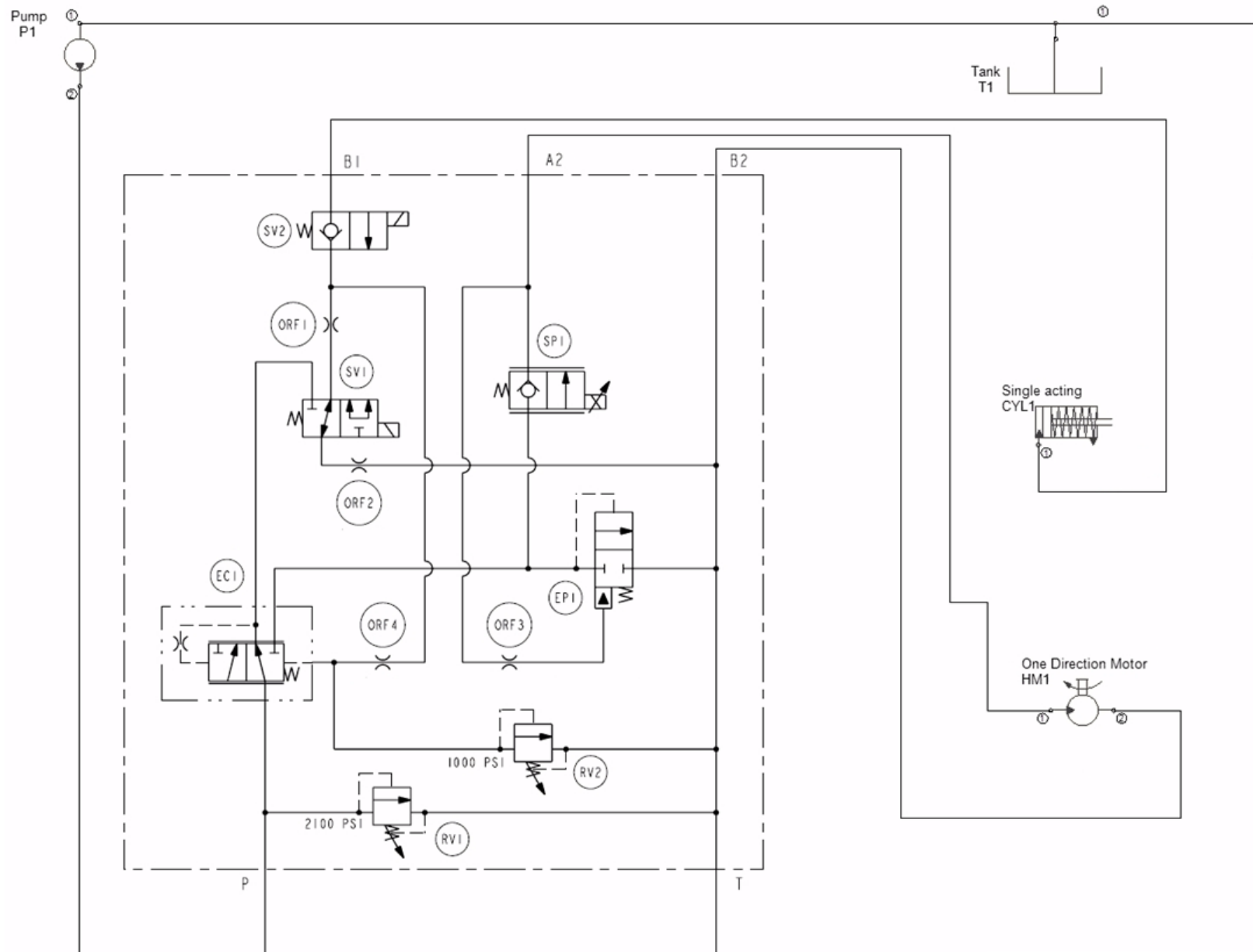


Figure 2. Hydraulic Valve Manifold

EC1 – Pressure Compensator Valve
 SV1 – Spool Valve 1
 SV2 – Spool Valve 2
 SP1 – Proportional Flow Control Valve
 EP1 – Pilot Spool Valve
 RV1 – System Relief Valve
 RV2 – Belt Frame Lift Cylinder Relief Valve

Double Windrow Attachment

Hydraulic System Functional Schematic



SPECIFICATIONS

Dimensions And Weights (all values are approximate)

Bundle Weight – Shipping Weight.....	700 kg (1540 lbs)
Belt Frame Length.....	2260 mm (89 in)
Belt Frame Width.....	1525 mm (60 in)
Belt Length (endless).....	4400 mm (173 in)
Belt Width	1092 mm (43 in)

Other Components

Hydraulic Drive Pump

Configuration.....	gear, tandem
Displacement (section for DWA).....	19.6 cu cm/rev (1.20 cu in/rev)
Inlet Port.....	1-5/8 – 12 UN (ORB)
Outlet Ports.....	7/8 - 14 UN (ORB)
Rotation.....	counterclockwise

Hydraulic Motor

Configuration.....	gear
Displacement (section for DWA).....	32.9 cu cm/rev (2.01 cu in/rev)
Inlet Port.....	7/8 - 14 UN (ORB)
Outlet Port.....	1-1/16 – 12 UN (ORB)
Rotation.....	counterclockwise
Drive Speed.....	variable up to 1400 rev/min

System Relief Pressure..... 14480 kPa (2100 psi)

Belt Frame Lift Circuit Relief Pressure..... 6895 kPa (1000 psi)

INSTALLATION INSTRUCTIONS

General Comments

- 1/ Removing the platform from the base machine may be beneficial for access to forming shields and other machine areas.

For instructions on removing the platform, refer to the 4995 SELF-PROPELLED WINDROWER OPERATOR'S MANUAL.

- 2/ All hardware for the double windrow attachment is shipped in three bags and organized by machine area for installation. The bags are labeled as follows:

LH = Left-hand side of machine
(Main frame)

RH = Right-hand side of machine
(Main frame and deflector)

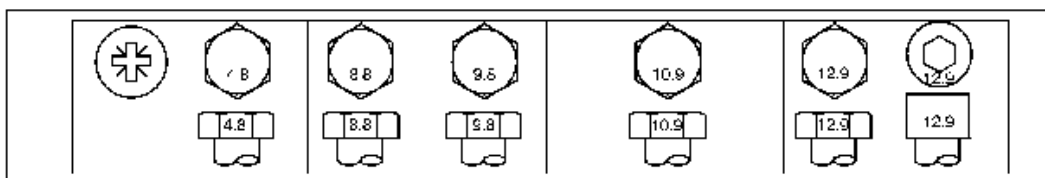
BF = Belt Frame
(Drop frames and cross tube)

- 3/ The following is a list of special tools that will be needed to complete the installation.
 - a/ hydraulic reservoir vacuum device (or shop vacuum to place vacuum on hydraulic system for short amount of time to change components)
 - b/ Deutsch connector crimper for wire ends

- 4/ Beginning in model year 2008 John Deere 4995 Self-Propelled Windrowers, the holes are built into the frames from the factory. Holes in the wheel drop frames may need to be drilled out depending on factory tolerances.

- 5/ Depending on time of year that the double windrow attachment is manufactured, the belt may or may not be installed on the frame. This is intended to prevent damage to belts from conditions arising from storage of new belt frames for long periods of time.

Metric Bolt and Screw Torque Values



Bolt or	Class 4.8				Class 8.8 or 9.8				Class 10.9				Class 12.9			
Screw	Lubricated ^a		Dry ^b		Lubricated ^a		Dry ^b		Lubricated ^a		Dry ^b		Lubricated ^a		Dry ^b	
Size	N-m	lb-in	N-m	lb-in	N-m	lb-in	N-m	lb-in	N-m	lb-in	N-m	lb-in	N-m	lb-in	N-m	lb-in
M6	4.7	42	6	53	8.9	79	11.3	100	13	115	16.5	146	15.5	137	19.5	172
									N-m	lb-ft	N-m	lb-ft	N-m	lb-ft	N-m	lb-ft
M8	11.5	102	14.5	128	22	194	27.5	243	32	23.5	40	29.5	37	27.5	47	35
			N-m	lb-ft	N-m	lb-ft	N-m	lb-ft								
M10	23	204	29	21	43	32	55	40	63	46	80	59	75	55	95	70
	N-m	lb-ft														
M12	40	29.5	50	37	75	55	95	70	110	80	140	105	130	95	165	120
M14	63	46	80	59	120	88	150	110	175	130	220	165	205	150	260	190
M16	100	74	125	92	190	140	240	175	275	200	350	255	320	235	400	300
M18	135	100	170	125	265	195	330	245	375	275	475	350	440	325	560	410
M20	190	140	245	180	375	275	475	350	530	390	675	500	625	460	790	580
M22	265	195	330	245	510	375	650	480	725	535	920	680	850	625	1080	800
M24	330	245	425	315	650	480	820	600	920	680	1150	850	1080	800	1350	1000
M27	490	360	625	460	950	700	1200	885	1350	1000	1700	1250	1580	1160	2000	1475
M30	660	490	850	625	1290	950	1630	1200	1850	1350	2300	1700	2140	1580	2700	2000
M33	900	665	1150	850	1750	1300	2200	1625	2500	1850	3150	2325	2900	2150	3700	2730
M36	1150	850	1450	1075	2250	1650	2850	2100	3200	2350	4050	3000	3750	2770	4750	3500

Torque values listed are for general use only, based on the strength of the bolt or screw. DO NOT use these values if a different torque value or tightening procedure is given for a specific application. For stainless steel fasteners or for nuts on U-bolts, see the tightening instructions for the specific application. Tighten plastic insert or crimped steel type lock nuts by turning the nut to the dry torque shown in the chart, unless different instructions are given for the specific application.

Shear bolts are designed to fail under predetermined loads. Always replace shear bolts with identical property class. Replace fasteners with the same or higher property class. If higher property class fasteners are used, tighten these to the strength of the original. Make sure fastener threads are clean and that you properly start thread engagement. When possible, lubricate plain or zinc plated fasteners other than lock nuts, wheel bolts or wheel nuts, unless different instructions are given for the specific application.

^a"Lubricated" means coated with a lubricant such as engine oil, fasteners with phosphate and oil coatings, or M20 and larger fasteners with JDM F13C zinc flake coating.

^b"Dry" means plain or zinc plated without any lubrication, or M6 to M18 fasteners with JDM F13B zinc flake coating.

Hydraulic System Installation

Hydraulic Manifold Installation

Remove the top-rear bolt at the end of the main frame cross member at the right frame rail. Reuse this bolt with the valve plate installation.

Install the RC0468 Valve Plate on the right frame rail using two (2) M10x40 bolts, ten (10) M10 washers, and two (2) M10 Nuts. Use three (3) washers on each bolt between the valve plate and the main frame rail.

Reinstall the bolt removed from the cross member.

Tighten all hardware properly.

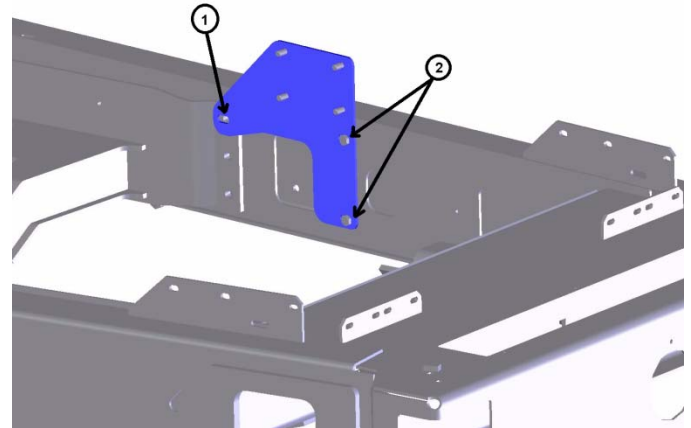


Figure 1. Right Frame Rail Valve Plate Mount

1 – Location of Frame Cross Member Bolt

2 – M10x40 Bolts

Install hydraulic manifold using four (4) M10x25 bolts and four (4) M10 washers as shown.

Note: Large solenoid on top surface.



Figure 2. Manifold Installation

1 – M10x25 Bolts and Washers (qty 4)

Hydraulic Hose Routing

Allow hoses with couplers to hang from the manifold.

Use D15032NU Vacuum Pump to hold oil in reservoir or drain reservoir. (To drain reservoir, see DRAIN AND FILL HYDRAULIC RESERVOIR in 4995 Windrower Technical Manual.)

Identify hydraulic return hose from Return Manifold under the LH side of the cab. With the hydraulic tank drained or under vacuum using Disconnect this hose from the tank and remove the adapter fitting.

Install RC0363 T-Fitting (-12 ORB, -12 ORFS) in place of removed fitting on the tank.

Reconnect Hydraulic Hose from Return Manifold to the bottom port of the T-Fitting. For older 4995 Machines, use RC0486 Adapter Fitting (-12 ORB to -12 JIC, straight) to adapt to the Return Hose. It may also be necessary, depending on vintage of machine, to route the Return Hose from the Return Manifold under the pump stack to have proper clearance for installation with the Adapter Fitting and T-Fitting in place.

Install RC0350 Hose (shorter hose, tank return) on side port of T-Fitting previously installed.

Install other end of RC0350 Hose to the fitting on the valve installed at port "T" (Tank).

Install one end of RC0349 Hose (longer hose) at 90 degree fitting on the valve from the port labeled P (Pressure).

Route the hose along the frame rail, forward to the area above the pump stack. Route hose under frame support for hydraulic oil tank towards the auxiliary charge pump.

This hose will be installed after the hydraulic pump is installed.

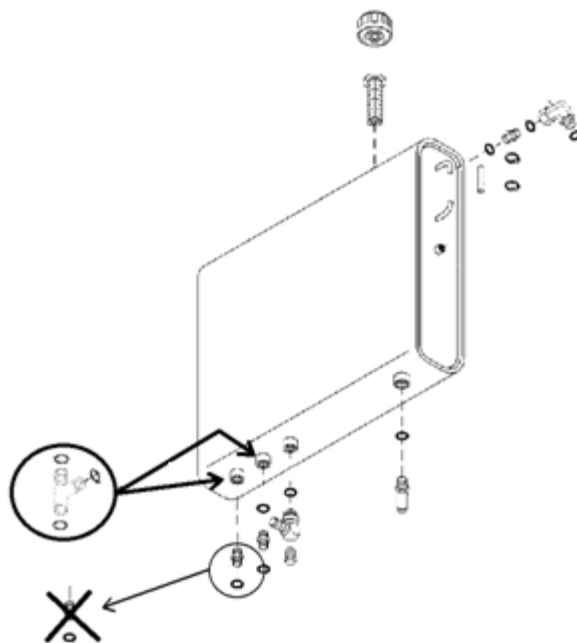


Figure 3. T-Fitting Installation at Tank

Important: T-Fitting must be installed at return port for return manifold under left side of cab.

Hydraulic Pump Installation

Maintain hydraulic tank vacuum or drain hydraulic reservoir. See 4995 Technical Manual for details.

Remove Auxiliary-Charge Pump. (To Remove Auxiliary-Charge Pump, see REMOVE AND INSTALL AUXILIARY-CHARGE PUMP in 4995 Technical Manual). This is the pump on the left stack, as viewed when seated in the cab facing forward.

Remove outlet fitting from factory Auxiliary Charge Pump. Install fitting in front section of RC0343 Hydraulic Pump included with the bundle.

Install one (1) RC0502 Adapter (-10 ORB to -10 ORFS, 90 deg) at pressure port of rear hydraulic pump.

Install RC0487 Suction Fitting in suction port of pump. (It may be easiest to tighten this fitting when the pump is installed in the machine).

Remove the O-Ring from the factory pump and install on the RC0343 Hydraulic Pump.

Important: Failure to transfer the o-ring to the RC0343 Hydraulic Pump will result in an oil leak.

With the pump in position, but before installing the mounting bolts, start the connection to the Charge Pressure Line and the Pressure line for the new Manifold. The Manifold Line attaches to the rear (shorter) section of the pump. The Charge Pressure Line attaches to the front (longer) section of the pump, closest to the mounting flange.

Complete installation of the hydraulic pump. (see REMOVE AND INSTALL AUXILIARY-CHARGE PUMP in 4995 Technical Manual).

Verify all hoses and fittings are tightened properly, including the suction fitting.

Verify that there is no interference with other hydraulic hoses. Adjust hoses as necessary.

Note: A few of the early 4995 Windrowers used a suction line with JIC fittings on the ends. If installing on such a machine, order one (1) T29839 Fitting, two (2) TY22467 Clamps, and one (1) E130440 Hose.

Remove the adapter fitting at the suction port at the hydraulic tank and install the new fitting. The new hose will be installed from the tank to the suction (inlet) port of the pump.

