316M Merger Attachment

For John Deere W200-Series and
R450 Self-Propelled Windrowers

Operator Manual

Includes installation, operating, adjustment, maintenance, technical, repair parts and safety information for the 316M Merger Attachment.

Please retain this document for future reference.
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RCI New Agricultural Attachments and Implements
Warranty Statement

RCI Engineering LLC, hereinafter referred to as RCI, warrants new RCI attachments and implements, 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 and labor 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. Used equipment.
4. Components covered by their own non-RCI warranties, such as tires and trade accessories.
5. Normal maintenance service and expendable, high-wear items.
6. Sacrificial components designed to fail to prevent damage to other components when obstructions are encountered (i.e. shear bolts, pickup teeth)
7. Repairs or adjustments caused by: improper use; non-intended use; failure to follow recommended maintenance procedures; use of unauthorized attachments; accident or other casualty.
8. 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 windrow merger attachment:

The belts used in this product are 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. Belts are considered to be a wear item and a spare cross belt is provided with each new merger attachment.

316M Merger Attachment for John Deere W200 and R450 Self-Propelled Windrowers

The 316M Merger Attachment is available for the John Deere W200 series and R450 (rotary traction unit) self-propelled windrowers (SPW) with 500R, 995 or 994 Rotary Platforms (4.5 m [14 ft, 6 in.]) only.

Intended Use
The 316M allows merging of windrows with SPW in front of a self-propelled forage harvester, or in conditions that do not require wide swaths for dry-down. The 316M can eliminate the need for raking or merging passes through the field.

Product Highlights

- Merge two or three windrows into one.
- Single windrows of approximately 6’ wide can be created as selected by the operator.
- Control all functions using the keypads on the multi-function lever.
- Attachment can be disabled on-the-go for normal center-dumping of the windrow.
- Attachment rises to transport position with leading edge of the belt frame angled upward to clear incoming crop flow for center-dumping.
- Belt speed is controlled from the cab and is adjustable to vary windrow placement and formation.
- Attachment features a front conveyor behind the conditioner. This device gathers material dropping out of the crop stream, and delivers it to the cross belt for reliable function in varying crop conditions.
- The hydraulic drive system enables the belt to maintain speed as the engine load is increased and engine speed decreases.
- Windrowers arrive from the factory Merger-Ready. No welding is required.

Product Limitations

- Center-dumped windrows are approximately 6’ wide and non-adjustable when the merger is disabled.
- The size of a belly-dumped windrow can vary with crop conditions.
- This attachment only discharges to the right side of the machine when merging.
- The machine toolbox at the left side of the machine is not compatible with this attachment.
- The merger attachment is not compatible with the larger REAR tire option (16.5L-16.1) tires on the W-200 Series Windrowers. It is compatible with all FRONT tire options on all machines.
- AutoTrac is needed for efficient harvesting when combining three windrows into one.
- The 316M is not compatible with impeller conditioners. The attachment is compatible with all roll-type conditioners.
- It is advised to add a camera to the base machine to view the crop flow under the machine. The camera can be mounted under the right side storage box and can be displayed on a 2630 display or with a camera display screen mounted in the cab by the dealer.

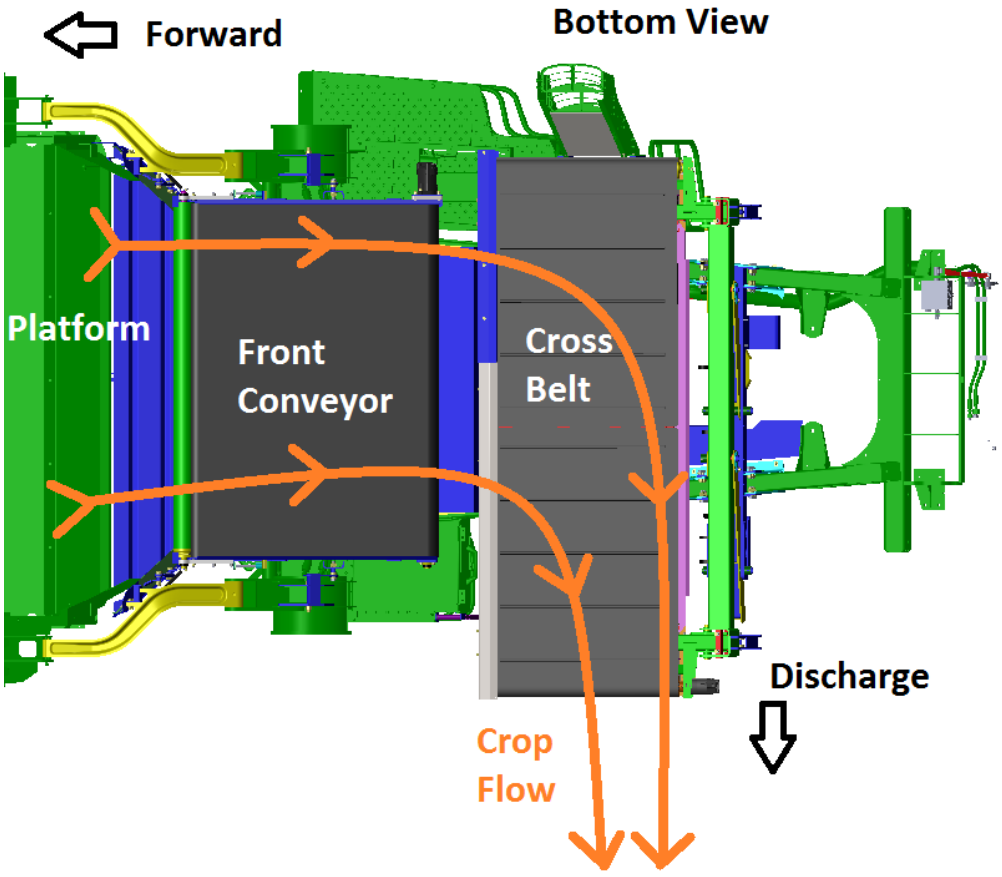
Ordering Information

- Bundle RC101001 for the 316M Merger Attachment. (This is the base bundle for the merger on all units.) Parts for 500R Platforms are included in this bundle.
- Bundle RC101283, W200-Series Completion Bundle, is also required for installation on W200-Series self-propelled windrowers.
- Bundle RC101282, R450 Completion Bundle, is also required for installation on R450 self-propelled windrowers.
- Bundle RC101002, 995 Completion Bundle, is also required for installation on a 995 Platform. No special parts are needed for the 500R Platform.
- This bundle is not compatible with John Deere W200 Series draper traction units, D450, A400, 4895, 4995, 4890, and 4990 Self-Propelled Windrowers.
- When using a 995 Platform for crops greater than five tons per acre and the harvesting of green/wet cereal grains, also order E94819 and E94820 (sheaves) through the John Deere Parts System to drive the conditioner at 1000 rpm. These parts are not required for the 500R Platform.

  Note: Crop accelerators and rotary strippers are advised for heavy crop conditions when using a 995 Platform. See 316M Operator Manual for more information.

ADDITIONAL MACHINE IMAGES FOR REFERENCE


W235
JOHN DEERE


Forward
Bottom View
Platform
Front
Conveyor
Cross
Belt
Discharge
Crop
Flow

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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 Self-Propelled Windrower for all information regarding the windrower. This manual is for the merger 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 and remain safe.

2. Familiarize yourself with all controls of the machine and attachment as well as the function of the unit before operation of the machine.

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.

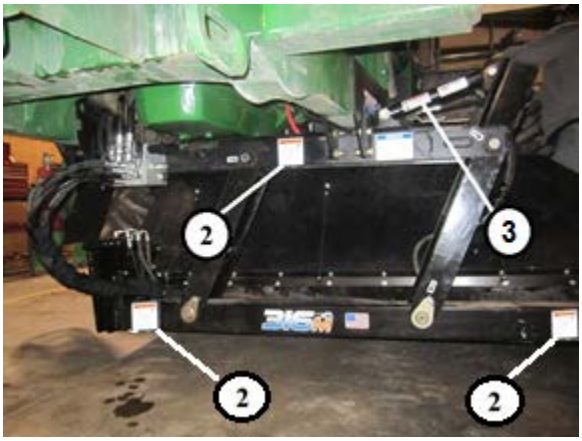
CAUTION in black letters on a yellow background indicates a potentially hazardous situation that, if not avoided, may result in minor injury.

Warning Decal 1

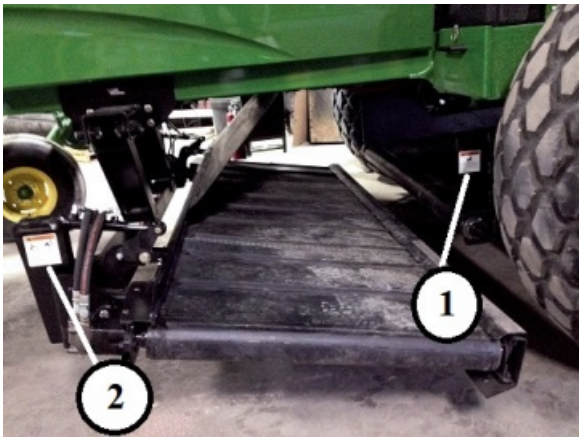
Warning Decal 2

Safety Sign Locations

Front Belt (Left Side)



Cross Belt (Rear)
Note: Warning Sign on Cylinder (Key 3) appears on all cylinder locations



Cross Belt (Right Side)
Front Belt (Right Side)

Cross Belt (Left Side)

Merger Lockout Location
A lockout device is provided at the main lift cylinder of the merger. A decal is placed next to the lockout to illustrate the operation. Always lock out the merger lift cylinder before doing any service on the merger. See Figure 1.