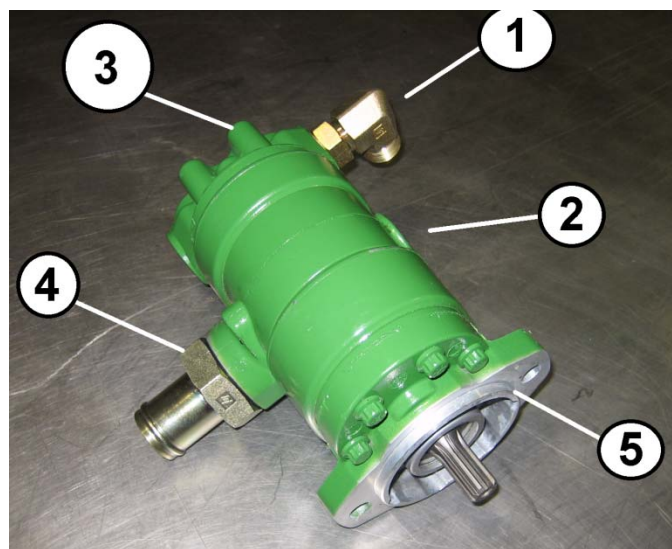


Figure 4. Pump Fitting Installation

1 – RC0502 -10ORB to -10ORFS 90 Deg Adapter

2 – Fitting From Auxiliary Pump

3 – RC0343 Hydraulic Pump

4 – RC0487 Suction Fitting

5 – Location for Seal from Production Pump

Install Main Frame Connections

Install LH Frame Plate

Important: 4995 Windrowers built starting in model year 2008 are shipped from the factory with the holes in the frame. Drilling may be required in some holes through multiple frame members, but is generally not required.

Remove the front-left wheel of the windrower. (To remove front-left wheel, see REMOVE AND INSTALL FRONT WHEELS in 4995 Technical Manual).

Remove the ladder from the cab platform and the two bolts retaining the cab hand rail in place.

Using the original hardware, install the RC0457 Spacer and RC0521 LH DWA Frame Template. Make sure the template is level relative to the main frame of the machine, and that all holes are aligned as best as possible.

Using a center-punch, mark the front three holes in the wheel drop through the newly installed template (Figure 1, Key 1). Remove the template and retain for future use with other installations.

Drill a pilot hole through the center of the holes in the frame plate. Using an extra-long pilot bit (approximately 6mm or ¼”), drill through the other side of the wheel drop frame. Take care to not contact the hydraulic hoses on the opposite side of the wheel drop frame.

Using a 17mm (11/16”) drill bit, drill the pilot holes in the wheel drop. If available, use a right-angle drill for the holes on the inside of the wheel drop. If a right-angle drill is not available, use an extra long drill bit to drill the holes from the outside. Install RC0457 Spacer and RC0456 LH Frame Plate using two (2) M12x50 Carriage Bolts

through the Cab Rail. Reuse the original M12 nuts.

Install the Ladder with four (4) M10x50 Hex Head Bolts and four (4) M10 Washers. Reuse the M10 Flange Nuts on the inside of the frame. Install the RC0458 Spacer at the rear Ladder mount.

Before tightening hardware, level the frame plate top edge relative to the cab platform.

Tighten all hardware properly.

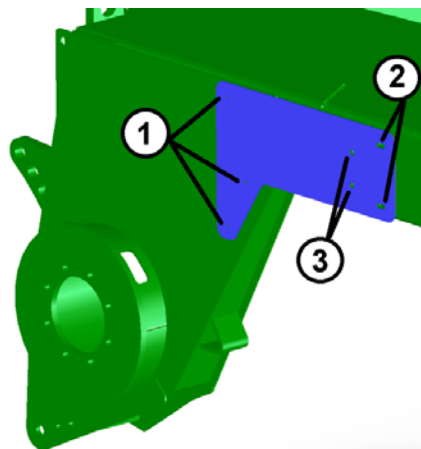


Figure 1. Template Installation

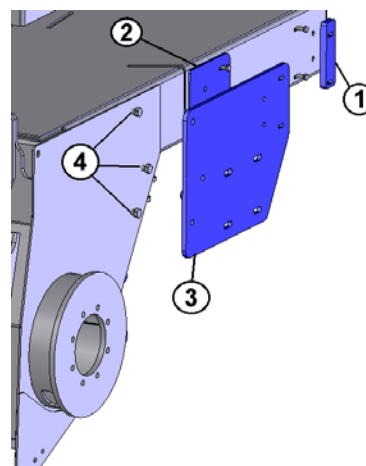


Figure 2. LH Frame Plate Installation

- 1 – RC0458 Rear Ladder Spacer
- 2 – RC0457 Spacer
- 3 – RC0456 LH Frame Plate
- 4 – New Holes

Install three (3) M16 x 190 Grade 10.9 bolts with washers from the outside towards the center of the machine.

On the inside of the wheel drop, install a 16mm (5/8") heavy-wide washer (plated with yellow zinc) on each of the M16 bolts. Then install two M16 nuts on each bolt and tighten properly to double-nut each bolt.

Note: Do not over-tighten the bolts as this will cause damage to the wheel drop of the windrower main frame.

Install the left-front wheel on the windrower. (To install front-left wheel, see REMOVE AND INSTALL FRONT WHEELS section in 4995 Technical Manual).

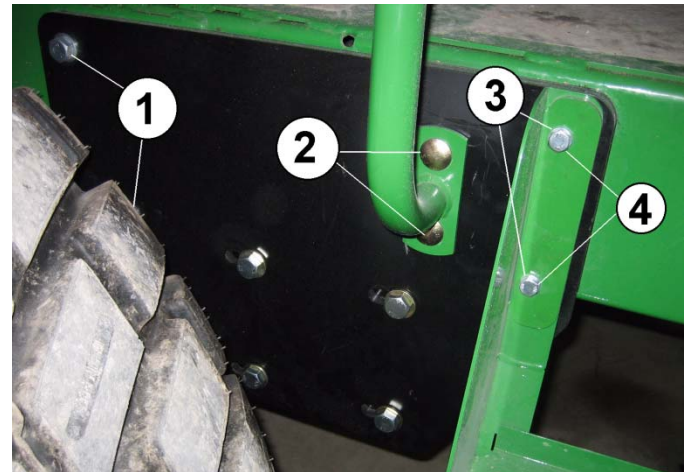


Figure 3. LH Frame Plate Installed

- 1 – M16 x 190 Hex Bolt with M16 Washer
- 2 – M12 x 50 Carriage Bolts
- 3 – M10 x 50 Hex Bolt (Qty 4 used)
- 4 – M10 Washer (Qty 4 Used)

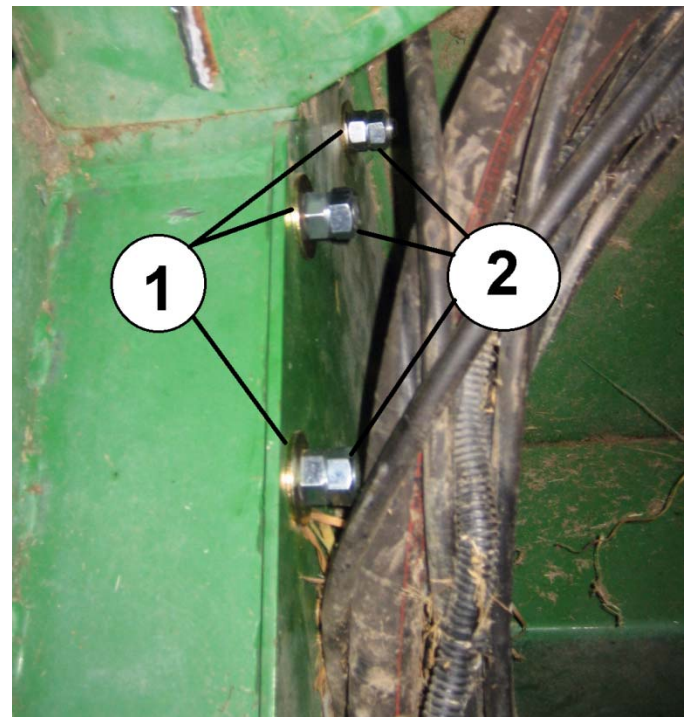


Figure 4. Inside of Wheel Drop Frame

- 1 – 16mm (5/8") Heavy Washer (Qty 3)
- 2 – M16 Nuts (Qty 6 used)

Install RH Frame

Remove the toolbox from the RH Frame Rail (if equipped).

Install the RC0521 LH DWA Frame Template as shown in Figure 5 with two M16x50mm bolts with M16 nuts. Make sure the template is level relative to the main frame of the machine, and that all holes are aligned as best as possible.

Using a center-punch, mark all the 6mm (0.25") holes for drilling. Remove the template and retain for future use with other installations.

Drill the marked holes as follows. The holes indicated by Key 2, Figure 5 are 13mm (0.512") diameter. The single hole indicated by Key 3, Figure 5 is 17mm (0.669") diameter.

IMPORTANT: Take care to not damage the hydraulic and electrical lines inside the frame rail during drilling.

With the help of an assistant or lift device, lift the RH frame into position and install three M16x50mm bolts with M16 washers in the positions shown. Install a 16mm (5/8") heavy-wide washer (yellow zinc) on the middle M16 bolt on the inside of the frame rail.

Level the RH frame relative to the main frame. Tighten the center M16 bolt with the heavy washer installed inside the frame rail.

Install two (2) RC0467 Plates inside the frame rail tube to complete the connection of the main plate. Use four (4) M12 x 40 mm hex bolts, eight (8) M12 nuts, and an additional M16 x 50 hex bolt with M16 washers and M16 nut to complete the connection.

Tighten all hardware properly.

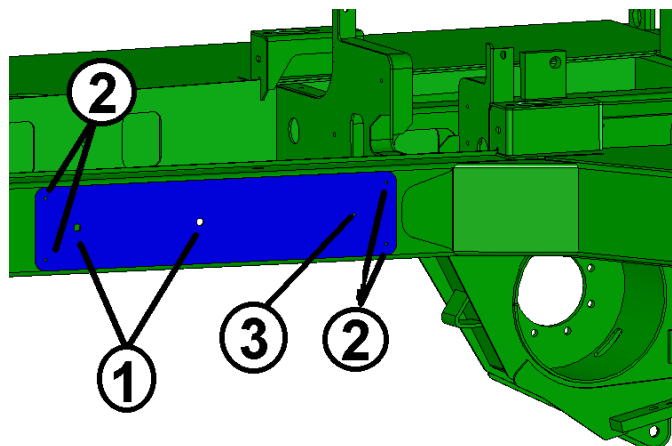


Figure 5. RH Main Frame Template Install

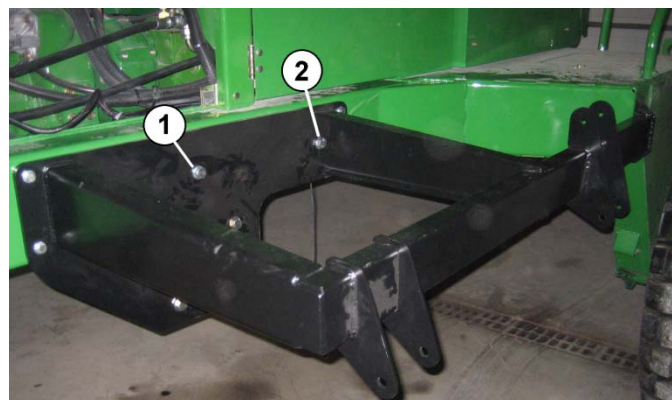


Figure 6. Installation of RH Frame

1 – M16 x 50 mm bolt with M16 Washer

16 mm (5/8") Heavy Washer inside frame

M16 Nut inside frame

2 – M16 x 50 mm bolt with M16 Washer

M16 Nut and washer inside frame

At the front RH cab platform, drill two (2) 11 mm (27/64") holes using the existing holes of the RH frame as a guide.

Install two M12 (1/2") thread rolling screws and tighten properly to complete the connection.

Note: The installation of the RH frame may cover a service decal on the main frame of the Windrower. If this is the case, order E95546 Decal through John Deere parts and install in an area that is visible near the same location.

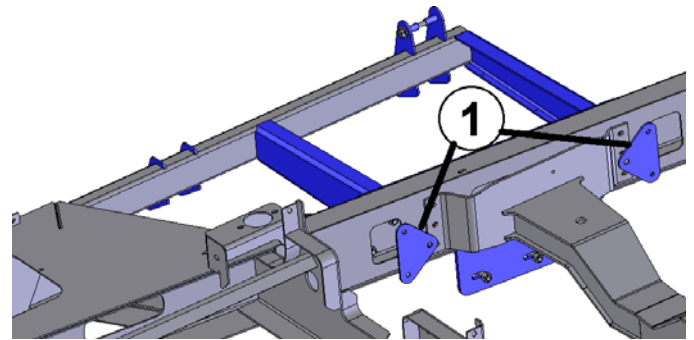


Figure 7. Frame Plates

1 – Frame support plate, inside tube frame

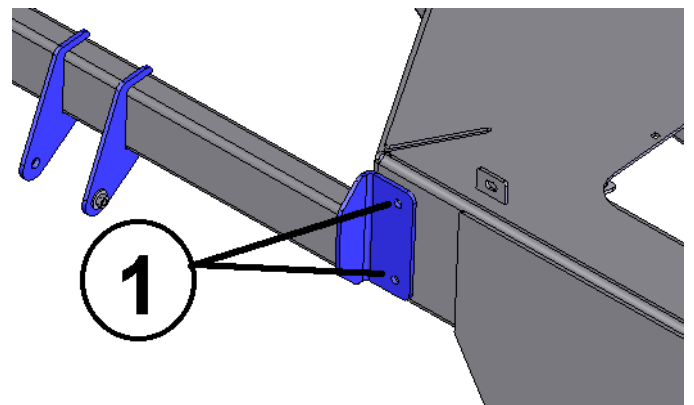


Figure 8. RH Cab Platform Mount

1 – Location for drilled holes

Installation of Cross Tube

Install Cross Tube

With the help of an assistant or a lift device, align the RC0453 Cross Tube into position under the machine, between the new frame plates installed.

Note: The end with the slightly sharper angle is installed on the RH Frame.

Install the RC0453 Cross Tube with four (4) M16 Bolts, eight (8) M16 Washers, and four (4) M16 Nuts on each end as shown.

Important: Slots are provided for proper fit of the frame. Plates should be parallel and make light contact before tightening.

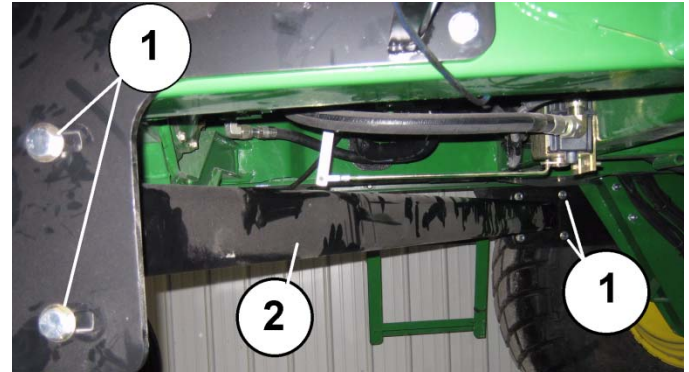


Figure 11. Cross Tube Installation

1 – M16 Hardware

2 – RC0453 Cross Tube

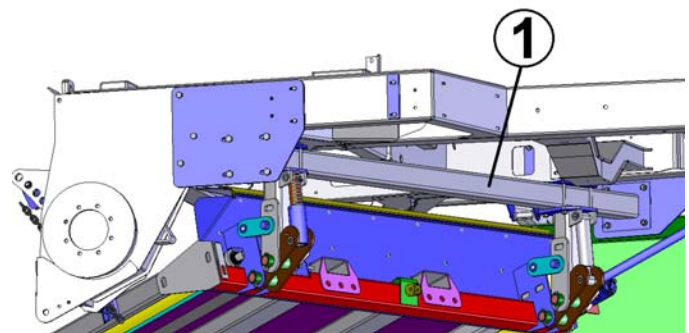


Figure 12. Cross Tube Placement

1 – RC0453 Cross Tube

Assemble Belt Frame

Remove the belt frame from the shipping pallet. The holes in the rear of the belt frame are provided for use with a fork lift for ease of handling.

Install the Drop Frame Assemblies to the belt frame using the top links, lynch pins, pivot pins and M10 bolts and nuts that are in place.

IMPORTANT: Grease all pivot pins before assembly and grease the pins once installed to ensure the entire surface is coated with grease.

Tighten all hardware properly.

Note: The spring device is mounted on the idler roller-end of the frame. The Cylinder is mounted nearest the drive end of the belt.

Install the jack on the jack stub at the rear of the frame.

Note: A Tie Band is used on the spring assembly for shipping purposes only and can be removed once the belt frame is installed in the machine.

Note: Depending on time of year that the double windrow attachment is manufactured, the belt may or may not be installed on the frame.

This is intended to prevent damage to belts from conditions arising from storage of new belt frames for long periods of time.

If not already installed, install belt on belt frame. (See *Belt Replacement* in SERVICE section of this manual.)