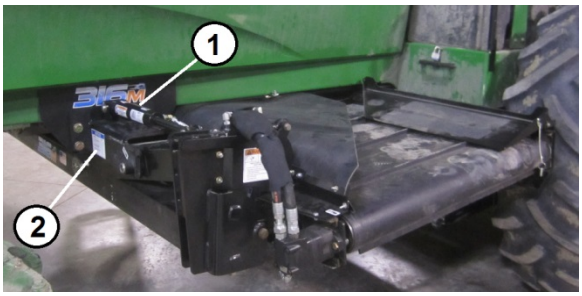


Figure 1. Merger Lockout Location
Key 1 – Lockout Location Key 2 - Decal

OPERATING THE ATTACHMENT

Preparing for the Field

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

1. Trash and debris are removed from the machine, especially around bearings and above top deflector.

2. All shields and guards are properly installed and tightened. Replace any damaged or missing shields and guards.

3. Belt speed is adjusted for crop conditions (See ADJUSTING BELT SPEED in this section).

4. Service items are completed (See MAINTENANCE section).

5. Belt Condition and Tension are proper (See BELT ADJUSTMENTS in ADJUSTMENTS section).

6. Belt frames are properly installed and hardware is properly fastened (See BELT FRAME INSTALLATION in SERVICE section).

7. 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).

8. Checklist for Windrower is complete (See OPERATING WINDROWER, PREPARING FOR THE FIELD section of Windrower Operator Manual).

9. Checklist for Platform is complete (See PRESTARTING CHECKS section of the Platform Operator's Manual).

10. All adjustments for crop conditions have been made (See INTIAL SETUP CONDITIONS in PERFORMACE section).

Operating the Attachment
W200-Series Self-Propelled Windrower

Refer to the W200 Self-Propelled Windrower Operator Manual for operation of controls of Windrower.

Enable/Disable the Merger Attachment
The Merger Attachment needs to be ENABLED for automatic operation.

To enable the attachment, press and hold the Merger Enable / Disable Button on the Multi-Function Handle as indicated in Figure 2 for five (5) seconds. An indicator for the merger will appear in the corner post next to the platform RPM as shown in Figure 3.

To disable the attachment, press and hold the Merger Enable / Disable Button on the Multi-Function Handle as indicated in Figure 2 for five (5) seconds. An indicator for the merger will disappear in the corner post next to the platform RPM as shown in Figure 3.

Raising or Lowering the Cross Belt
Once enabled, the cross belt of the Merger will raise and lower automatically when the raise/lower button for the platform is double-clicked to the second detent.

To raise the merger, first raise the platform by pressing the "1" button on the Multi-Function Handle. Then double-click the platform raise button at the second detent.

To lower the merger, first lower the platform by pressing the Platform Lower Button on the Multi-Function Handle. Then press the same button a second time to lower the merger. The button must be pressed to the second detent both times for the merger to lower. See Figure 2.

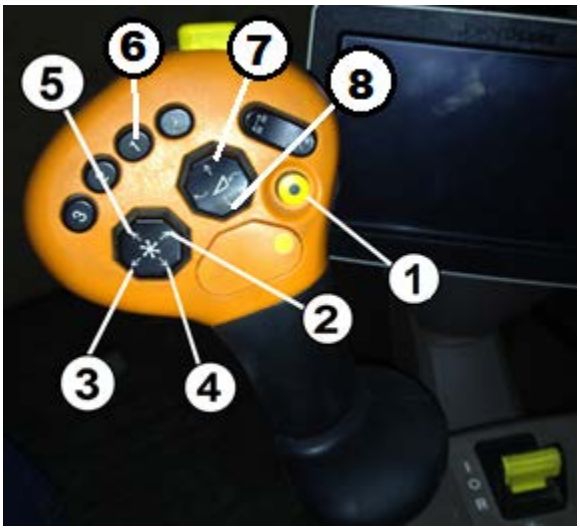


Figure 2. Merger Controls
Key 1 – Merger Enable/Disable
Key 2 – Belt Speed Increase
Key 3 – Belt Speed Decrease
Key 4 – Manual Merger Lower
Key 5 – Manual Merger Raise
Key 6 – "1" Button
Key 7 – Platform Raise
Key 8 – Platform Lower

Figure 3. Merger Enable Indicator
Key 1 – Merger Enable Icon Illuminated

Manual Raise/Lower of Cross Belt
When the Merger is enabled, the cross belt can be raised and/or lowered manually.

First, enable the *Merger Adjustment Mode.*

IMPORTANT: *Merger Adjustment Mode* will lock out any platform adjustments from the Multi-Function Handle for five (5) seconds after the last adjustment is made. The unit will revert back to platform adjustment automatically after five (5) seconds of no adjustments.

To enable the *Merger Adjustment Mode*, press the yellow Merger Enable/Disable button for one click (do not hold). See Figure 4. The light in the button will illuminate while in the *Merger Adjustment Mode*.

To raise the merger cross belt manually, press the upper portion of the left quad button while in *Merger Adjustment Mode*. The merger cross belt will raise for the duration of the button press.

To lower the merger cross belt manually, press the lower portion of the left quad button while in *Merger Adjustment Mode*. The merger cross belt will lower for the duration of the button press.

IMPORTANT: Do not raise the cross belt completely in manual mode as the belt may continue running in a raised condition and belt damage may result.

Merger Attachment Auto-Raise
The merger attachment is designed to automatically when the windrower is reversed. This is to prevent damage to the merger attachment should an obstruction be encountered.

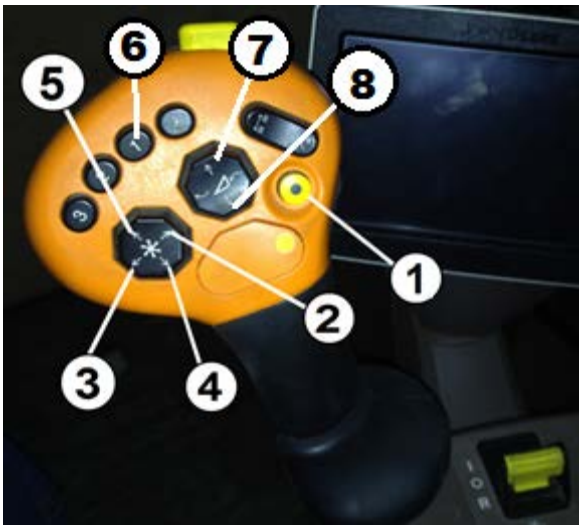


Figure 4. Merger Controls
Key 1 – Merger Enable/Disable
Key 2 – Belt Speed Increase
Key 3 – Belt Speed Decrease
Key 4 – Manual Merger Lower
Key 5 – Manual Merger Raise

Cross Belt Motor Engagement
The cross belt will only engage when the platform is engaged, lowered to harvesting position, and the merger is enabled. The merger must be enabled before lowering the platform for the cross belt to function properly. The cross belt will turn off automatically when raised.

Adjusting Belt Speed of Cross Belt Motor
Belt speed of the merger is controlled by pressing the left and right arrows of the left quad button as shown in Figure 4 while in *Merger Adjustment Mode*. Each press of the button will result in a 10% change in output in the respective range of motor speed control. The left button decreases speed. The right button increases speed.

Front Belt Motor Engagement
Front Belt motor engagement is automatically acquired by engaging the platform of the machine. To disengage, turn off the platform.

Note: The front belt motor speed will remain constant at 900 to 950 rpm. It is not adjustable for normal operation.

Front Belt Motor Override
The front belt motor can be turned off once the platform is running by pressing the Front Belt Disable button on the armrest as shown in Figure 5.

Once the front belt is disabled, the platform must be turned off to reset the function of the front belt.

This feature is provided so that the operator can adjust the swath board completely down on the platform and deliver the windrow under the front belt for wide swaths for dry-down only.

Figure 5. Front Belt Motor Override
Key 1 – Front Belt Motor Disable Button

Operating the Attachment
R450 Self-Propelled Windrower

Enable/Disable the Merger Attachment

Refer to the R450 Self-Propelled Windrower Operator's Manual for operation of controls of Windrower.

The Merger Attachment needs to be ENABLED for automatic operation.

To enable the attachment, press the Merger Enable / Disable Control on the Multi-Function Handle as indicated in Figure 6.

An icon will appear in the top view of the corner post to indicate when the Merger is enabled.

The vertical bars with an angled belt as shown by Key 1, Figure 7, indicate that the Merger Option is installed on the machine.

When enabled, arrows are displayed as shown by Key 2, Figure 7, indicating that the Merger is active.

When activated, the Merger will deliver the windrow automatically to the side of the R450. The cross belt will raise and lower automatically when the platform is raised and lowered.

To disable the Merger, simply press the Disable Control on the Hydrostatic Control Handle, Key 3, Figure 6. This will raise the unit to transport position, disable the cross belt from turning, and turn off the Merger Enabled Icon in the Upper Cornerpost Display.

Figure 6. Hydrostatic Control Handle
Key 1 – Directional Control
Key 2 – Deflector Control
Key 3 – Merger Enable / Disable Control

Figure 7. Upper Cornerpost Display
Key 1 – Merger Installed
Key 2 – Merger Enabled

Raising or Lowering the Cross Belt (R450)

The belt frame lift mechanism uses a hydraulic cylinder independent of the platform lift circuit and 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 cross belt independently of the platform, this can be achieved by pressing the cross belt raise or lower switches as shown in Figure 8, Key 1 and Key 2.