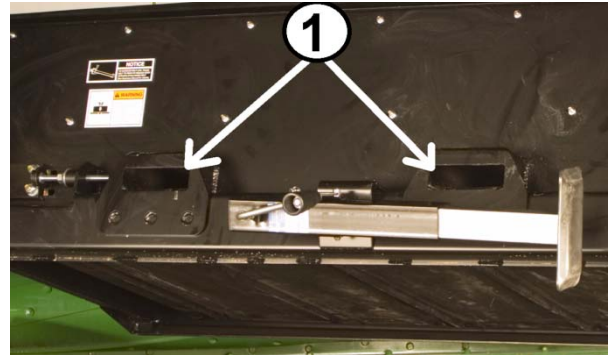


Figure 1. Fork lift holes for handling

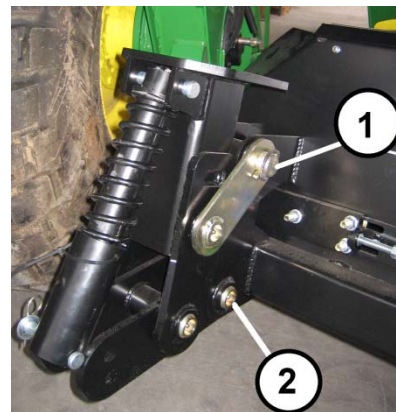


Figure 2. LH Drop Frame Installation

- 1 – Top Link
- 2 – Lower Pivot Pin

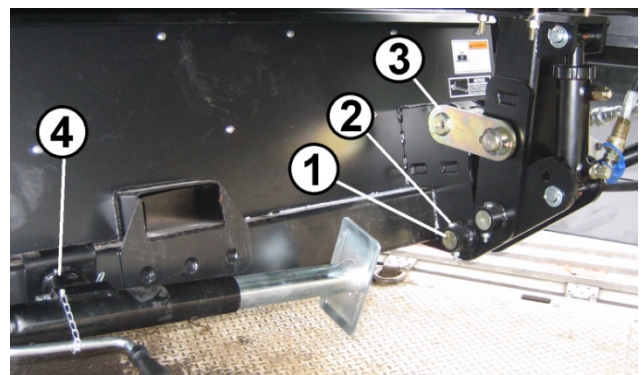


Figure 2. RH Drop Frame Installation

- 1 – Lower Pivot Pin
- 2 – M10 Bolt and Nut
- 3 – Top Link
- 4 – Jack Stand

Install the hydraulic motor assembly on the drive roller as shown in Figure 4. Use bearing setting compound on shaft when installing the coupler. Do not forget to install the ¼ Machine Key.

Use high-strength thread locker on the threads of the set screw of the chain coupler.

The motor must be in-line with the roller for adequate chain coupler life.

IMPORTANT: The alignment of this chain coupler will need to be checked after adjusting the belt tracking. Failure to do so may result in premature wear.

The assembly must be as close to the roller as possible to maximize the contact area of the coupler on the roller.

Properly tighten all M10 Nuts on the mounting brackets once properly aligned.

Tighten the allen screw on the chain coupler once installed.

Lubricate the chain coupler with chain lubricant.

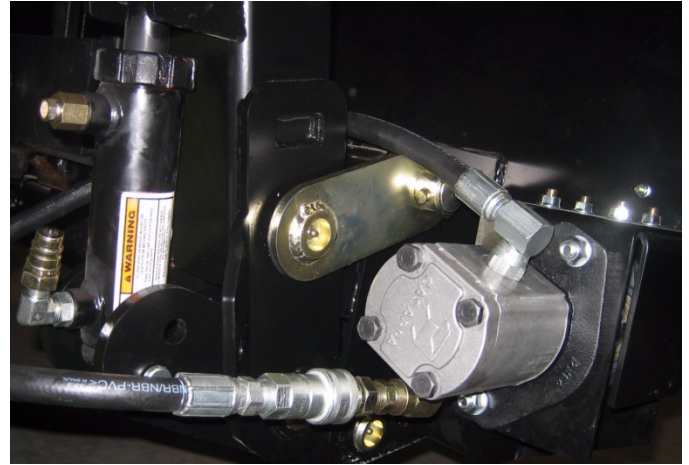


Figure 4. Hydraulic Motor Assembly Installation

Install Belt Frame

Note: It may be advantageous to use a set of car dollies to move the belt frame on a concrete surface under the machine. If dollies are used, ensure the belt frame is properly secured to the wheels and use caution around the belt frame.

Move the belt frame under the machine such that the drop frames are aligned under the drop frames.

Using the jack, adjust the height of the belt frame so the top of the drop frame contacts the cross tube.

Install the RC0452 Top Plate on top of the cross tube using four (4) M12 x 160 bolts, hardened washers, and M12 Nuts for each drop frame.

Do not tighten the hardware completely, but draw up the drop frame to the cross tube.

IMPORTANT: The bottom barrel of the spring mechanism must always be installed in the lower mounting hole. Installation in the upper hole will cause premature failure of the spring and will not allow the belt frame to lower properly.

The hydraulic cylinder must always be installed in the lower hole of the pivot arm as well.

Note: The upper hole is used so that the pivot arm may be flipped for extended wear life of the pivot components.

The belt frame must not extend past the wheel drop of the windrower. Before tightening the hardware of the drop frames of the belt frame, slide the belt frame so that the edge of the belt frame (Key 2, Figure 6) aligns with the edge of the wheel drop frame (Key 1, Figure 6).

Tighten all drop frame hardware properly.

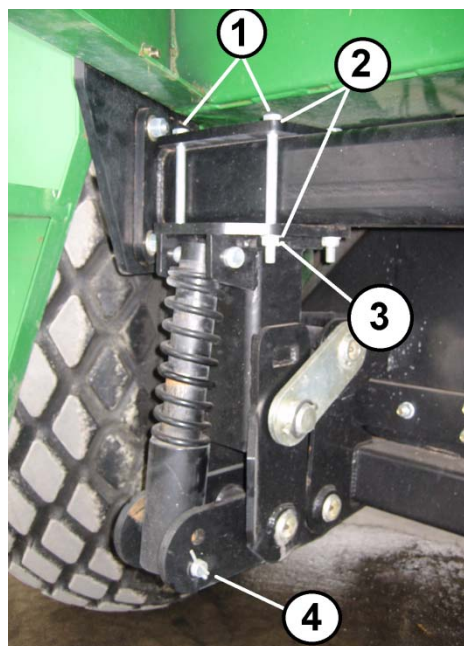


Figure 5. Drop Frame Installation

- 1 – M12 x 160 Bolts
- 2 – M12 Hardened Washers
- 3 – M12 Nuts
- 4 – Lower Mounting Hole (Reference)

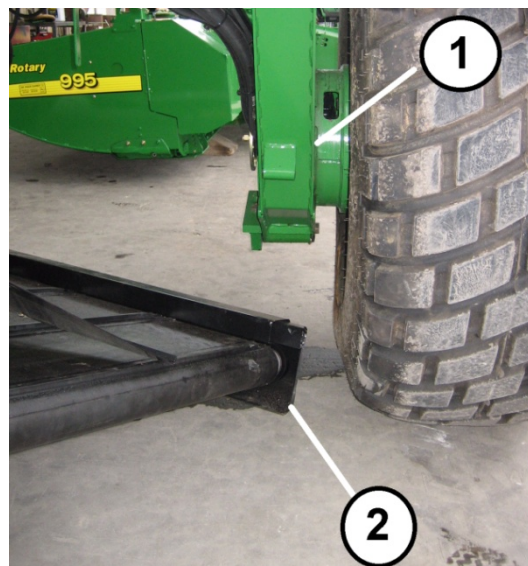


Figure 6. Lateral Placement

- 1 – Frame of wheel drop
- 2 – Outer edge of belt frame

Install Support Arm

Install RC0470 Support Arm on the RH drop frame using one (1) M12 x 40 bolt, two (2) M12 Washers and one (1) M12 Nut as shown in Figure 7. Do not tighten hardware completely.

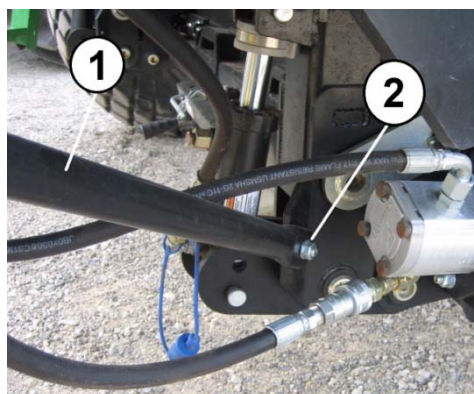


Figure 7. Support Arm Installation

1 – RC0470 Support Arm 2 – M12 Hardware

Install RC0469 Support on the other end of the RC0470 Support Arm using one (1) M12 x 40 bolt, two (2) M12 Washers and one (1) M12 Nut and rotate into position on the bottom of the main frame rail. Slide the RC0470 Support Arm to center the slot on the bolts at both ends. This is to allow for movement when reinstalling the belt frame in the future.

Center-punch the holes and drill two 13mm (.512”) diameter holes in the main frame of the machine. Take care to not contact the hydraulic hoses in the main frame when drilling.

Mount the RC0469 Support on the main frame as shown in Figure 9 using using two (2) M12 x 40 bolts, four (4) M12 Washers and two (2) M12 Nuts.

Note: Adjust the light as needed for clearance to the RC0470 Support.

Tighten all hardware properly.



Figure 8. Marking of Holes

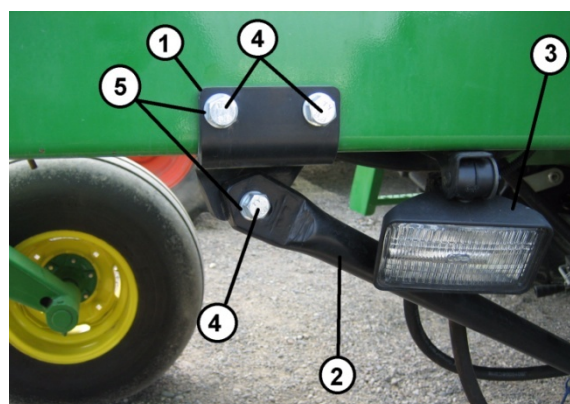


Figure 9. Support Installation

1 – RC0469 Support 2 – RC0470 Support
3 – Light 4 – M12 x 40 Bolts
5 – M12 Washers

Connect all hydraulic connections at the motor and cylinder. Install dust caps into each other at the cylinder connection.

Install Front Chain Support

Mark and drill a 13mm (0.512") diameter hole at the vertical center and 25 mm (1") forward of the welds at the top slide plate as shown in Figure 9.

Install the RC0431 Chain Support bracket using one (1) M12 x 40 bolt, two (2) M12 Washers and one (1) M12 Nut as shown in Figure 10.

Place the chain in the hook. The chain will need to be properly adjusted once the platform is installed on the machine. See BELT FRAME DOWN STOP in the INITIAL SETTINGS section.

IMPORTANT: The down-stop must be adjusted properly with the platform installed on the machine.

Install Top Chain Mount

Note: 4995 Windrowers built starting in model year 2008 are shipped from the factory with the chain mount hole in place eliminating the need to drill the hole during installation.

Manually raise the top deflector of the belt frame at the small chain. Note the frame member the chain is closest to. Mark and drill a 11mm (7/16") hole in the sheet as shown in Figure 11. The hole is 38mm (1.5") away from the frame rail and 63mm (2.5") back from the end of the plate.

Install the M10 Bolt as shown in Figure 11 at the hole and tighten properly.

Adjust the hook point in the chain to ensure that the top deflector of the belt frame will be higher than top of the forming shields once installed.

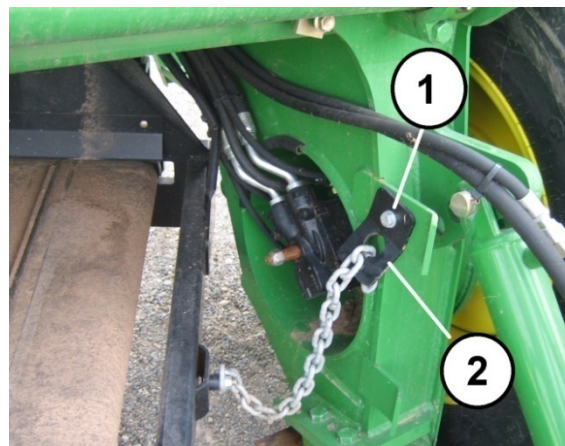


Figure 10. Chain Bracket Installation

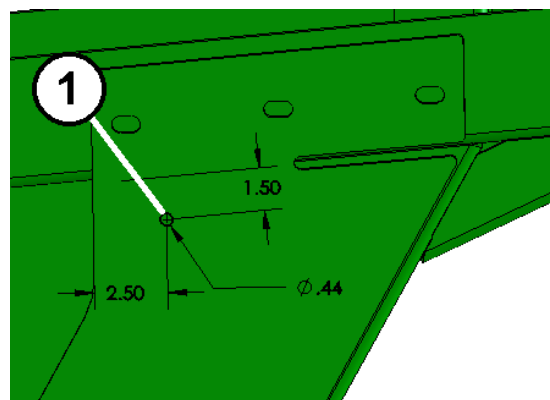


Figure 11. Hole Location

1 – 11mm (7/16") drill location

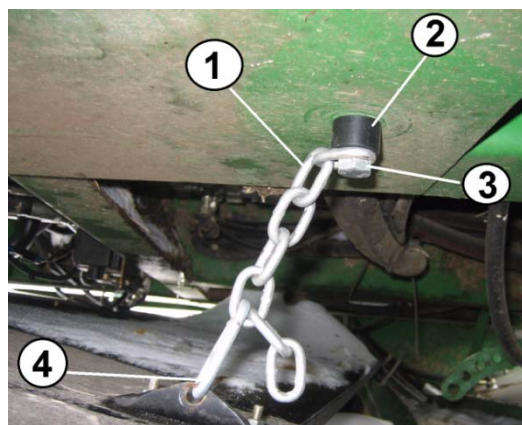


Figure 11. Chain Installation

1 – 45144 Chain 2 – RC0432 Bushing
3 – M10 Bolt 4 – 0500499 Chain Hook

Install Side Deflector

Install side deflector as shown below.

Notes:

- 1/ The bottom pin of the electric actuator should be placed in the outermost, lower hole of the deflector.
- 2/ Do not over-tighten the pivot bolts of the deflector or actuator as this will slow the deflector speed.
- 3/ The bushings act as spacers between the actuator and the ears of the frame for centering.

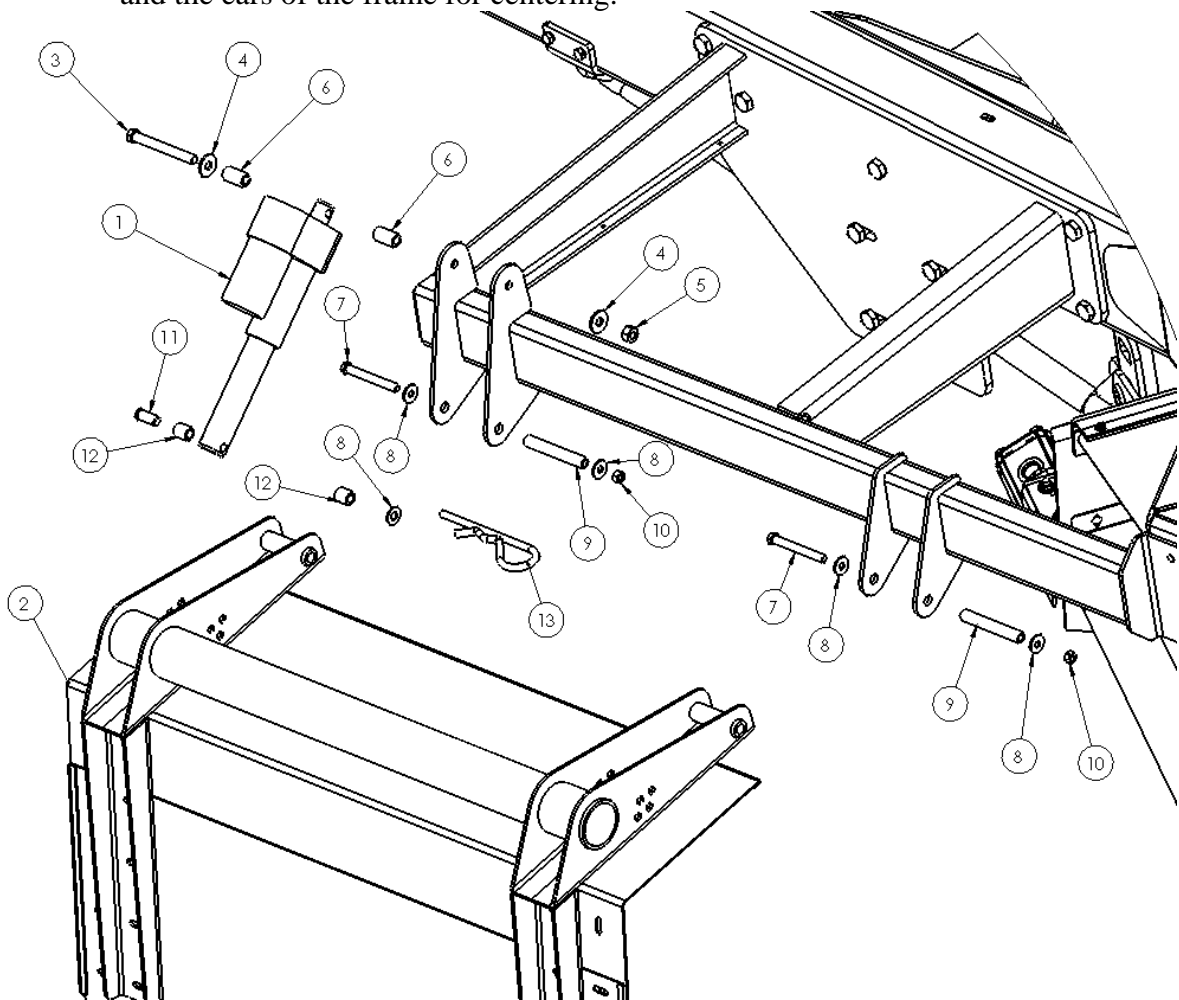


Figure 12. Deflector Components

- | | | |
|------------------------------|------------------------|---------------------|
| 1 – RC0360 Electric Actuator | 2 – Deflector Assembly | 3 – M12 x 160 Bolt |
| 4 – M12 Washer | 5 – M12 Lock Nut | 6 – RC0472 Bushing |
| 7 – M10 x 140 Bolt | 8 – M10 Washer | 9 – RC0471 Bushing |
| 10 – M10 Nut | 11 – Clevis Pin | 12 – RC0496 Bushing |
| 13 – Hitch Pin Clip | | |

Modification of Forming Shields

Remove Fluffboard

Remove the rear fluff-board from the forming shields. This board is not compatible with the double windrow attachment.

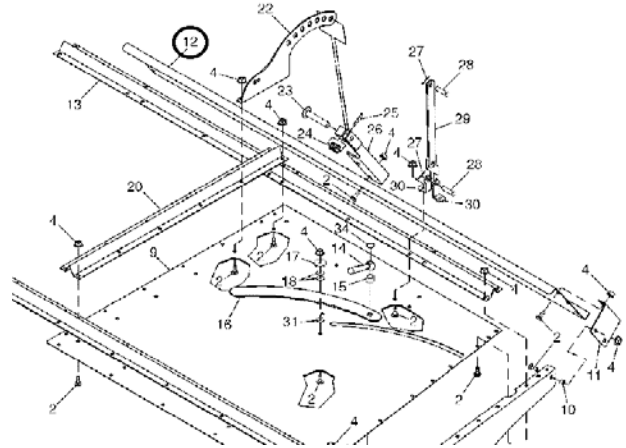


Figure 1. Fluffboard

Note: Remove Key 12 and associated hardware. These components are not compatible with the double windrow attachment.

Remove Forming Shields

Remove left and right forming shields from the platform.

The figures indicate the desired end result for reference. Parts to be modified are painted black for reference.



Figure 2. LH Forming Shield End Result



Figure 3. RH Forming Shield End Result

Modify Forming Shields

Important: If cutting with heat, remove all paint within three (3) inches of the cut line.

LH Forming Shield

Cut the forming shield as indicated in Figure 4. Round all corners and repaint as necessary.

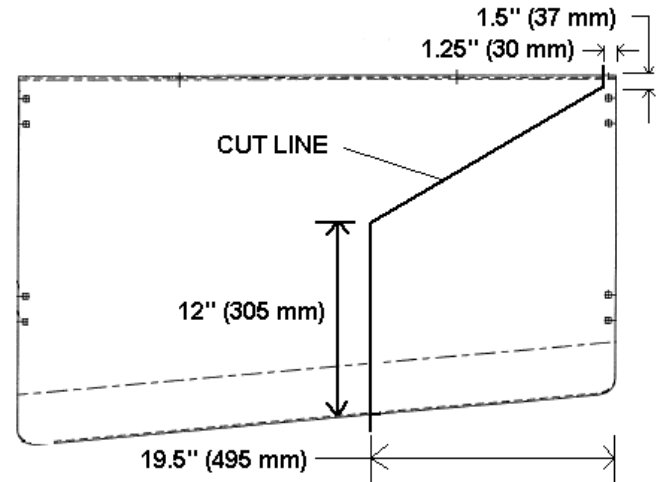


Figure 4. LH Forming Shield Modification

Install Forming Shields

Install side forming shields with original hardware. Adjust the shields to the furthest open position.

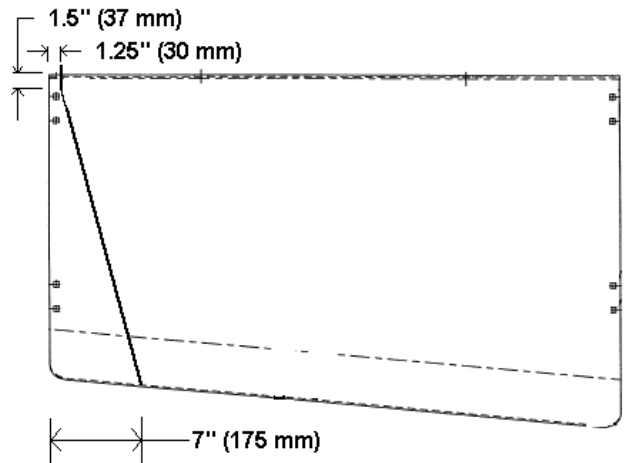


Figure 5. RH Forming Shield Modification

Note: Forming shields on 995 Platforms manufactured after January, 2008, may have different appearance than indicated here. Modification for forming shields should be carried out in same manner using same dimensions from the same ends of the forming shields as indicated.

Wire Harness Installation - Early 4995

This section covers wire harness installation on 4995 Windrowers up to s/n E04995X330676.

For Windrowers s/n E04995X330677 and above, see next section.

Installation of Harness in Cab

Begin with the wire harness in the cab of the machine.

Remove the top plate of the armrest.

Disconnect and remove all switches from the factory armrest plate.

Install factory switches on RC0481 Armrest Plate and RC0484 Decal.

Remove the middle section of the armrest by removing the screws around the perimeter, under the armrest and at the hinge of the cushion to have access to the inside of the main compartment.

Using a 32mm (1-1/4") hole saw, drill two holes in the middle of upper armrest section for the harness to enter the area under the armrest plate. Refer to Figure 1.

IMPORTANT: Do not damage any wire harnesses with the drill during this step.

Drill a single 32 mm (1-1/4") diameter hole in the bottom of the armrest as shown in Figure 2. This is the entry point for the armrest.

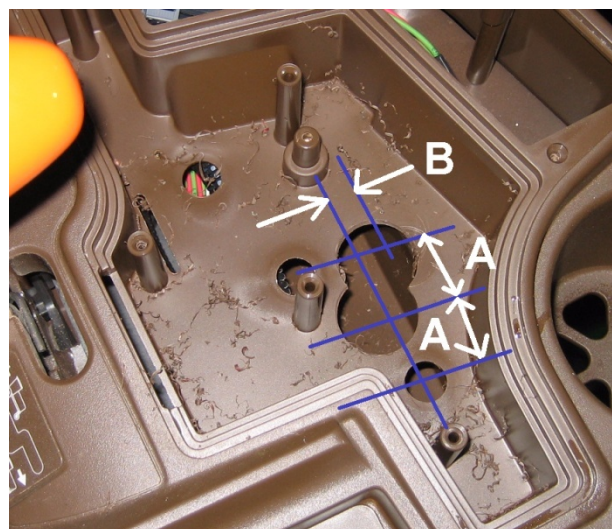


Figure 1. 2 Hole Locations

A – 25 mm (1")
(0.5")

B – 12 mm

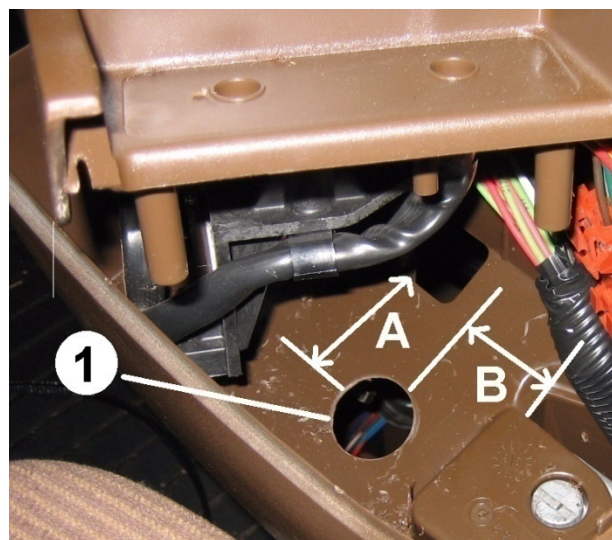


Figure 2. Hole Location for Bottom of Armrest

A – 50mm (2")

B – 50mm (2")

1 – Hole Location, 32 mm (1-1/4") diameter

Beginning with the harness at the right, rear corner of the cab, install the branch that

leads to the switches to the hole in the bottom of the armrest. The switches will need to be removed for installation in the armrest.

In the armrest, the wires for the DWA On/Off Switch need to be routed under the partition to reach the cavity for the switch. All other wires are routed through the two (2) adjacent holes previously cut.

Install the switches and the potentiometer in the new armrest plate and connect all wire harness connections. The belt frame raise/lower switch should be on the right side when viewed from the top. The deflector raise/lower switch should be on the left side.

Note the orientation of the switches when installing. For the belt frame switch, the blue wire powers the lower circuit and should be oriented towards the “lower” function of the switch. For the deflector switch, the black wire powers the lower circuit and should be oriented towards the “lower” function of the switch.

The following is given for reference for the deflector and belt frame raise/lower switches.

Belt frame raise/lower switch connects to harness end that has blue, red, and brown wires.

The deflector raise/lower switch connects to the harness with more wires and of colors red, black, green, blue and brown.

Once the harness and switches are installed, install the rubber grommet in the bottom of the armrest as shown in Figure 4.

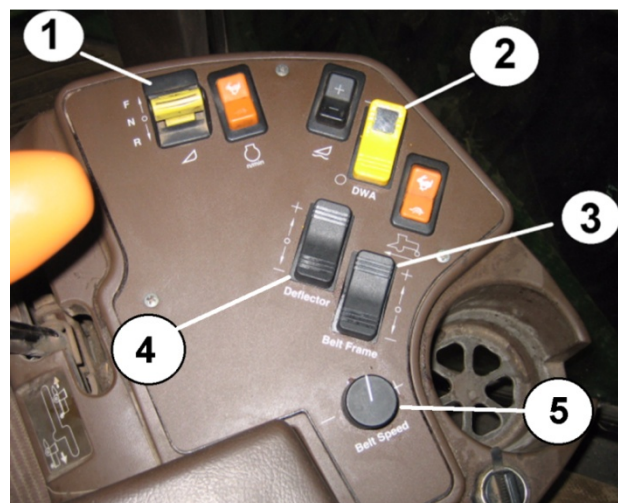


Figure 3. Armrest Switch Orientation

- 1 – Platform engage (reference)
- 2 – DWA On/Off Switch
- 3 – Belt Frame Raise/Lower
- 4 – Deflector Raise/Lower
- 5 – Belt Speed Control

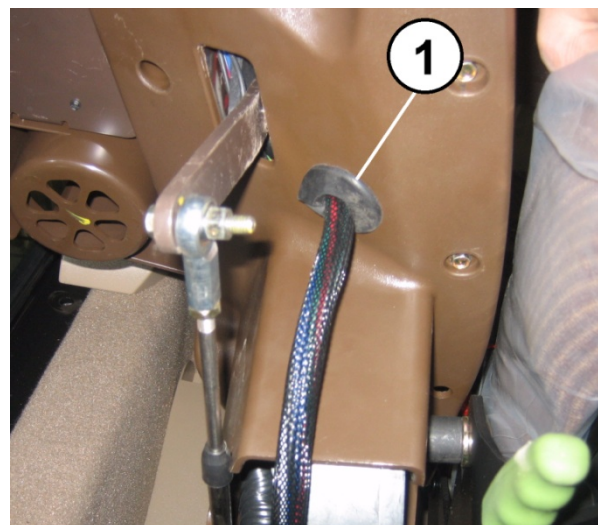


Figure 4. Grommet Installation

- 1 – Grommet

Route the harness branch with the exposed wires and eyelets through the back panel of the cab and out to the side access panel.

IMPORTANT: DO NOT BEND HARNESS SHARPLY FOR ANY REASON AS THERE ARE DIODES IN THE HARNESS THAT CAN BE DAMAGED BY BENDING.

At the side access panel, as shown in Figure 5, connect the two eyelets on black wires to the cab ground.

Cut the end of the blue, brown and green wires (copper should not be exposed). Using the splice connectors enclosed in the harness bag, splice the blue, brown and green wires as follows.

Blue – Splice to wire 437 in large harness

Brown – Splice to wire 425 in large harness

Green – Splice to wire 402 in large harness

Note: Do not splice to any wire with a letter trailing the number such as 425A. Only splice to wires exactly as indicated above. All three wires on the base machine that are listed above are green in color.

Using Tie bands, secure the timer module to the main wire harness as shown in Figure 5.

Note: Always use electrical tape under a tie band when covers are not present to prevent damage to the wires.

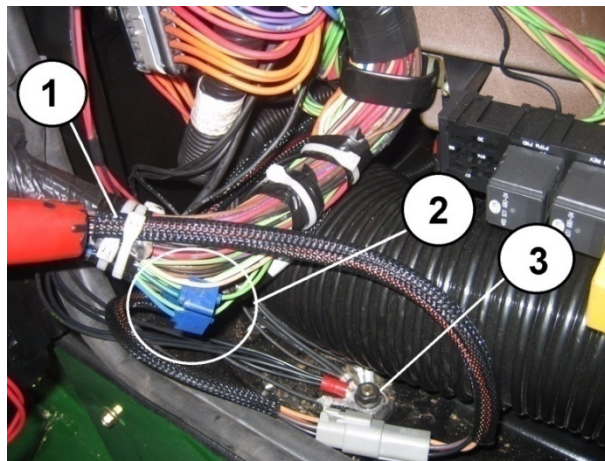


Figure 5 – Wiring at Access Panel

1 – Timer Module

2 – Spliced Connectors x 3

3 – Cab Ground

In the cab, at the floor where the rubber mat meets the plastic cowling, lift the rubber mat.

Mark and drill a 32mm (1-1/4") diameter hole using the hole saw to allow the harness to exit the cab.

Once drilled, pass the length of the harness through the hole and install the rubber grommet.

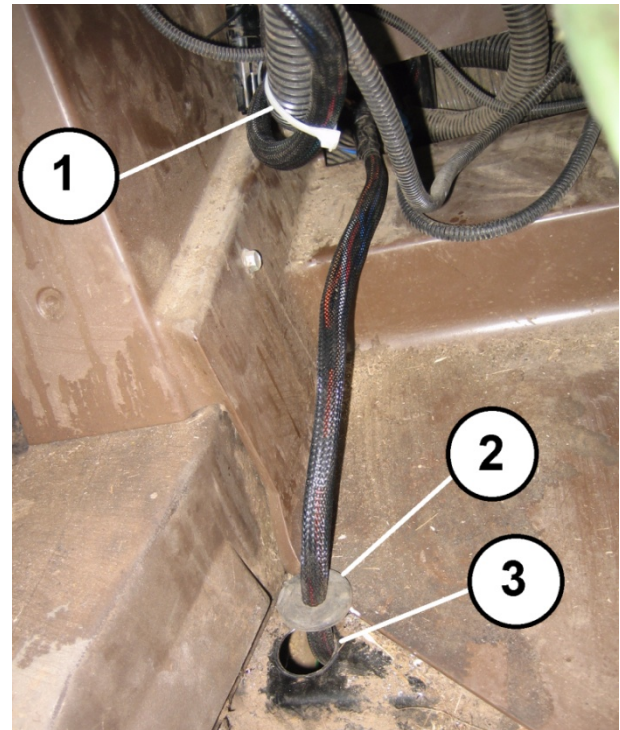


Figure 6. Hole in Cab Floor

1 – Tie band to armrest harness

2 – Grommet

3 – Hole in cab floor

Secure the remainder of the harness in the cab to the existing armrest harness using tie bands as shown in Figure 7.



Figure 7. Harness Routing

1 – Tie Bands

Under the cab, route the harness towards the rear of the machine along the RH frame rail. Use tie bands as appropriate to secure the harness to the frame or other harnesses.

Note: Do not secure the wire harness to any hydraulic lines as the vibration may cause damage to the harness over time.