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

Adjusting Belt Speed (R450)

Belt speed is adjusted by first pressing the Cross Belt Speed Adjust Control on the armrest (Key 3, Figure 8) followed by turning the dial (Key 4, Figure 8) clockwise for an increase in belt speed or counterclockwise for a decrease in belt speed.

Turn the dial slowly to adjust speed. Each detent (click) of the dial will adjust the belt speed 10 percent (10%). Once the desired belt speed is selected, the controller will retain the information in memory automatically. The indicator will disappear approximately five seconds after the last adjustment is made.

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

Figure 8. Cross Belt Controls
Key 1 – Cross Belt Raise
Key 2 – Cross Belt Lower
Key 3 – Cross Belt Speed Adjust
Key 4 – Adjustment Dial

Figure 9. Lower Cornerpost Display
Key 1 – Cross Belt Speed Adjust Indicator

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FIELD OPERATION

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

Summary
This following describes operation of the machine with the merger installed for two modes of harvesting

a. Single Windrowing
b. Merging Windrows

Single Windrowing
The belt frame can remain installed for swathing operations.

Disable the Merger as indicated in the OPERATING THE ATTACHMENT section of this manual.

Proceed with windrowing operation. The material will travel over the front belt and beneath the cross belt of the Merger.

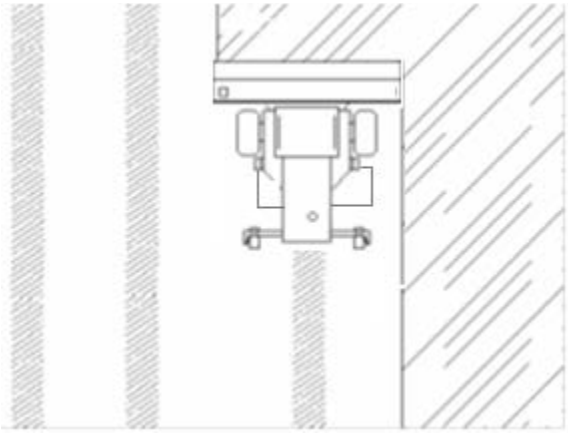

Figure 10. Single Windrowing

Merging Windrows
Merging is achieved when two or more windrows are combined to a single windrow. This windrowing method is used when drying time is not needed for dry-down of the windrowed materials.
In light conditions, the belt speed can be slowed to allow for controlled placement of the merged windrows. In heavy conditions, increase the belt speed to maximum.

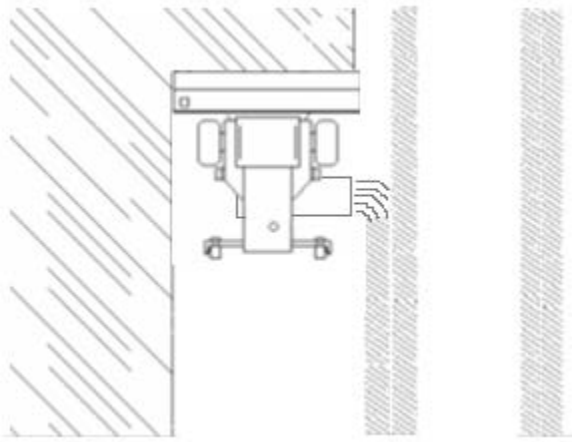

Figure 11. Merging Windrows

Front Belt Function
The purpose of this front belt assembly is to deliver material that drops out of the traditional crop flow passing above, back to the cross belt. It is not designed to carry the entire crop load from the platform, only the material that drops out from the main flow.

This will aide in the function of the machine in adverse crop conditions.

This belt frame is comprised of a belt that is aligned over a set of rollers with a groove at the ends to assist with tracking.

See Figure 12 for more details.

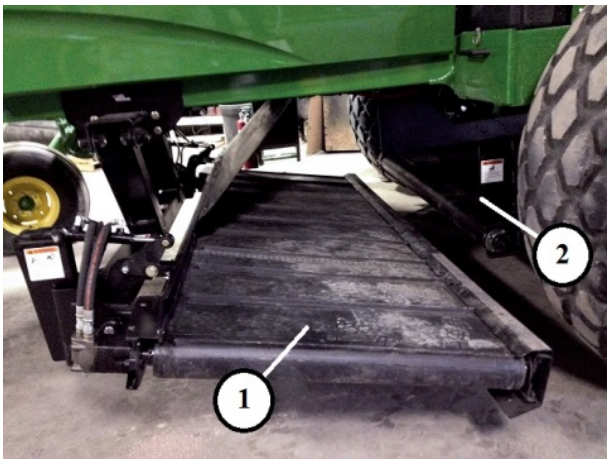

Figure 12. Cross Belt and Front Belt
Key 1 – Cross Belt
Key 2 – Front Belt

IMPORTANT
When lowering the merger to harvest, hold the down button on the hydrostatic handle until the cross belt is lowered completely to the down stop at the hydraulic lift cylinder.

Belly-Dumping of Windrow
The windrow is restricted through the front belt to approximately 6’ (2 m) in width. This is not adjustable.

When the merger is disabled, the front belt will continue to deliver the crop to the rear of the unit, in effect belly-dumping the windrow.

WARNING: DO NOT DIRECT CROP FLOW FROM THE PLATFORM TO PASS UNDER THE FRONT CONVEYOR. MACHINE DAMAGE MAY RESULT.

INITIAL SETTINGS

Swath Board Setting (500R and 995)

The swath board directly behind the conditioner of the platform must be adjusted to the fully raised position to third notch at all times for proper crop flow.

The initial setting for the swath board is the notch for the completely raised position. See Figure 13. If a platform angle of 4 or greater is used, set the swath board adjustment to the second or third notch.

For the 995, always set the swath board to the open-most position to start, regardless of platform angle.

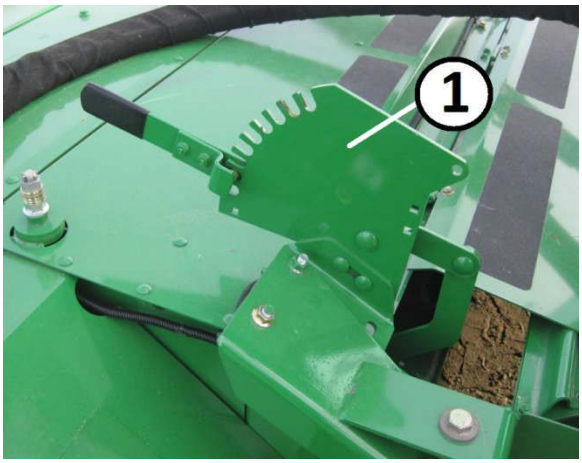

Figure 13. Swath Board Setting
Key 1 – Swath Board Control Arm

Belt Speed

Adjust the belt speed to full speed for starting harvesting. Failure to do so may result in poor performance of the attachment.

Final belt speed adjustment is made while harvesting.

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

Platform Setup

See 995 PLATFORM SETUP section of this manual for more information.

For the 500R, set the conditioner in the same manner as outlined for the 995. Other adjustments are outlined in the Operator Manual for the 500R.

ADJUSTMENTS

Front Crop Guide Adjustment

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

Improper adjustment of this crop guide may result in material accumulation inside 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 to adjust the clearance such that the crop guide just rubs on the belt to minimize the gap.

Adjust the crop guide to be as level as possible, parallel to the belt.

See Figure 14 for more detail.

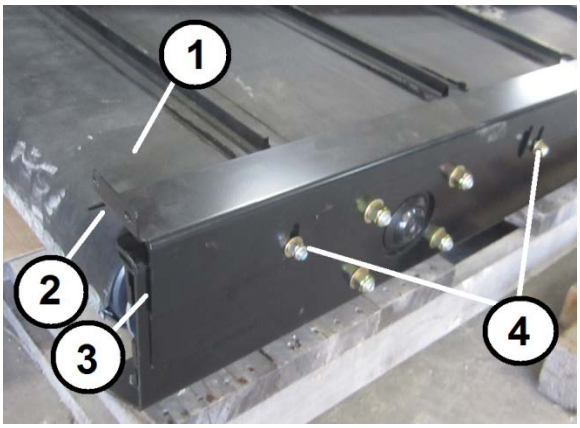

Figure 14. Front Crop Guide
Key 1 – Belt Key 2 – Gap Adjustment
Key 3 – Crop Guide Key 4 – Front Bolts

Note: Step removed for clarity.

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 material accumulation inside of the belt.

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

To adjust, loosen the back bolts of the crop guide (carriage bolts are used from the inside to the back) and slide to adjust the clearance such that the crop guide just rubs on the belt to minimize the gap.

See Figure 15 for more detail.

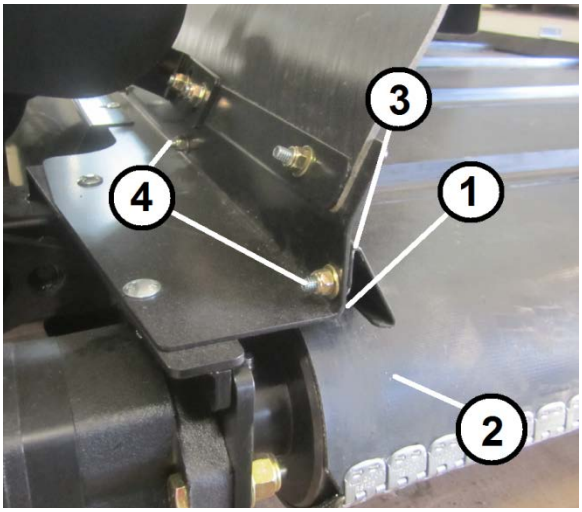

Figure 15. Rear Crop Guide
Key 1 – Gap Adjustment Key 2 – Belt
Key 3 – Crop Guide Key 4 - Bolts

Front Belt Tension Adjustment

The belt tension for the front belt 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.