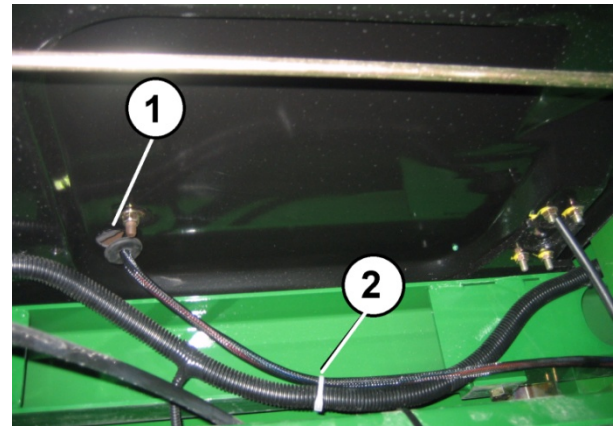


Figure 8. Area Under Cab

1 – Hole in cab floor

2 – Tie Band to main vehicle harness

Continue to route the harness along the RH frame rail towards the valve assembly in the engine compartment. Secure the harness in the same manner stated above.

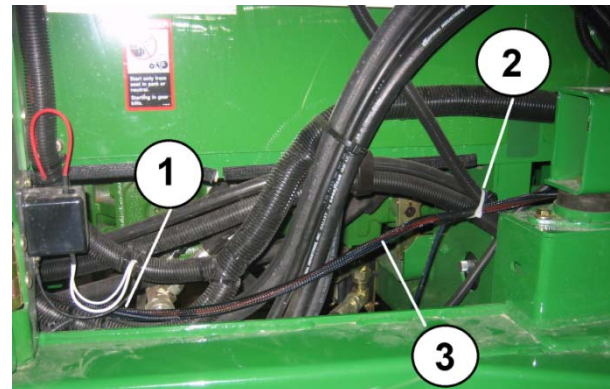


Figure 9. Harness Routing Behind Panel

1 – Tie Band

2 – Tie Band

3 – Wire Harness

Install the power wire from the harness along the main vehicle harness to circuit breaker one (1).

Connect the eyelet to the terminal as indicated in Figure 10.

Secure the harness and fuse holder as necessary with tie bands.

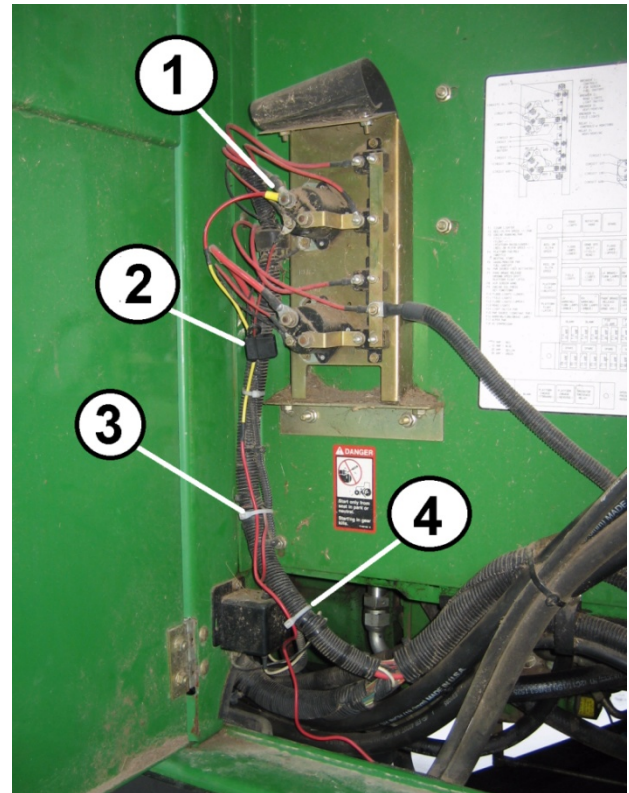


Figure 10. Power Wire Installation

- 1 – Terminal at Circuit Breaker 1
- 2 – Fuse Holder (20 amp)
- 3 – Tie Band
- 4 – Tie Band

Continue to route the remainder of the harness along the RH frame rail. Install connectors at valve as indicated in Figure 11. Wrap any excess harness and tuck behind engine cross member. Use tie bands to secure the harness as necessary.

Reminder: Do not secure the harness to any hydraulic hoses as this can cause long-term harness damage.

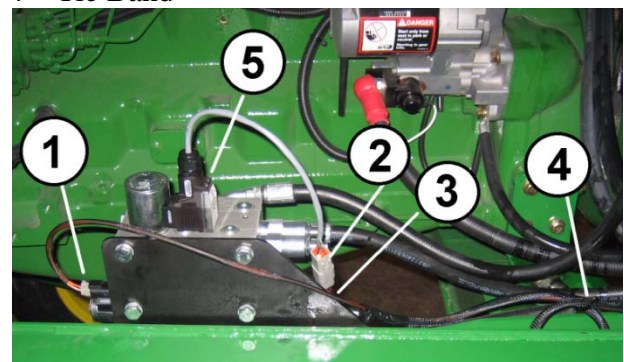


Figure 11. Harness Install

- 1 – Belt Frame Lower Valve
- 2 – 4-Pin Deutsch
- 3 – Belt Frame Raise Valve
- 4 – Tie Band, Loop
- 5 – Proportional Controller

Route last section of harness under the main frame rail and along the RH DWA Frame as indicated in Figure 12. Secure at the holes in the frame using tie bands.

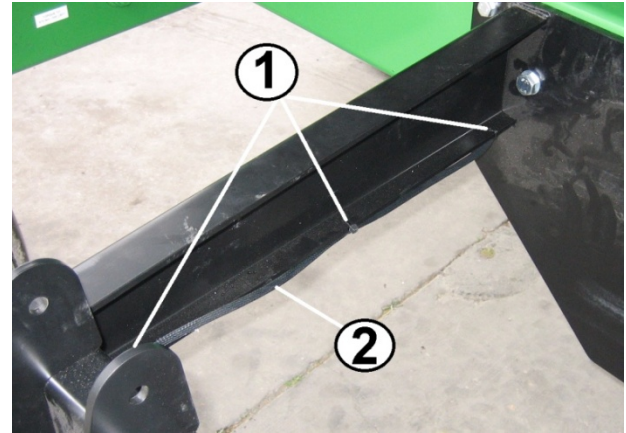


Figure 12. Deflector Harness Routing

1 – Tie band locations

2 – Wire harness

At the electric actuator, first install the harness covering supplied with the main wire harness.

Next, using components supplied with the harness and special tools, install the Deutsch connector on the electric actuator. The following is the pin location for each wire on the actuator.

Red Wire – Location 1

Black Wire – Location 2

Note: If the electric actuator runs opposite of the anticipated movement from the cab after installation, these wires can be switched to correct the situation.

Secure the harness to the top bolt at the electric actuator with a tie band. Also secure the leads to the actuator with a tie band as indicated in Figure 13.

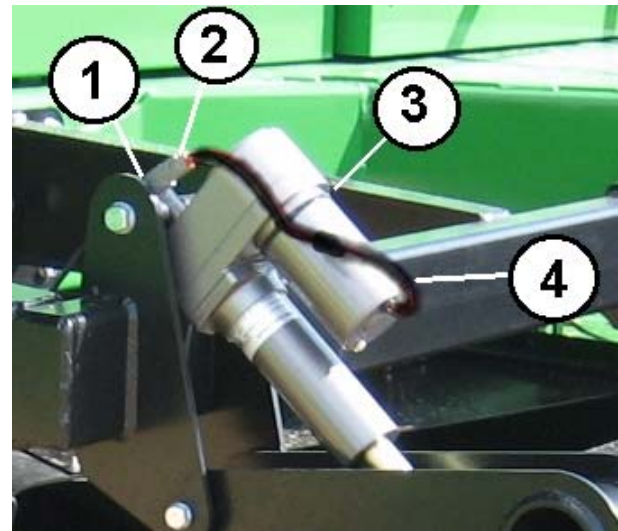


Figure 13. Actuator Harness Install

1 – Tie Band

2 – Deutsch Connector

3 – Tie Band

4 – Harness Cover

Wire Harness Installation - Late 4995

This section covers wire harness installation on 4995 Windrowers E04995X330677 and above.

For Windrowers s/n up to s/n E04995X330676, see previous section.

Begin with the switches and potentiometer in the cab.

Remove the top plate of the armrest and the three of the four plugs installed.

Using a 6 mm (0.25") drill bit, drill through the plastic decal of the armrest for the potentiometer.

Install the switches and potentiometer as indicated by Figure 2.

When connecting to the harness in the armrest, connect the ends of the harness to the switches as follows:

<u>Harness End Label</u>	<u>Switch</u>
HB Belt Speed Switch	DWA On/Off
Reel Fore/Aft Switch	Belt Frame
Deck Shift Switch	Deflector

Also connect the 3-Prong Deutsch connector to the Potentiometer.

The DWA On/Off switch will connect to the HB Belt Speed harness connector with an adapter harness. This adapter harness requires the loose ends of the harness to be plugged into the HB Belt Speed harness connector individually (see Figure 3), and then secured with electrical tape to prevent loosening. The connections are as follows.

<u>Wire Color</u>	<u>HB Belt Speed Con. Position</u>
Green	Position 1 (Fig 3, lower right)
Red	Position 3 (Fig 3, lower left)
Black	Position 5 (Fig 3, upper mid)



Figure 1. Armrest Plate
1 – Plugs to remove



Figure 2. Switches Installed
1 – DWA On/Off
2 – Belt Frame Raise/Lower
3 – Deflector Raise/Lower
4 – Belt Speed Control

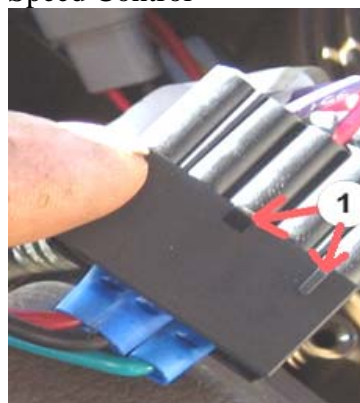


Figure 3. Wire Installation
1 – Reference (latch pin)
Black = upper row, Red/Green=lower row

At the access panel on the RH side of the machine, remove the cap on the connector at the back of the cab as shown in Figure 3.

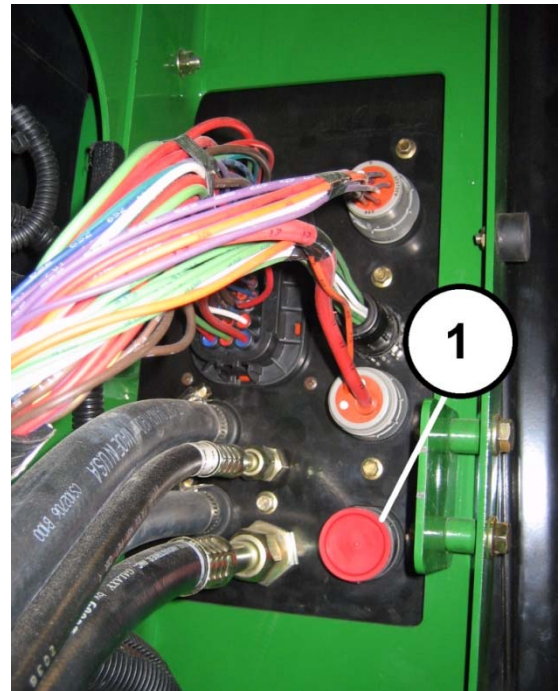


Figure 3. Back of Cab

1 – Cap on connector for DWA Harness

Install the main wire harness at the connector and route along the other main vehicle harnesses to the RH frame rail of the machine. Secure with tie bands as indicated in Figure 4. Secure the timer module as indicated.

IMPORTANT: DO NOT BEND HARNESS SHARPLY FOR ANY REASON AS THERE ARE DIODES IN THE HARNESS THAT CAN BE DAMAGED BY BENDING.

Note: Do not secure the wire harness to any hydraulic lines as the vibration may cause damage to the harness over time.

Verify that a 20 amp fuse is installed in F22 of the main fuse panel. This is the power supply for the DWA functions.

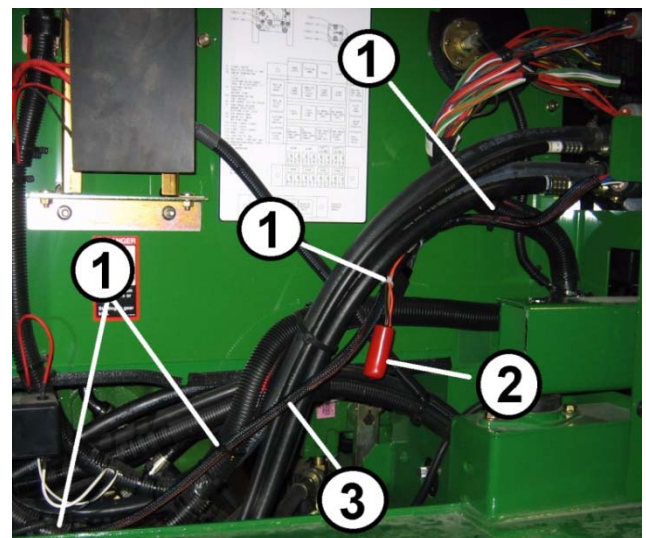


Figure 4. Wire Harness Installation.

1 – Tie Band

2 – Timer Module

3 – Wire Harness

Continue to route the remainder of the harness along the RH frame rail. Install connectors at valve as indicated in Figure 5. Wrap any excess harness and tuck behind engine cross member. Use tie bands to secure the harness as necessary.

Reminder: Do not secure the harness to any hydraulic hoses as this can cause long-term harness damage.

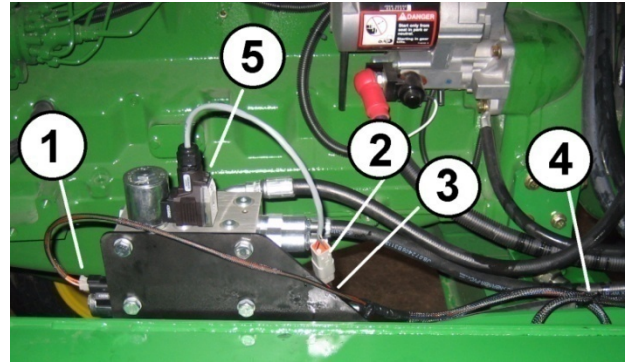


Figure 5. Harness Install

1 – Belt Frame Lower Valve 2 – 4-Pin Deutsch

3 – Belt Frame Raise Valve 4 – Tie Band, Loop

5 – Proportional Controller

Route last section of harness under the main frame rail and along the RH DWA Frame as indicated in Figure 5. Secure at the holes in the frame using tie bands.

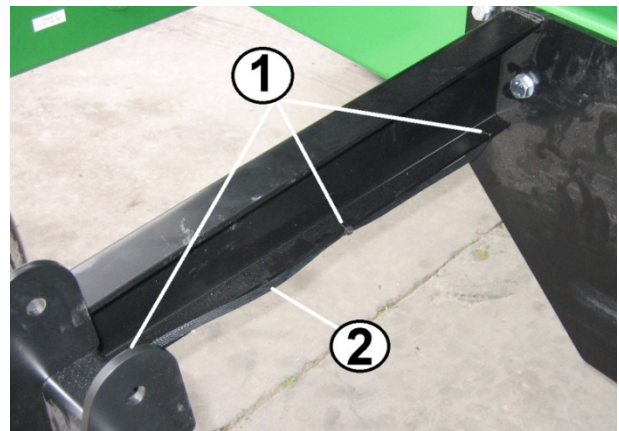


Figure 5. Deflector Harness Routing

1 – Tie band locations

2 – Wire harness

At the electric actuator, first install the harness covering supplied with the main wire harness. This material is made to stretch to fit over the lead isolator on the wires. It may be helpful to use a ballpoint pen or centering punch to help stretch the material.

Next, using components supplied with the harness and special tools , install the Deutsch connector on the electric actuator. The following is the pin location for each wire on the actuator.

Red Wire – Location 1

Black Wire – Location 2

Note: If the electric actuator runs opposite of the anticipated movement from the cab after installation, these wires can be switched to correct the situation.

Secure the harness to the top bolt at the electric actuator with a tie band. Also secure the leads to the actuator with a tie band as indicated in Figure 5.

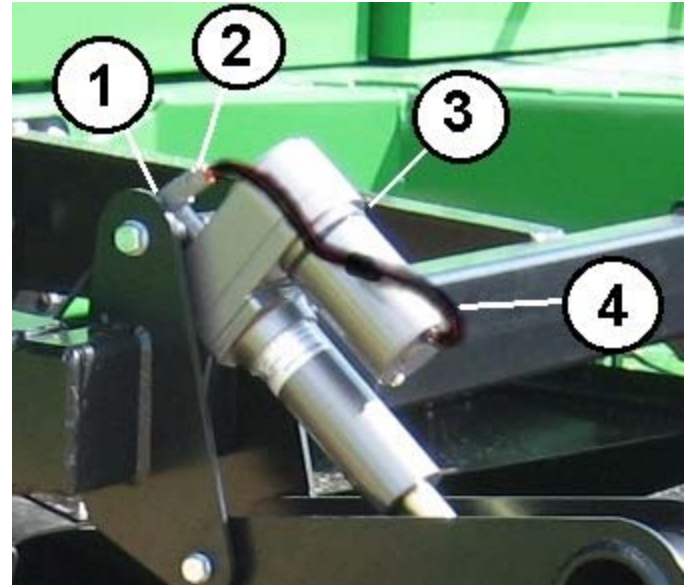


Figure 6. Actuator Harness Install

1 – Tie Band

2 – Deutsch Connector

3 – Tie Band

4 – Harness Cover

Note: The fuse for this harness is installed in the vehicle fuse assembly at the access panel on the right side of the cab. Verify that a 20amp fuse is installed in position F22.