IMPORTANT: 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 can 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 performance, 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 merger is not in use (i.e. in the off-season). Releasing belt tension and then re-tensioning may cause belt reliability issues.

Follow the steps below to adjust belt tension. Begin at the side 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 just rotate turn by hand with no fore/aft movement. Tighten the jam nut (Key 3).

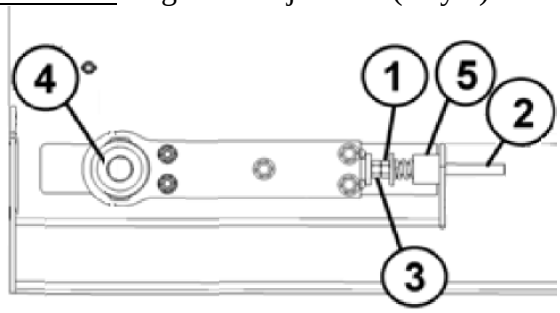

Figure 16. Roller Adjustment
Key 1 –Adjustment Nut Key 2 –Adjustment Bolt
Key 3 – Jam Nut Key 4 – Idler Roller
Key 5 – Stop Bushing

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

Once completed, verify the belt does not sag below the frame of the front conveyor. If it does sag below the frame, inspect bearing carrier to ensure it is able to slide freely in the frame. Also inspect the idler roller to ensure there is no crop buildup between the belt and scraper. If the belt visibly hangs below the frame, crop may enter the belt when crossing over windrows in the field.

Cross Belt Tension Adjustment
The belt tension for the cross belt 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 clear of debris. Clean as necessary.

The drive roller should always be verified first to determine the position of the belt. The objective of the adjustment is to adjust the motor end of the drive roller out by ¼" relative to the opposite end of the drive roller and the frame. This results in the drive roller setting on a slight angle to control the belt position under load. The drive roller is only typically moved when a belt is changed or to service other components of the unit and is not moved to adjust the tension of the belt.

The angle of the drive roller determines the angle of tracking of the belt. It must be angled slightly so that the belt angle counteracts the impact of gravity (sag) on the belt.

Begin adjustment at the motor end of the drive roller (access from rear).
The adjuster uses a ½" ratchet wrench at the end for adjustment. To adjust, first loosen the lock mechanism, Figure 17, Key 1, and slide away from shaft, Key 2. Rotate shaft (Figure 17, Key 2) counterclockwise to move the drive roller assembly out to be ¼" (6mm) past the end of the frame at Figure 18, Key 1. The frame of the sliding adjuster should be ¼" (6mm) past the frame of the pivot arm (fixed).

IMPORTANT: The angle of the drive roller is critical to belt tracking. Improper adjustment of the driver roller can cause belt damage.

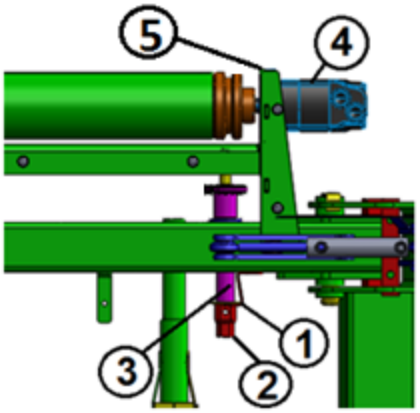

Figure 17. Motor End Adjustment
Key 1 – Lock Key 2 – Shaft
Key 3 – Adjuster Key 4 – Motor (ref)
Key 5 – Roller Alignment

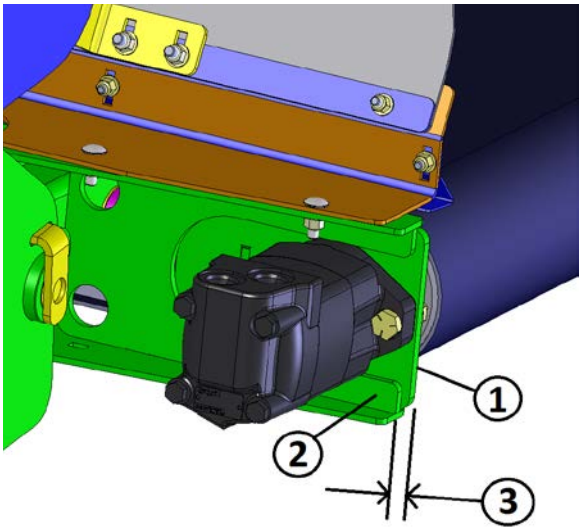

Figure 18. Motor End Adjustment
Key 1 – Motor Frame
Key 2 – Pivot Frame
Key 3 – Dimension: ¼" (6mm) here

Adjust the idler end of the drive roller through the opening in the skid shoe. Adjust the idler end such that the carrier frame is flush to the pivot frame at the idler end as shown in Figures 19 and 20.

SPECIFICATION:
Position of front end of drive roller:
Flush to frame

IMPORTANT: MAKE SURE THE ROLLER IS COMPRESSED AT THE ADJUSTER BEFORE SETTING THE ANGLE OF THE DRIVE ROLLER (i.e. push roller in to make sure it is not floating on the frame. Check again after belt tension is set)

To lock the motor end in position, slide Lock, Figure 21, Key 1, around Shaft, Key 2, and tighten bolt properly.

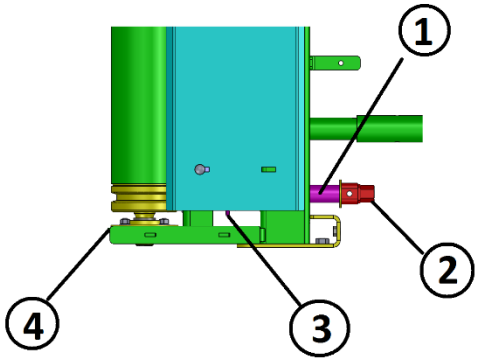

Figure 19. Drive Roller, Idler End
Key 1 – Adjuster Key 2 – Shaft
Key 3 – Adjuster Key 4 – Flush Point

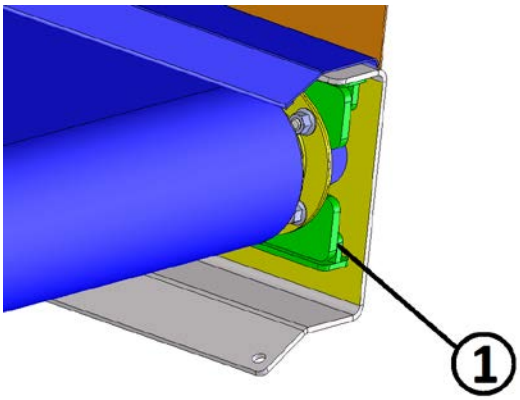

Figure 20. Idler End Positioning
(view from end of roller towards skid shoe)
Key 1 – Flush at this point

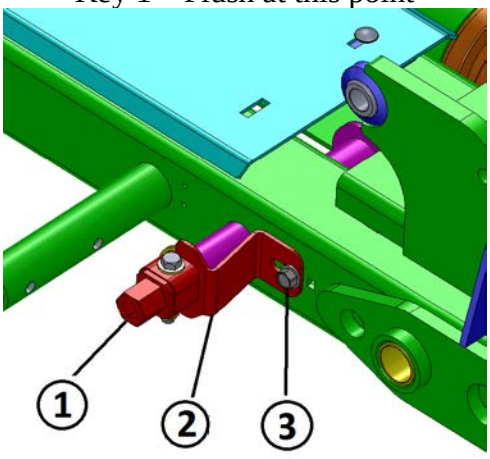

Figure 21. Tension Indicator (ref)
Key 1 – Lock Key 2 – Adjuster
Key 3 – Lock Bolt

To adjust belt tension, the idler roller is adjusted. First loosen the lock mechanism, Figure 22, Key 1, and slide away from shaft, Key 2. Start at the v-groove side of the roller (at rear). Rotate shaft, Figure 23, Key 2, counterclockwise to tension the belt.

SPECIFICATION:
Adjust the tension of the V-Groove side of the roller to increase tension using the provided indicators. This will result in the hex end of the adjuster becoming flush with the end of the indicator.
See Figure 23.

Adjust the front side of the idler roller (at front of cross belt, through skid shoe). Rotate shaft, Figure 8, Key 1, counterclockwise to tension the belt.