Specification: Double windrow attachment fuse amperage is 20 amps.

Tire Pressure and Wheel Spacing

Tire pressures can be modified to improve operating characteristics of the windrower with the Double Windrow Attachment installed.

Wheel Spacing

Rear tires need to be configured as follows with regards to wheel spacing.

Left rear tire – Per 4995 Self-Propelled Windrower Operator's manual for configuration (typically in-line with center of front tire).

Right rear tire – completely moved in for clearance of the windrow when the DWA is used and for clearance of windrow when single windrowing.

Tire Pressure

Optimum tire pressures for Standard 18.4-26, 12PR button tread and 18.4R-26, 2-star radial bar tread tires are defined in the 4995 Self-Propelled Windrower Operator's Manual.

Optimum tire pressures for the 23.1R-26, R3 radial button tire and 23.1-R26, R1 radial bar tire with the double windrow attachment installed are as follows.

Specification: Large front tire pressure
20 psi

Rear tire pressures for the machine with a double windrow attachment installed are as follows:

Left rear tire – 10 psi

Right rear tire – 12 psi

Note: Right rear tire pressure rating is higher as this axle is set in further for more room for windrow placement when the DWA is used.

IMPORTANT: When the double windrow attachment is removed, set tire pressures as indicated by the 4995 Self-Propelled Windrower Operator's Manual for all tires.

IMPORTANT: Rear wheel stabilizer kit is not compatible with the double windrow attachment at the right side of the machine. The left side is compatible and may remain installed with use of the double windrow attachment.



Figure 1. Wheel Spacing

1 – LH Side, Out

2 – RH Side, In

Installation Checklist

Once installation is complete, verify the following:

- 1/ No missing components.
- 2/ No leaks in the system.
- 3/ Belt does not turn when the platform is not turning, even when DWA switch is “ON” and platform is turned off
- 4/ Deflector moves in appropriate direction for switch movement.
- 5/ Belt frame moves the appropriate direction for switch movement.
(Adjust RH cab mirror for visibility of top deflector from cab for ease of test.)
- 6/ Belt frame raises and lowers with the platform.
- 7/ Belt speed is adjustable from the cab.
(This can be determined by change in noise with the machine at idle and changing the belt speed.)
- 8/ Tires and wheel spacing are properly configured.

Pre-Delivery Inspection

The following **MUST** be configured before the unit is operated in the field.

With the platform installed and tires configured properly, lower platform to the ground and turn off the machine.

Check the following adjustments:

- 1/ DWA Belt Frame Down Stop Adjustment

(See BELT FRAME DOWN STOP in the INITIAL SETTINGS section in this manual).

- 2/ Belt Frame Crop Guide Adjustments

(See CROP GUIDE ADJUSTMENT section in this manual)

- 3/ Belt Adjustments

(See BELT TENSION and BELT TRACKING in the ADJUSTMENTS section in this manual)

- 4/ Deflector Adjustments

(See DEFLECTOR ACTUATOR and DEFLECTOR PANEL in the INITIAL SETTINGS section in this manual.)

- 5/ Initial Machine Settings

(See INITIAL MACHINE SETTINGS section in this manual)

REPAIR PARTS

General Comments

The following pages include information regarding parts for the double windrow attachment. Right or left hand parts are determined by sitting in the operator's seat facing forward. The abbreviation "A.R." in the "USED" column indicates "As Required." This is because a different number of the specific component may be needed for proper assembly depending on the tolerance of the individual machine.

All parts listed for the double windrow attachment are available from your local dealer.

Attention: Dealer – Contact RCI directly for all part orders for this attachment. In general, any fabricated component painted black is an RCI part and any part that is painted John Deere green is a John Deere part and can be located in the Parts Manual for the machine to which the attachment is installed. Please include a serial number and model of the attachment when placing a parts order. The serial number plate is attached to the rear plate of the belt frame.

Replacement Hardware

All bolts, cap screws, washers and machine screws are metric grade 8.8 and zinc plated unless markings on the part indicate otherwise. Flange bolts and flange nuts are metric grade 10.9 and zinc plated unless markings on the part indicate otherwise.

The use of improper hardware in any location can result in the failure of the component fastened with the hardware or

related structures, and can cause personal injury, further damage to the product, or loss of property.

Replacement Parts

Replacement parts may have occasional differences to the parts being replaced. This difference is typically providing the benefit of a design change made after the release of this publication.

Recommended Spare Parts Listing - Dealer

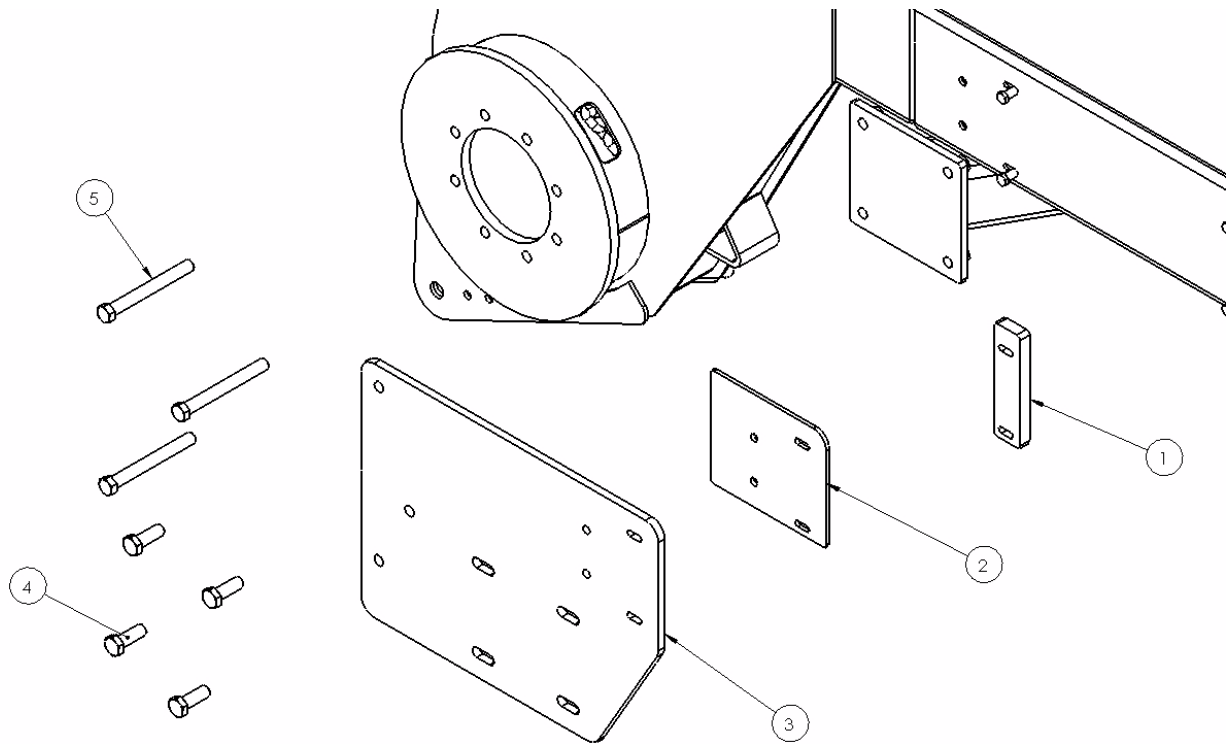
The following spare parts are recommended for stocking purposes and include common wear items for this attachment.

<u>Part Number</u>	<u>Description</u>	<u>Qty per Unit</u>
RC0357	Belt, Endless	1
RC0359	Bearing w/lock	1
RC0361	Plug, Vent	1
RC0503	Kit, Cylinder	1
RC0485	Chain (for coupler)	1

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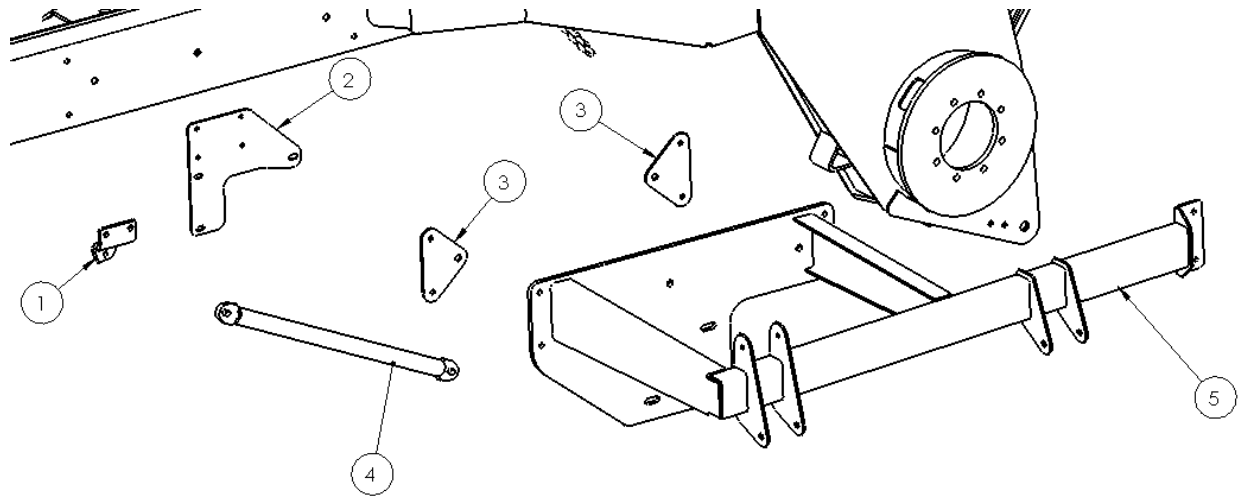
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Electrical Parts (4995 Windrower s/n E04995X330677 and above).....	Pg. 99
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Left Frame Components



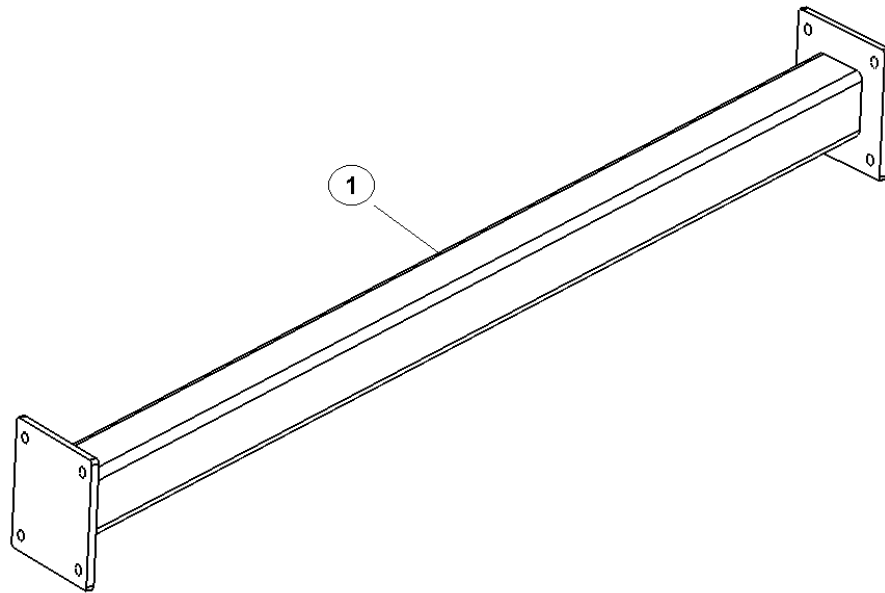
Key	Description	Part Number	Qty. Used
1	Spacer	RC0458	1
2	Spacer	RC0457	1
3	LH Frame Mount	RC0456	1
4	M16 x 50 Hex Bolt, Gr. 10.9	0154019	4
-	M16 Washer	40361	8
-	M16 Hex Nut, 10.9	1140311	4
5	M16 x 190, Grade 10.9, short thread	0154034	3
-	Heavy Washer	1133863	3
-	M16 Hex Nut, 10.9	1140311	6

Right Frame Components



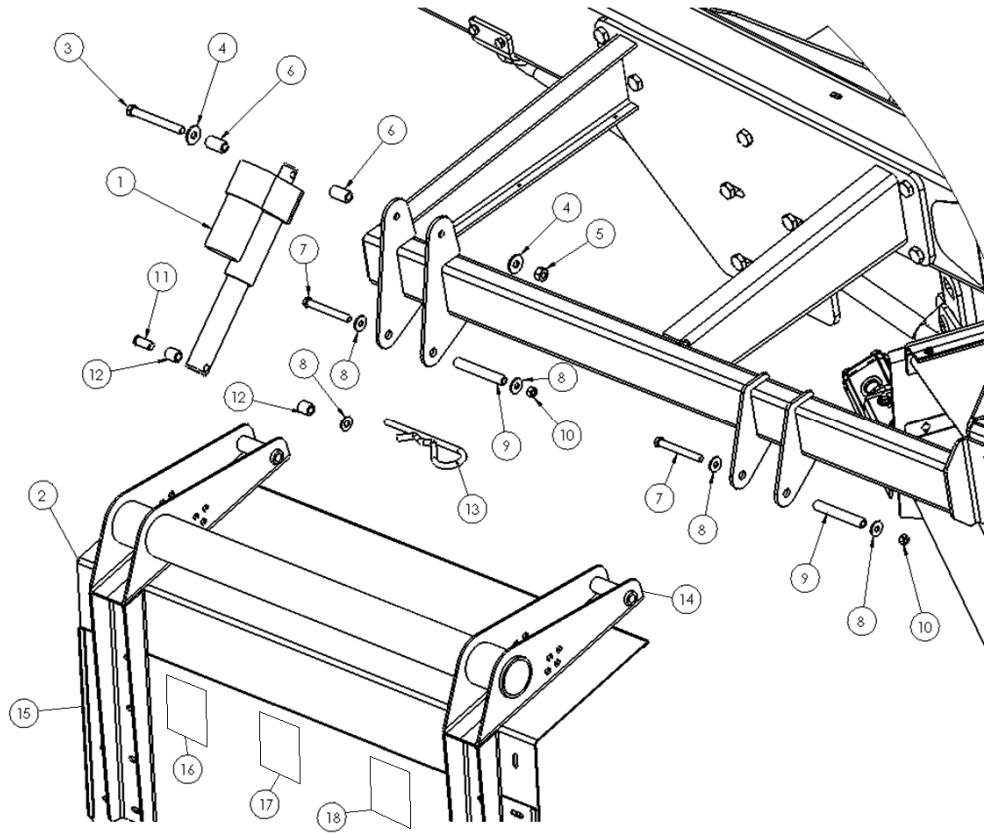
Key	Description	Part Number	Qty. Used
1	Support	RC0469	1
-	M12 x 40 Hex Cap Screw, 8.8	0145164	2
-	M12 Washer	1140359	4
-	M12 Nut, Gr. 8.8	1140309	2
2	Valve Mounting Plate	RC0468	1
	M10x35 Carriage Bolt	10679-06079	2
	M10 Washer	0153662	14
	M10 x 25, Gr. 8.8	1138655	4
	M10 Hex Nut, Gr. 8.8	1140308	2
3	Support	RC0467	2
4	Support	RC0470	1
	M12 x 40 Hex Cap Screw, 8.8	0145164	2
	M12 Washer	1140359	4
	M12 Nut, Gr. 8.8	1140309	2
5	Frame	RC0459	1
	Heavy Washer	1133863	1
	M16 x 50 Hex Bolt, Gr. 10.9	0154019	7
	M12 x 40 Hex Cap Screw, 8.8	0145164	4
	M16 Hex Nut, 10.9	1140311	7
	M12 Hex Nut, 10.9	1140309	4
	M16 Washer	40361	13
	M12 Washer	1140359	8
	1/2" x 1 Thread Rolling Screws	0143706	2