At the front side of the idler roller, tension the belt so the hex end of the adjuster aligns with the first notch on the indicator, ½" away from the end of the indicator. See Figure 23. Slide Lock, Figure 22, Key 1, around Shaft, Key 2, and tighten properly. A lock is only provided for the high tension side, at the V-Groove end of roller. <u>See indicator notes on next page before adjusting.</u>

IMPORTANT: <u>Do not overtighten adjusters. If resistance to rotation is observed, inspect for interference. Overtightening adjusters can shear the roll pin at the end of the adjuster and requires the belt to be removed for replacement.</u>

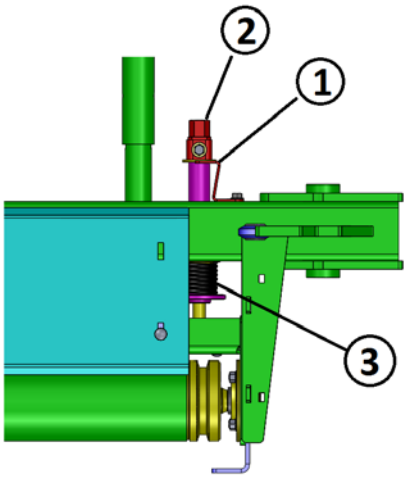

Figure 22. Idler End Adjustment
Key 1 – Lock Key 2 – Shaft
Key 3 – Adjuster (with spring)

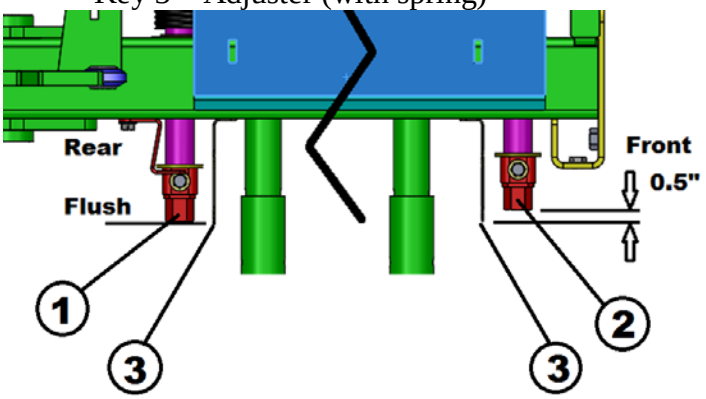

Figure 23. Spring Tension Adjustment
Key 1 – Rear (V-Groove) Side Idler Adjust
Key 2 – Front Side Idler Adjust
Key 3 – Indicator

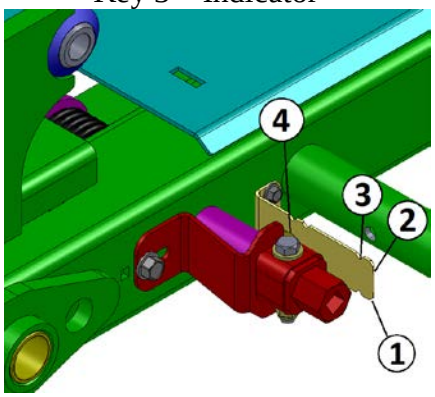

Figure 24 – Indicator Reference
Key 1 – Indicator
Key 2 – V-Groove Side Mark
Key 3 – Front Side Mark
Key 4 – Adjuster Washer

Tensioner Indicator
In crop conditions of greater than 20 tons/acre, it may be beneficial to increase the tension on the belt by up to 3/8" (10mm). This can be accomplished by tightening the adjusters such that they extend beyond the normal indicator position.

For mergers up to s/n 1066, the indicators are represented by Figure 25. For mergers s/n 1067 and above, the indicators are represented by Figure 26.

IMPORTANT
Over-tensioning the belts may result in the belt riding out of the v-groove on the roller, causing damage to the belt or tensioning mechanism. Under-tensioning the belts may result in belt slippage in heavy conditions.

IMPORTANT
After tensioning the belt, check the angle of the drive roller using a carpenter square as shown in Figure 27. Verify that the drive roller is approximately ¼" further out on the motor end than the idler end. If the drive roller is not on a slight angle, readjust roller angle per instructions above as components may have shifted during tensioning.

BELT TROUBLESHOOTING
If the belt tracks high on the idler end (ie pushes away from the roller and is not seated on the roller to the high side, or jumps out on the idler end), decrease the angle of the drive roller by turning the tensioner on the motor end of the drive roller clockwise one turn.
If the belt tracks low on the idler roller end (ie pushes away from the roller and is trying to move away from the v-groove to the front direction of the machine), increase the angle of the drive roller by turning the tensioner on the motor end of the drive roller counterclockwise one turn.

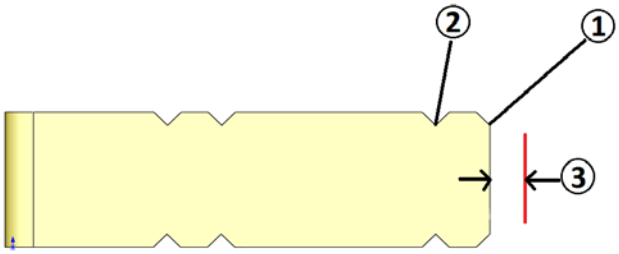

Figure 25. Tension Indicator
(up to s/n 1066)
Key 1 – Standard Tension – V-Groove End
or High Tension - Front
Key 2 – Standard Tension – Front
Key 3 – High Tension – V-Groove End
(Rear)

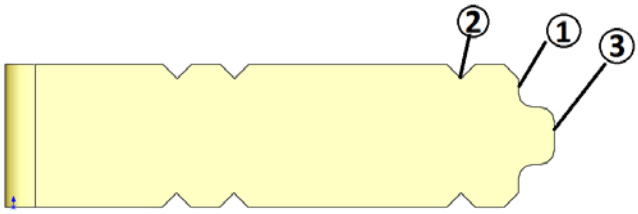

Figure 26. Tension Indicator
(s/n 1067 and above)
Key 1 – Standard Tension – V-Groove End
or High Tension - Front
Key 2 – Standard Tension – Front
Key 3 – High Tension – V-Groove End
(Rear)

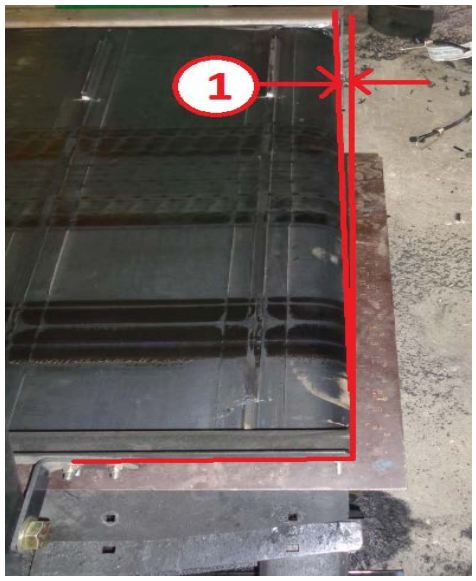

Figure 27. Drive Roller Angle Verification
Key 1 – Angle of Drive Roller

Down Stop Adjustment

The down stop of the merger is adjusted to maintain the proper ground clearance of the lowest edge of the skid shoe to the ground when in the harvesting position in the field.

SPECIFICATION:
Ground clearance at lowest point of skid shoe when in field (left end of cross belt):

4” to 6” (100 to 150 mm)

See Figure 28.

Figure 28. Ground Clearance Measurement
Key 1 – Point of Measurement

To adjust the ground clearance of the unit, raise the merger to the transport position and shut off the machine.

Lock out the merger lift cylinder.

Loosen 4 bolts in the stop plate. Adjust the adjuster bolts (Figure 29, Key 4) to the desired position of the stop plate. Tighten all hardware properly.

See Figure 29.

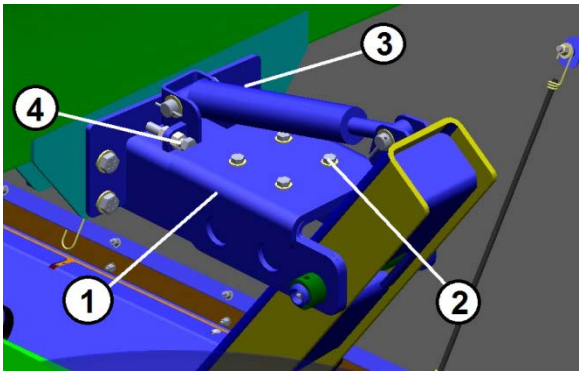

Figure 29. Down Stop Adjustment
Key 1 – Plate Key 2 – Plate Bolts (qty 4)
Key 3 – Cylinder Lock Location
Key 4 - Adjuster Bolts (1 per side)

Release the lock of the merger lift cylinder.

Verify ground clearance.

Upper Stop Adjustment
An upper stop adjustment is provided at each end of the cross belt for adjustment of the raised position of the merger.

The purpose for this adjustment is to prevent the merger cross belt frame from pressing against the bottom of the windrower frame.

To adjust the Upper Stop, first raise the merger to the transport position. Shut off the engine. Remove the key form the ignition.

Lock the merger lift cylinder. See MERGER LOCKOUT DEVICE Section in this manual.

Locate two adjustment bolts at each end of the cross belt frame as shown in Figure 30.

Start at the RH side of the machine.

Adjust the bolts in to tilt the cross belt pivot arms down until the front top of the skid shoe has zero clearance to the deflector under the main frame as shown in Figure 31. The skid shoe should not apply force to the main frame of the windrower.

Both bolts should be adjusted equally. When adjusted, tighten the jam nuts to lock the stop bolts.

Repeat the process at the LH side of the machine. See Figure 32. Release lockout valve at cylinder when complete.

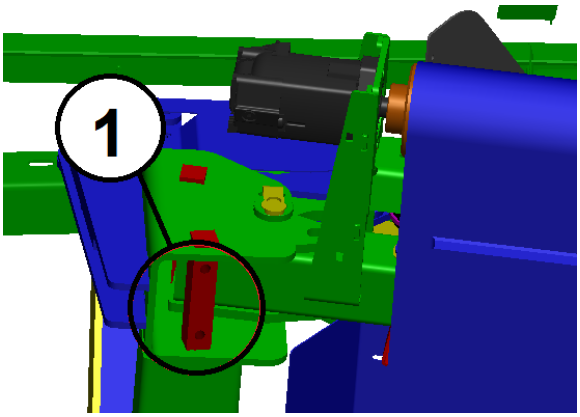

Figure 30. Upper Stop Bolt Location
Key 1 – Bottom of Frame at Stop Bar

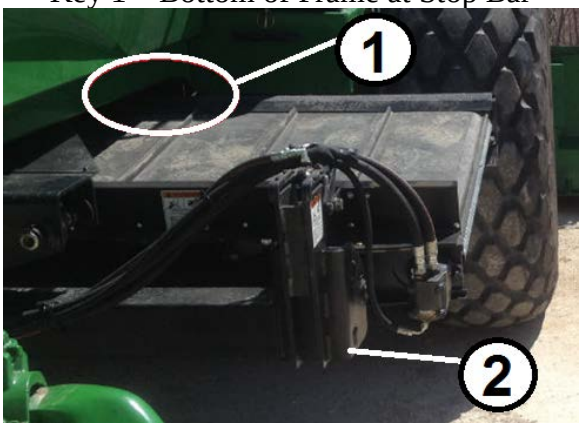

Figure 31. RH Upper Stop Adjustment
Key 1 – Location of Skid Shoe Contact
Key 2 – Location of Adjustment Bolts

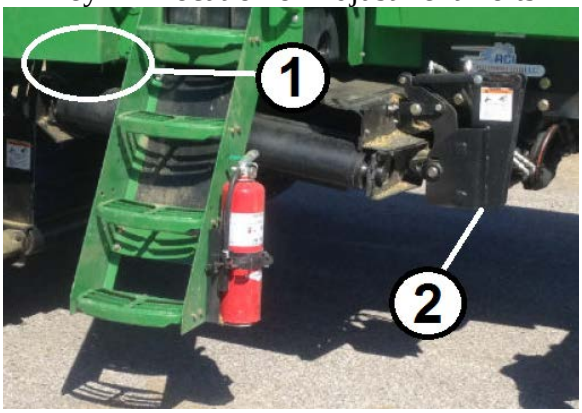

Figure 32. LH Upper Stop Adjustment
Key 1 – Location of Skid Shoe Contact
Key 2 – Location of Adjustment Bolts

995 PLATFORM ADJUSTMENTS
(DOES NOT APPLY TO 500R Platform. Refer to 500R Operator Manual for information regarding the 500R Setup.)

Summary

Proper configuration and setup of the 995 Platform is critical to performance of the unit in the field. Failure to achieve proper setup may result in poor crop flow to the merger and decreased performance.

IMPORTANT
Follow all safety precautions as outlined in the Operator Manual for the John Deere Windrower, 995 Platform, and RCI Merger Attachment. Always park on a level, firm surface. Turn off the engine and remove the key.

If the Platform is raised, engage the platform lift lockout lever.

Notes

A) Follow all recommendations in this document for initial setup.

B) Further adjustments for performance can be made in the field once function is achieved.

C) Do not assume that any settings are correct without inspecting.

D) These recommendations are based on years of experience with the 995 Platform with mergers and are intended to be used all together for best machine function.

E) Maladjustment of any one setting can cause issues with crop flow and should be avoided.

F) For further explanation of each setting or procedure on how to make the adjustments needed, please contact your local John Deere dealer.

G) All part numbers referenced in this section are available through the John Deere parts system.

H) All adjustment procedures are outlined in the Operator Manual for the 995 Platform.

Cutting Knives

Use only knives from John Deere and keep in good order.

If worn excessively or damaged, replace. Flip knives when one side is worn.

Sharp knives save fuel.

Use the standard 10.5 degree knife to begin.

In heavy crops that are severely lodged, an 18 degree knife is available.

Part numbers of knives:

Packs of 25	
10.5 Degree CW:	E80208
10.5 Degree CCW:	E80206
18 Degree CW:	FH308235
18 Degree CCW:	FH308234

Rotary Strippers

Install a rotary stripper at Disc 2 and Disc 9 for all winter forage and/or heavy forage conditions.

In extreme conditions, some customers have had success installing additional rotary strippers on Disc 1 and Disc 10. This is additional stripper not recommended for an initial setup, but may assist in extreme crop conditions.

Part number for the Rotary Stripper is AE73088. Quantity 2 are used.

See Figures 33 and 34.

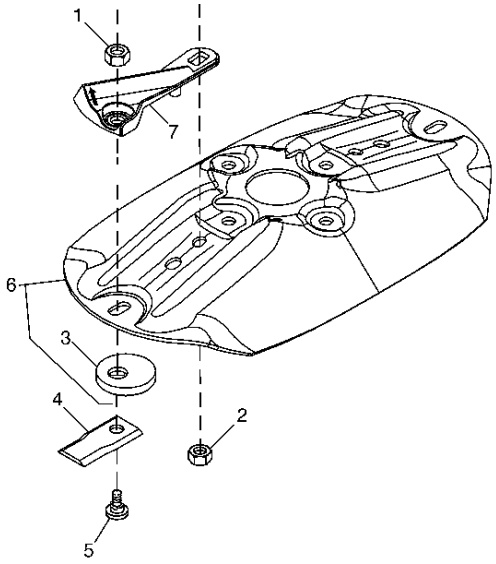

Figure 33. Cutting Knife Arrangement

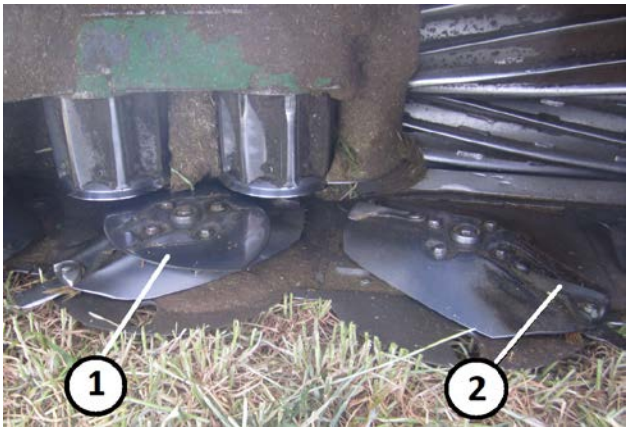

Figure 34. Rotary Stripper and Accelerator
Key 1 – Rotary Stripper Key 2 - Accelerator

Accelerator Installation

Install accelerators on all other discs on the platform. See Figure 34.

Part number for Accelerators:

CW Accelerator:	E98137
CCW Accelerator:	E98138

Scraper Adjustment

Adjust scraper to approximately .080" to 0.125" clearance to vertical drum as indicated in Figure 35.

Rotate drum to verify clearance

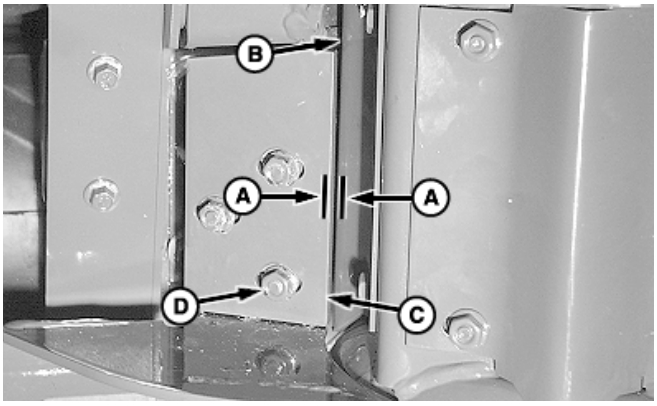

Figure 35. Scraper at Converging Drum
Key A – Gap Key B – Drum
Key C – Plate Key D – Bolt

Rotation of Drums – Counter Rotation

Set platform to Counter-Rotation. This will result in drum 4 and drum 7 rotating opposite of the adjacent drums. This will allow for three streams of crop flow to enter the conditioner and typically performs better in heavy crop conditions.

The procedure for this may be found in the Repair Manual for the 995 Platform.

If streaking of crop at the cutting area arises, change the rotation back to center-rotation. Refer to the Repair Manual for the 995 Platform.

Conditioner Gap

Set conditioner gap to "zero gap." This means to take the conditioner down to "rumble" and back off just until the "rumble" stops.

Ensure that the conditioner is not built up with mud in the grooves or open spaces.

Any material that remains on the conditioner will prevent the conditioner to reach the "zero gap" setting.

On used units, this setting should be rechecked after operating in the field for a short time to verify the conditioning rolls are clean as a tighter gap will tend to keep the amount of material built up on the rolls at a minimum.

If needed, manually remove all material on the conditioning rolls.

Conditioner Roll Link Position

Verify the tensioner spring for the conditioner is in the proper position.

A total of three notches are available in the roll arm. See Figure 36.

Link (D) on left-hand side is in notch 2 from the rear.

Link (D) on the right-hand side is in notch 3 from the rear.

To avoid spring damage, install both springs with hook opening facing toward RH of platform.

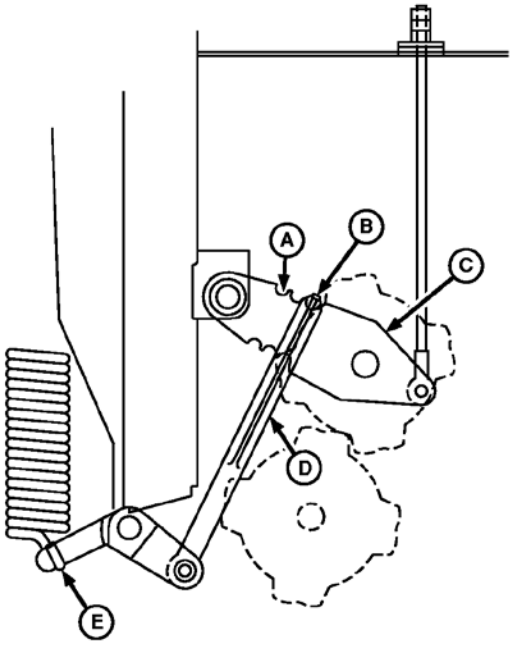

Figure 36. Checking Roll Pressure Link Position

Key A – Rear Notch Key B – Front Notch Key C – Roll Arm Key D – Link Key E – Spring Attaching Notch

Conditioner Tensioner Spring Pre-load

Set the conditioner tension. This may need to be checked and adjusted over time.