Cross Tube



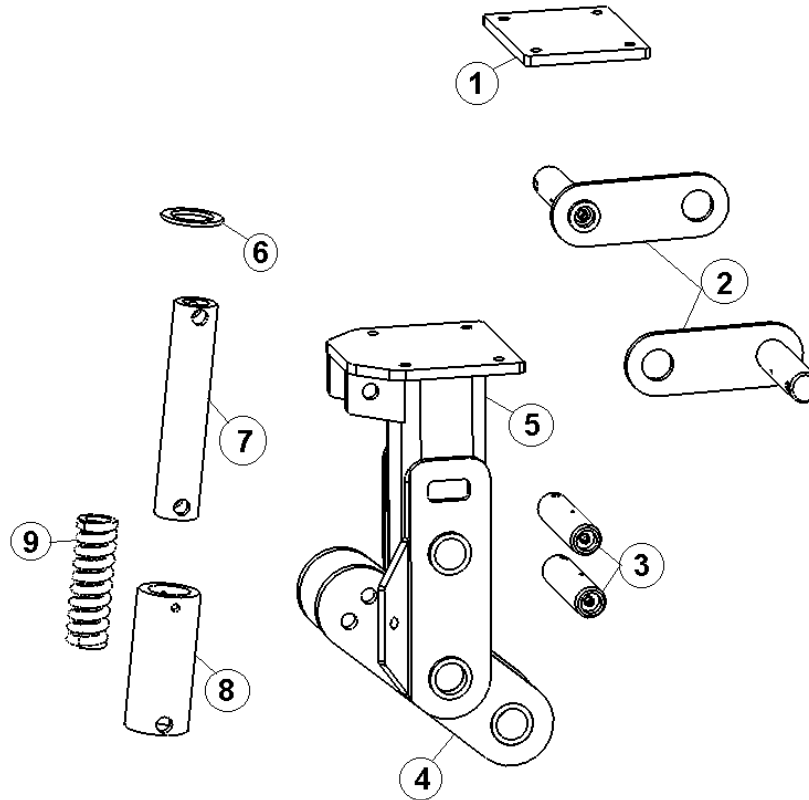
Key	Description	Part Number	Qty. Used
1	Cross Tube	RC0453	1

Side Deflector



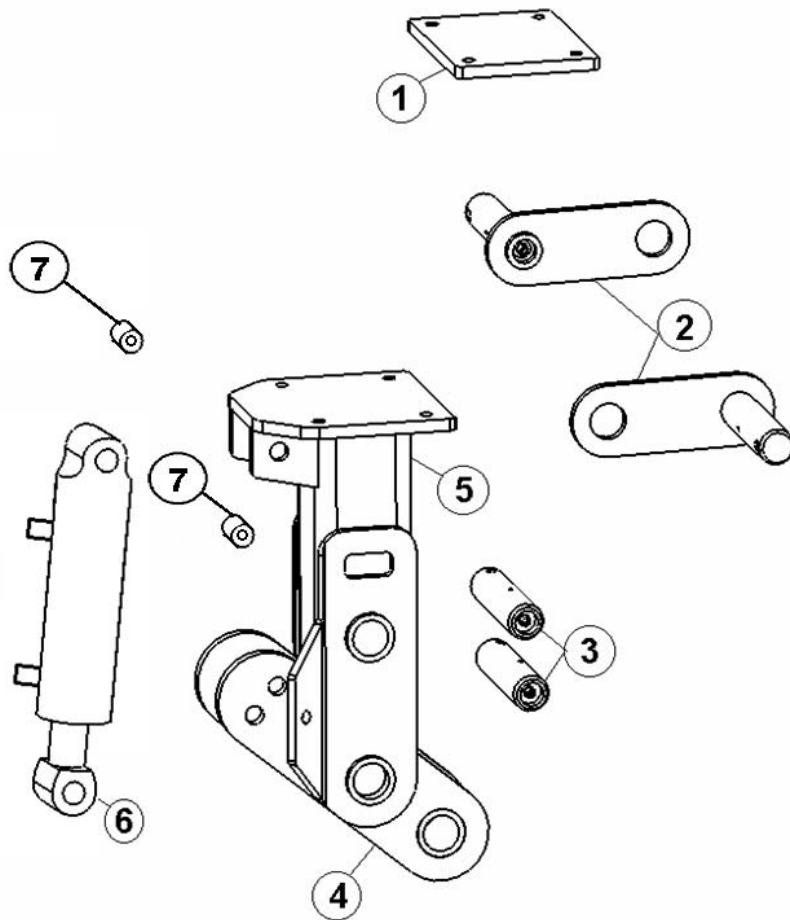
Key	Description	Part Number	Qty. Used	Comments
1	Linear Actuator	RC0517	1	Replaces RC0360 with s/n 227
2	Sheet, Upper	RC0479	1	
3	M12 x 140 Hex Bolt, Grade 8.8, Short Thread	38721	1	
4	M12 Washer	1140359	3	
5	M12 Lock Nut, Grade 8.8	1140171	1	
6	Bushing	RC0472	2	
7	M10 x 140 Hex Bolt, Grade 8.8, Short Thread	38672	2	
8	M10 Washer	1140358	4	
9	Bushing	RC0471	2	
10	M10 Lock Nut	1140167	2	
11	Clevis Pin, M12 (1/2" x 4)	66122	1	
12	Bushing	RC0496	2	
13	Hitch Pin Clip	45286	1	
14	Frame	RC0473	1	
-	M8 x 25 Carriage Bolt	10679-06012	16	
-	M8 Washer	1140357	16	
-	M8 Lock Nuts	1140163	16	
15	Sheet, Lower	RC0480	1	
16	Decal, Pinch Point	RC0493	1	
17	Decal, Deflector	RC0491	1	
18	Decal, Moving Parts	RC0494	1	

Left Pivot Frame Assembly



Key	Description	Part Number	Qty. Used
1	Top Plate	RC0452	1
-	M12 x 160 Hex Bolt Gr. 10.9, short thread	10679-06006	4
-	M12 Washer, hardened	34880	8
-	M12 Nut, Gr. 10.9	0153641	4
2	Top Link	RC0445	2
-	7/16" Lynch Pin	0157330	2
-	M10 x 1.0 Grease Fitting, straight	0496006	2
3	Pin	RC0439	2
-	M10 x 70 (Short Thread) Hex Bolt	1138664	2
-	M10 Hex Nut	1140308	2
-	M10 x 1.0 Grease Fitting, straight	0496006	2
4	Pivot Arm	RC0436	1
5	Drop Frame	RC0440	1
6	Washer	RC0451	1
7	Rod	RC0449	1
8	Tube	RC0450	1
9	Spring	RC0348	1
-	3/4" x 4-1/2" Zinc Clevis Pin	01567993	2
-	5/32" x 1-1/2" Cotter Pin (for Clevis Pin)	65105	1
-	3/4" Washer	1133092	2
-	Hitch Pin Clip	45285	1

Right Pivot Assembly

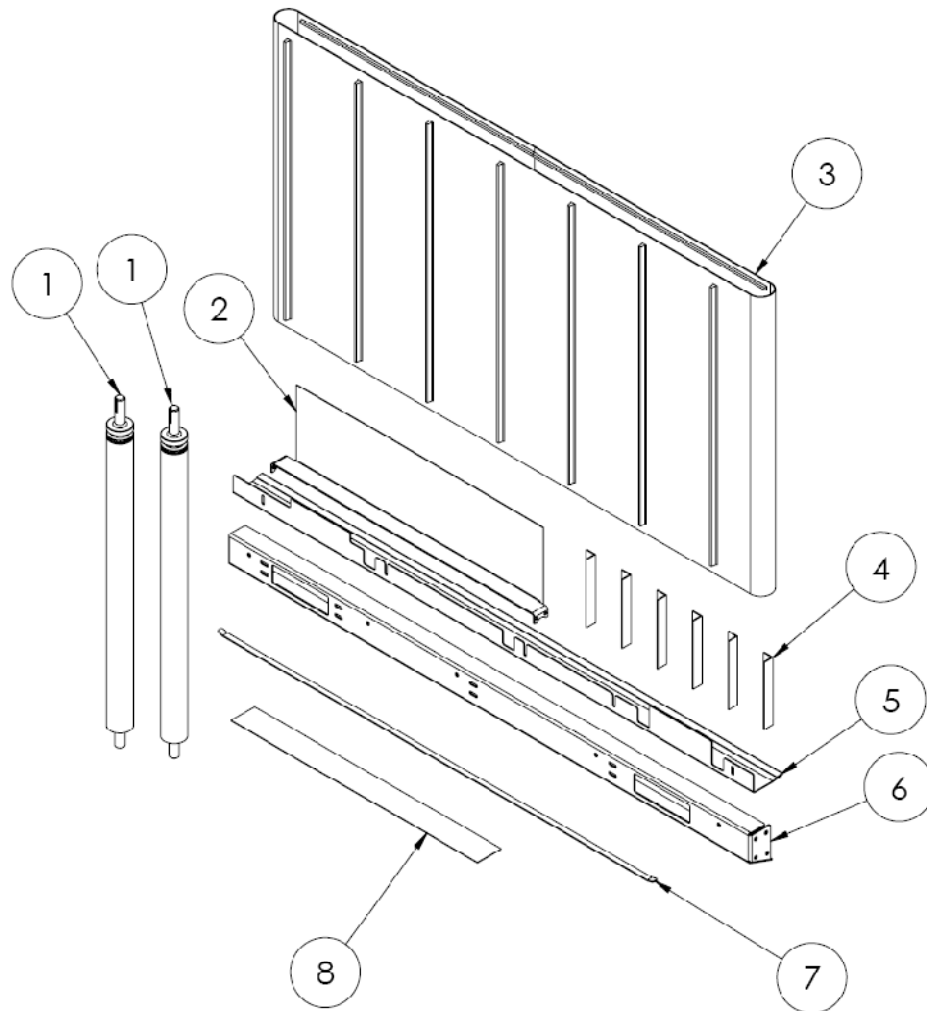


Key	Description	Part Number	Qty. Used
1	Top Plate	RC0452	1
-	M12 x 160 Hex Bolt Gr. 10.9, short thread	10679-06006	4
-	M12 Washer, hardened	34880	8
-	M12 Nut, Gr. 10.9	0153641	4
2	Top Link	RC0445	2
-	7/16" Lynch Pin	0157330	2
-	M10 x 1.0 Grease Fitting, straight	0496006	2
3	Pin	RC0439	2
-	M10 x 70 (Short Thread) Hex Bolt	1138664	2
-	M10 Hex Nut	1140308	2
-	M10 x 1.0 Grease Fitting, straight	0496006	2
4	Pivot Arm	RC0436	1
5	Drop Frame	RC0440	1
6	Cylinder	RC0345	1
-	3/4" x 4-1/2" Zinc Clevis Pin	01567993	2
-	5/32" x 1-1/2" Cotter Pin (for Clevis Pin)	65105	2
-	3/4" Washer	1133092	2
7	Bushing	RC0495	2

Important:

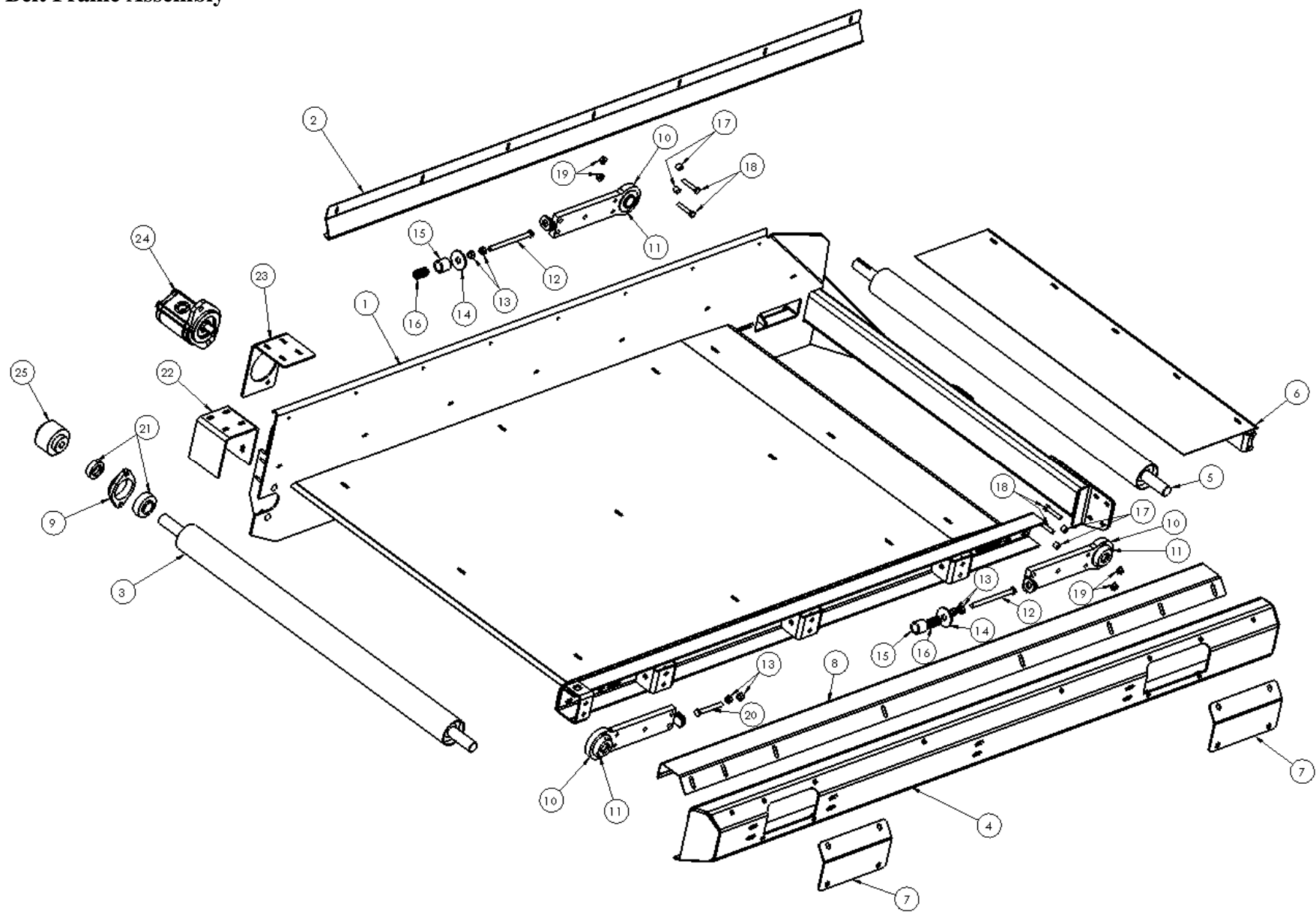
This attachment is equipped with a factory-installed update bundle that involves different rollers, belt, skid shoe and scrapers compared to standard production attachment.

Use the parts listing on this page for any component shown. Use the following pages for all other parts



Key	Part Number	Description	Qty	Comments
1	RC049003	Roller	2	
2	RC049018	Scraper	1	
3	RC049009	Belt	1	Includes clip
4	RC049013	Support	6	
5	RC049012	Guide, Crop	1	
6	RC049014	Shoe, Skid	1	
7	RC049021	Support	1	
8	RC049016	Sheet	1	