Loosen jam nut and turn clockwise to increase pressure. See Figure 37.

The factory setting for conditioner roll pressure, when measured from the shoulder of plug (B) to inner edge (F) of spring hook, should be 21-1/4" (540 mm).

Tighten jam nut properly when finished.

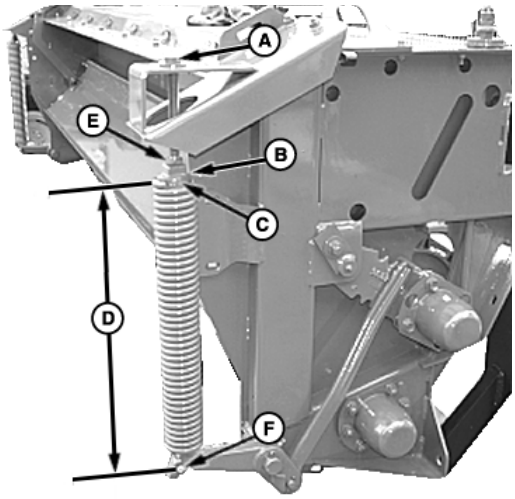

Figure 37. Adjust Conditioner Roll Pressure

Key A – Cap Screw Key B – Shoulder of Plug Key C – Spring Plug
Key D – Spring Length Key E – Jam Nut
Key F – Inner Edge

Conditioner Speed

If operating in heavy wheat conditions, a slower platform speed is typically selected.

Therefore, the 1000 rpm sheaves are recommended to be installed.

When installing, remember that the smaller sheave should be installed at the conditioner, and the larger pulley at the gearbox drive at the front of the platform.

The original belt may be used with the pulleys.

Part numbers of sheaves:

E94820
E94819

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Swathboard Angle

The swathboard, located directly behind the conditioner of the platform, must be always in the highest raised position when used with the merger.

The forming shields provided with the merger will guide the crop flow to the bottom of the main frame of the base machine without the use of the swathboard in a lower position.

See Figure 38.

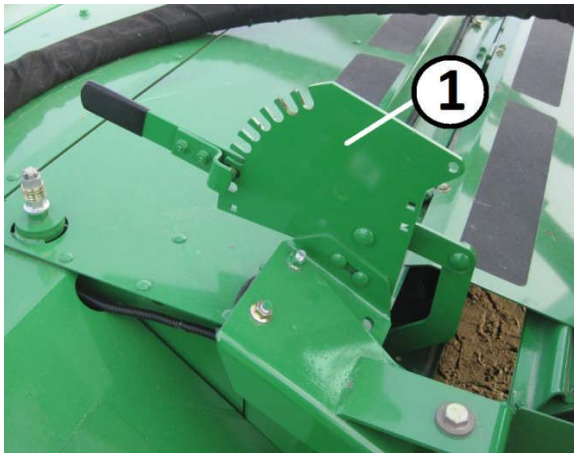

Figure 38. Swathboard Control Initial Position
Key 1 – Swathboard Control

Engine Speed

Ensure the operator is using the unit at wide open throttle during harvesting of heavy crops.

Running at less than WOT slows down the hydraulic pump and will limit the amount of speed control the system will have if the engine rpm pulls down under load.

In general, try to use the machine at WOT, but it is permissible to operate the attachment at mid-range RPM in lighter crops.

MAINTENANCE

Lubrication

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

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

Refer to the Platform Operator Manual for lubrication requirements of the platform.

Figure 33. Lubrication Location Decal

Location	Frequency	Requirement
Front Belt Motor	10 hours	1
Cross Belt Motor	10 hours	1
Pivot Pins	10 hours	6
Hydraulic Cylinder	10 hours	2

Note: Use same grease as recommended with the windrower.

Note: Each motor shaft location / end of roller is a splined drive equipped with two grease fittings 180 degrees apart for ease of access. Only one grease fitting at each location is required to be greased at the given interval.

See Figure 39 for lubrication locations.

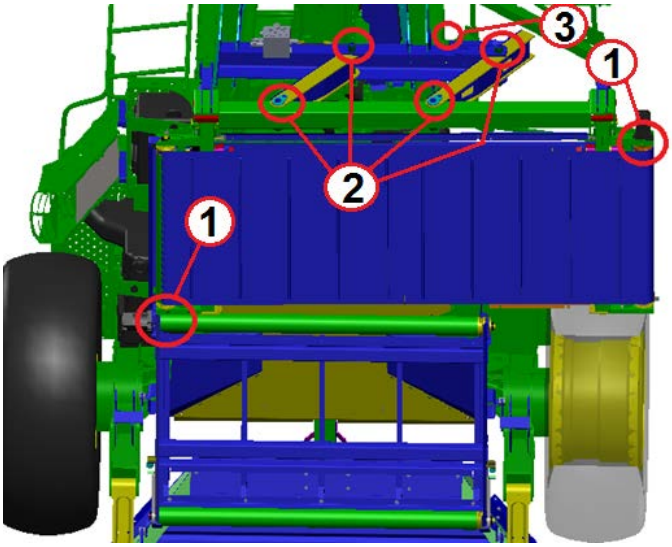

Figure 39. Grease Locations
Key 1 – Motor Shaft Key 2 – Pivot Pins
Key 3 – Cylinder Ends (both ends of lift cyl)

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 in order to maximize the life of the belt.

Always store the unit out of direct sunlight in a cool, dry place free of rodents.

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.

Do not treat the belt with any belt dressing of any kind.

Prevent damage to the belt by avoiding foreign objects that may cause cuts or damage to the belt.

Make any necessary repairs to the edges of the belt if they are damaged by improper adjustment or any other outside force.

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.

Regularly inspect and adjust belt tension as needed. Improperly tensioned belts can result in belt slippage on the drive roller or excessive wear.

SERVICE

Bolt Torque Values

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

Belt Replacement

To replace the cross belt, lower the attachment to the down position, lower the platform to the ground, and shut off the engine.

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

Remove the belt from the belt frame.

Install new belt and adjust the belt tension. (see BELT TENSION ADJUSTMENT in the ADJUSTMENTS Section).

It may be advantageous to use a ratchet strap around the belt with the ratchet positioned at the bottom side of the belt. Move the seam of the belt to the bottom center of the belt frame. Ratchet the strap to pull all slack of the belt to the bottom of the belt and to help hold the belt in a raised position to aid in installing the pin.

Also, it may be helpful to use a cordless drill on the belt pin to rotate it slowly during installation. Take proper safety precautions when using power tools.

To replace the belts of the front belt frame, lower the attachment to the down position, lower the platform to the ground, and shut off the engine.

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

Remove the belt from the belt frame.

Install new belts and adjust the belt tension. (see BELT TENSION ADJUSTMENT in the ADJUSTMENTS Section).

NOTE: <u>When installing the belt pin, bend the end of the pin parallel to the opposite end. Cut off any extra pin material. Both ends of the pin when bent should be aligned and rotated in a trailing fashion for belt rotation.</u>

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THEORY OF OPERATION

Electrical System

The electrical system for the merger attachment is integrated to the electrical system of the W200-Series or R450 Windrower by use of a CAN controller.

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 at the same time as the platform. This is accomplished through the CAN controller.

The CAN controller only monitors the traffic on the CAN of the windrower and reacts accordingly. It does not communicate with the CAN of the windrower.

Belt speed is also controlled through the controller and regulated through a PWM output on the solenoid valve.

The following diagram is the functional schematic for the wire harness used in the attachment.

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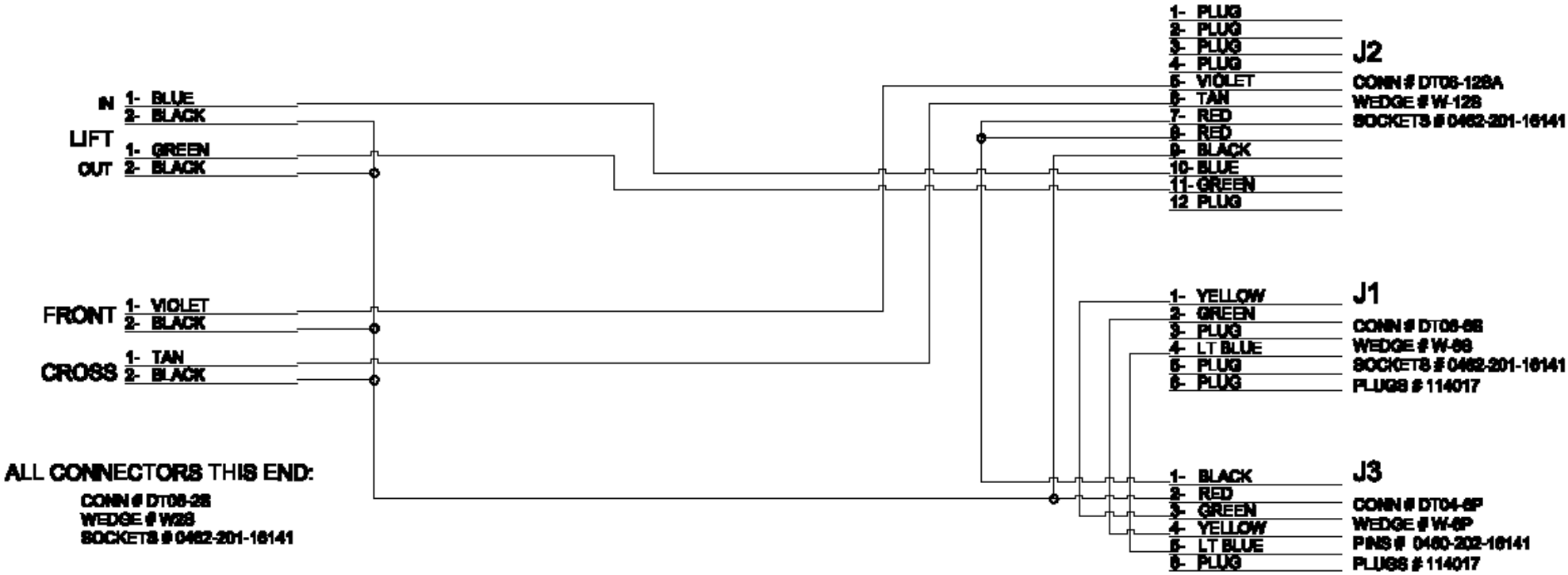
Merger Attachment Wire Harness Functional Schematic



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Hydraulic System

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

The circuit is supplied with oil from a dedicated pump. The reservoir for the circuit is shared with the Windrower.