Belt Frame Assembly

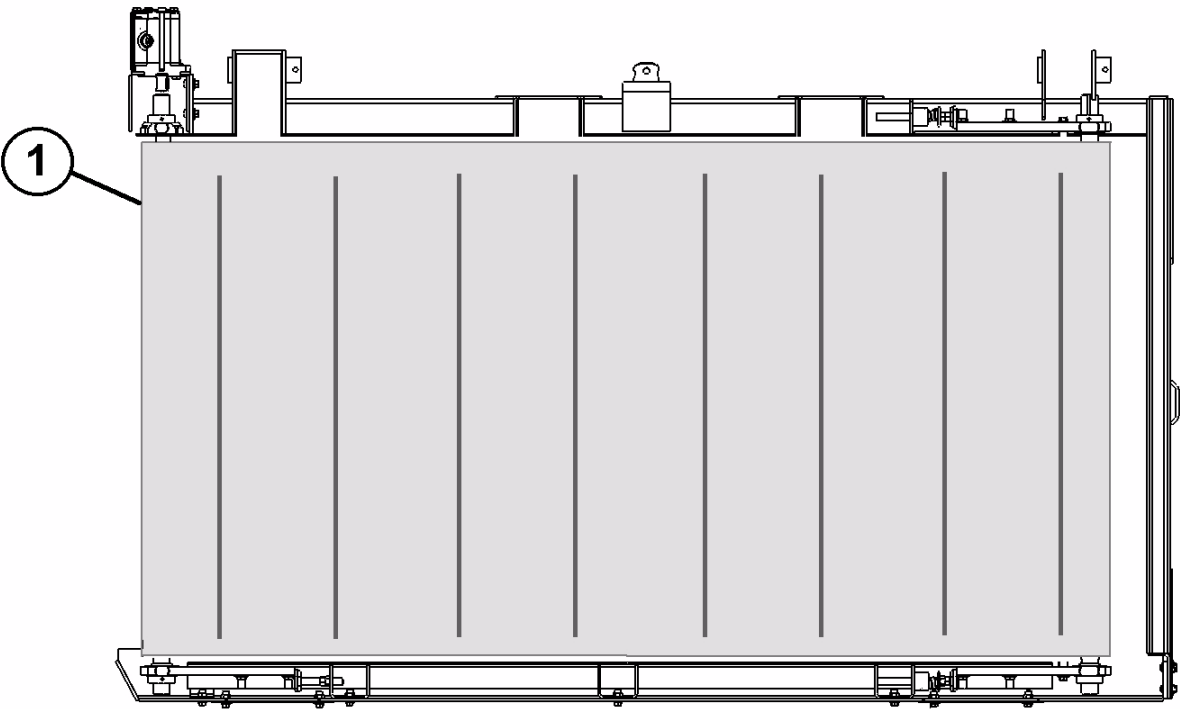


Belt Frame Assembly – Continued

Key	Description	Part Number	Qty. Used
1	Belt Frame	RC0373	1
2	Crop Guide, Rear	RC0421	1
-	M6 x 20 Carriage Bolt	10679-06007	8
-	M6 Flange Nut	90700	8
3	Roller (Rubberized), Drive	RC0356	1
4	Skid Plate	RC0417	1
-	M10 x 25, Gr. 8.8	1138655	12
-	M10 Washer	0153662	12
5	Roller, Idler	RC0336	1
6	Slider	RC0433	1
7	Access Panel	RC0414	2
-	M10 x 25, Gr. 8.8	1138655	8
-	M10 Washer	0153662	8
8	Crop Guide, Front	RC0415	1
-	M10 x 25, Gr. 8.8	1138655	4
-	M10 Washer	0153662	4
9	Bearing Housing, Flange (with bearing)	RC0358	1
-	M10x35 Carriage Bolt	10679-06079	2
-	M10 Flange Nut	90702	2
10	Support, Bearing	RC0410	3
-	M12 x 50 Carriage Bolt	10679-06013	9
-	M12 Washer, 8.8	34880	9
-	M12 Hex Top Lock Nut, 8.8	90683	9
11	Bearing, Roller (with lock collar)	RC0359	2
12	M12 x 150 Cap Screw, 8.8	0121857	2
13	M12 Hex Nut, 8.8	1140309	6
14	M12 Fender Washer	38406	2
15	Bushing	RC0416	2
16	Spring	RC0347	2
17	Bushing	RC0432	4
18	M10 x 55 Hex Cap Screw, 8.8	0121824	4
19	M10 Flange Nut	90702	4
20	M12 x 90 Cap Screw, 8.8	0121851	1
21	Bearing, Roller (with lock collar)	RC0359	1
22	Support	RC0430	1
-	M10 x 25 Carriage Bolt	10679-06008	4
-	M10 Hex Flange Nut	90702	4
23	Mount, Motor	RC0429	1
-	M10 x 25 Carriage Bolt	10679-06008	4
-	M10 Hex Flange Nut	90702	4
24	Motor, Hydraulic Gear	RC0344	1
-	Seal Kit	RC0530	1
-	M12 x 40 Hex Cap Screw, 8.8	0145164	2
-	M12 Washer, 8.8	34880	4
-	M12 Hex Top Lock Nut, 8.8	90683	2
-	1/4" machine key x 1.5" long	10679-00839	1

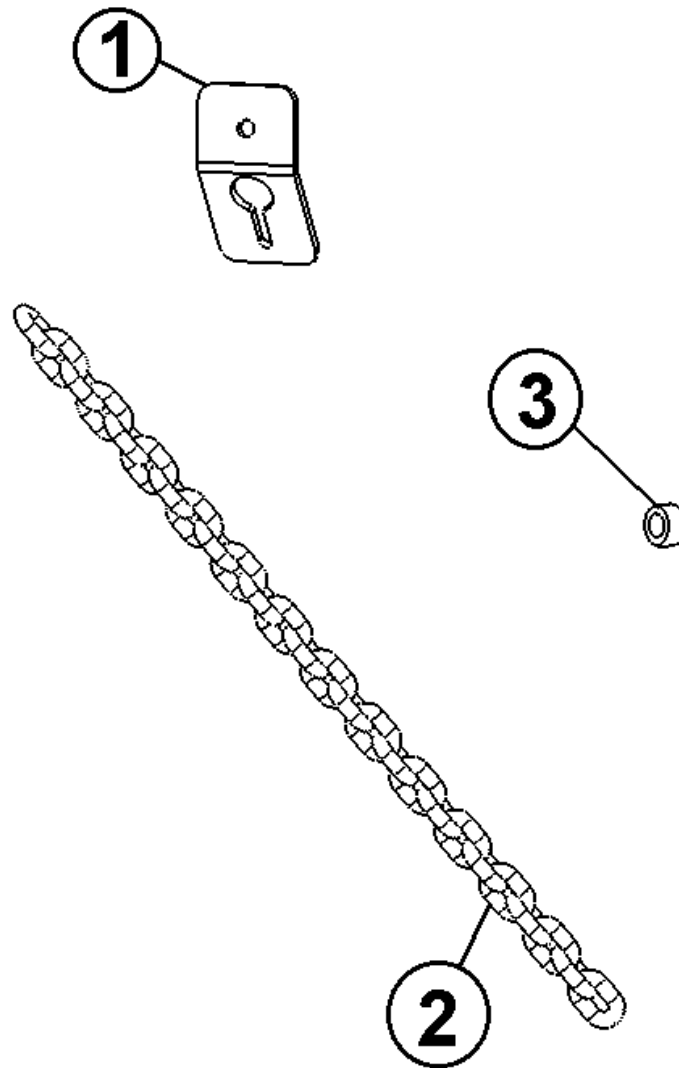
Key	Description	Part Number	Qty. Used
25	Coupler, Chain		-
-	Chain Coupler Sprocket - 1-1/4"	RC0353	1
-	Chain Coupler Sprocket - 7/8"	RC0354	1
-	Chain for Coupler	RC0485	1
-	Decal, Belt Tracking	RC0490	2
-	Decal, Belt Frame Lowering	RC0492	2

Belt



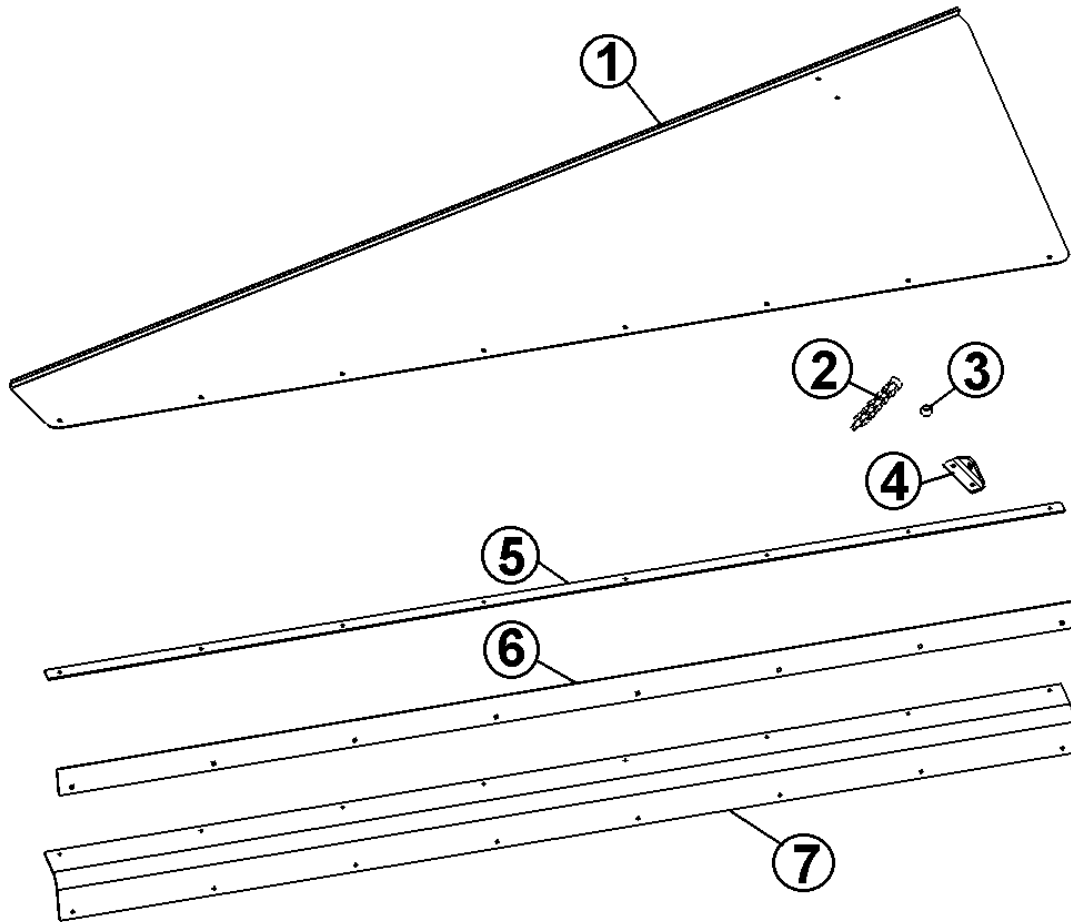
Key	Description	Part Number	Qty. Used
1	Belt, Endless	RC0357	1

Chain Support – Front



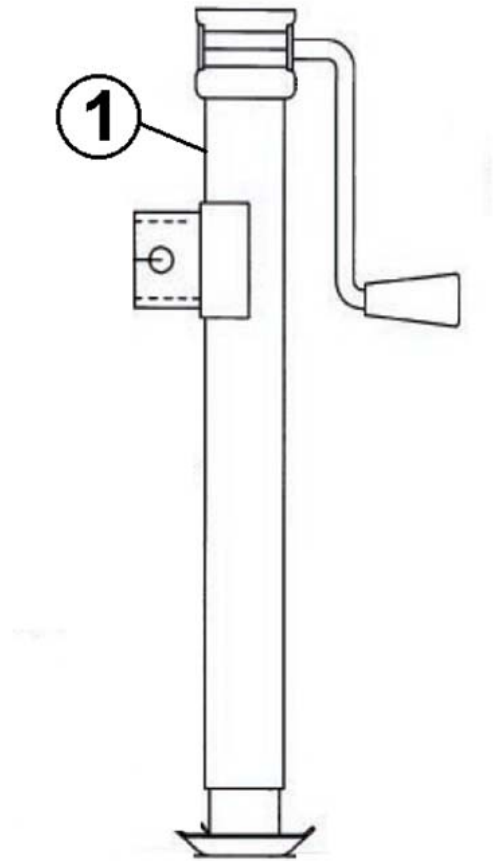
Key	Description	Part Number	Qty. Used
1	Support	RC0428	1
-	M12 x 40 Hex Cap Screw, 8.8	0145164	1
-	M12 Flange Nut	90703	1
2	5/16" Chain, 24" Cut Length	45146	1
3	Bushing	RC0495	1
-	M12 x 50 Carriage Bolt	10679-06013	1
-	M12 Flange Nut	90703	1

Top Deflector



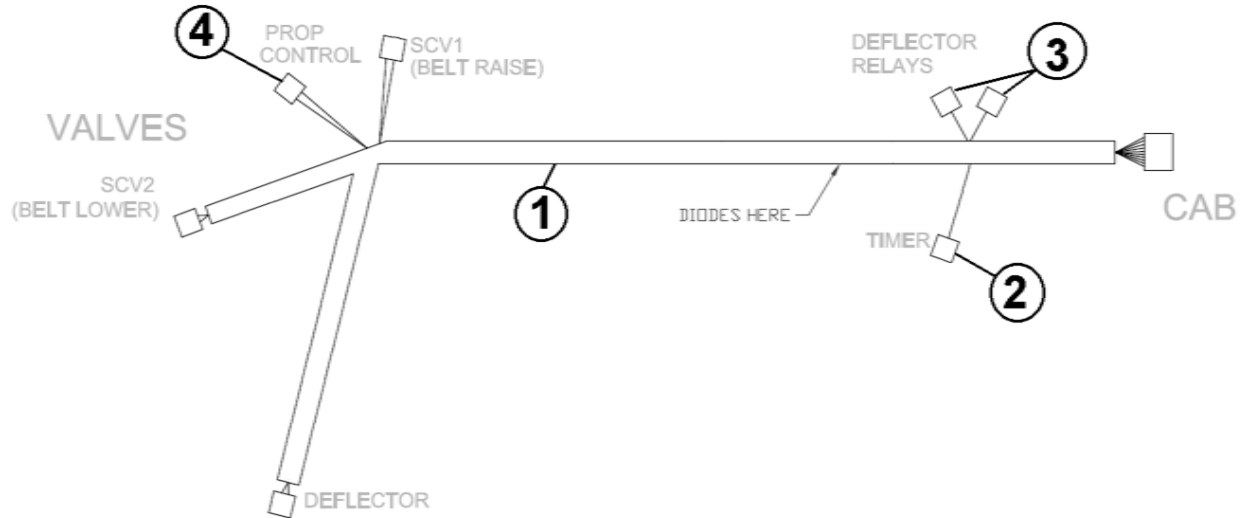
Key	Description	Part Number	Qty. Used
1	Top Deflector	RC0424	1
2	3/16" Chain - 6" Cut Length	45144	1
3	Bushing	RC0432	1
-	M10 x 55 Hex Cap Screw, 8.8	0121824	1
-	M10 Washer	0153662	2
-	M10 Flange Nut	90702	1
4	Support, Chain	RC0431	1
-	M6 x 20 Carriage Bolt	10679-06007	2
-	M6 Flange Nut	90700	2
-	Chain Hook - 1/4"	0500499	1
5	Strip	RC0423	1
6	Strip	RC0422	1
-	M6 x 20 Carriage Bolt	10679-06007	8
-	M6 Flange Nut	90700	8
7	Belting	RC0371	1
-	M6 x 20 Carriage Bolt	10679-06007	8
-	M6 Flange Nut	90700	8

Jack Stand



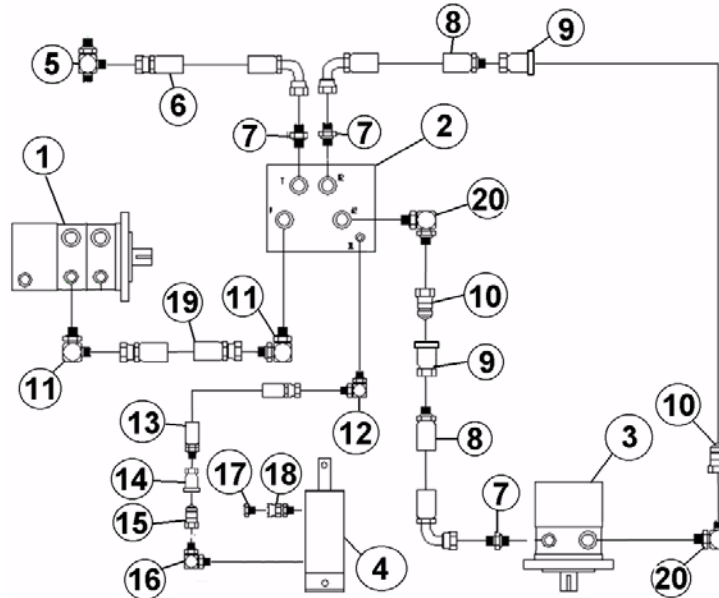
Key	Description	Part Number	Qty. Used
1	Jack Stand	RC0346	1

Electrical Parts (4995 Windrower s/n E04995X330677 and above)



Key	Description	Part Number	Qty. Used
1	Harness, Wiring	RC0498	1
2	Timer	RC0518	1
3	Proportional Controller	RC0497	1
-	Switch, Belt On/Off	RC0524	1
-	Potentiometer (with knob)	RC0525	1
-	Switch, Belt Frame Raise/Lower	RC0528	1
-	Switch, Deflector Raise/Lower	RC0529	1

Hydraulic System



Key	Description	Part Number	Qty. Used	Comments
1	Gear Pump	RC0343	1	
-	Seal Kit	RC0523	1	
2	Valve Assembly	RC0342	1	
3	Gear Motor	RC0344	1	
-	Seal Kit	RC0530	1	
4	Cylinder	RC0345	1	
5	T-Fitting, -12 ORB, -12 ORFS	RC0363	1	
6	Hydraulic Hose	RC0350	1	
7	Fitting, -10 male ORB to -10 ORFS adapter, str	RC0501	3	
8	Hydraulic Hose	RC0352	2	
9	Quick Coupler Chuck, 1/2 FPT	RC0366	2	
10	Quick Coupler Nipple, 1/2 FPT	RC0364	2	
11	Fitting, -10 male ORB to -10 ORFS adapter, 90 deg	RC0502	2	
12	Fitting, -6 male ORB to -6 male ORFS 90 deg	RC0500	1	
13	Hydraulic Hose	RC0351	1	
14	Quick Coupler Chuck, 3/8" FPT	RC0409	1	
15	Quick Coupler Nipple, 3/8 FPT	RC0408	1	
-	Dust Cap, Male	RC0406	1	
-	Dust Cap, Female	RC0407	1	
16	-8 male ORB to 3/8" MPT 90 deg adapter	RC0499	1	
17	1/4" MPT Vent Plug	RC0361	1	
18	1/4" FPT to 3/4" male ORB Adapter	RC0489	1	
19	Hydraulic Hose	RC0349	1	
20	Fitting, -10 SAE ORB male to 1/2 MPT, 90 deg	RC0533	2	
-	Cylinder Kit Control Segments	RC0503	1	
-	Suction Fitting, 1-1/4" hose barb straight	RC0487	1	