See schematics on the following pages.

Starting with s/n 1061, the manifold has been changed to integrate the relief valves at the tilt cylinders into the manifold design.

SPECIFICATIONS:

System relief pressure:
3,000 psi (20,684 kPa) maximum

Cylinder Circuits Relief Pressure:
2,500 psi (17,236 kPa) maximum

IMPORTANT
The Manifold design allows belt speed to be maintained while engine pulls down to approximately 2000 rpm.

This better matches the platform speed control so all working components maintain operating speed under load.

For this system to operate correctly, it is important to adjust the front belt motor speed to specification (930 to 950 rpm) as outlined at the end of the INSTALLATION INSTRUCTIONS Section of this manual.

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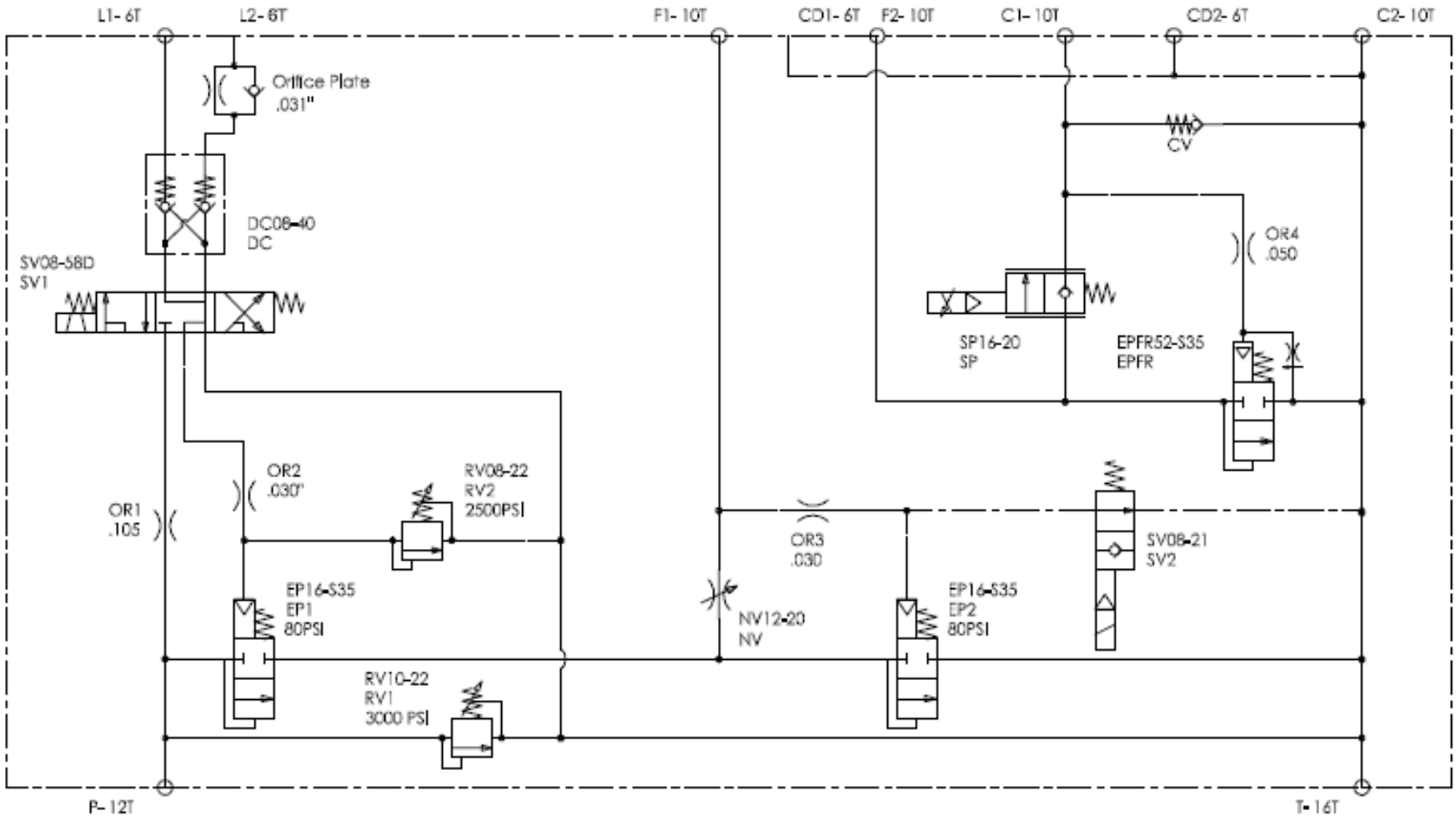
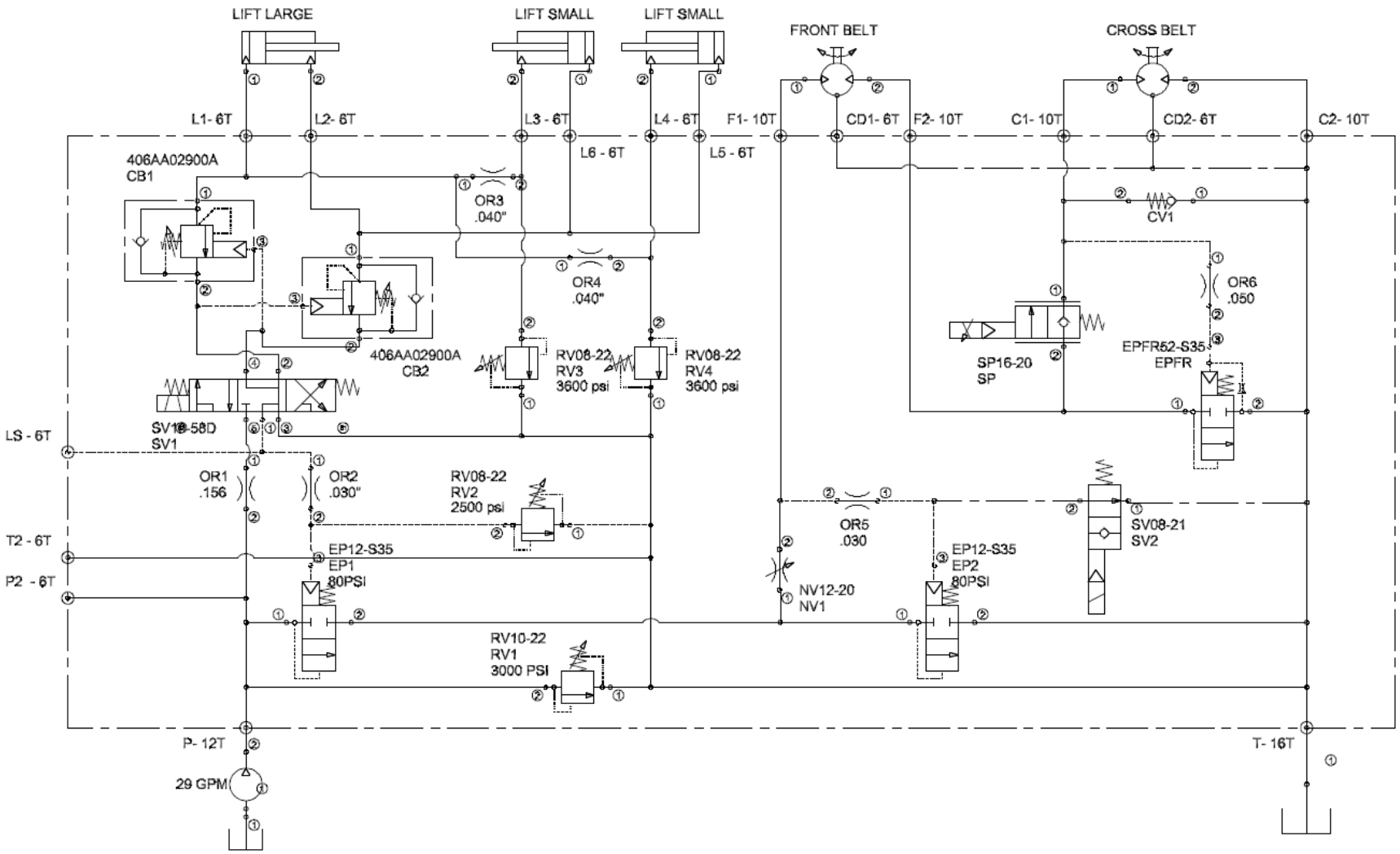
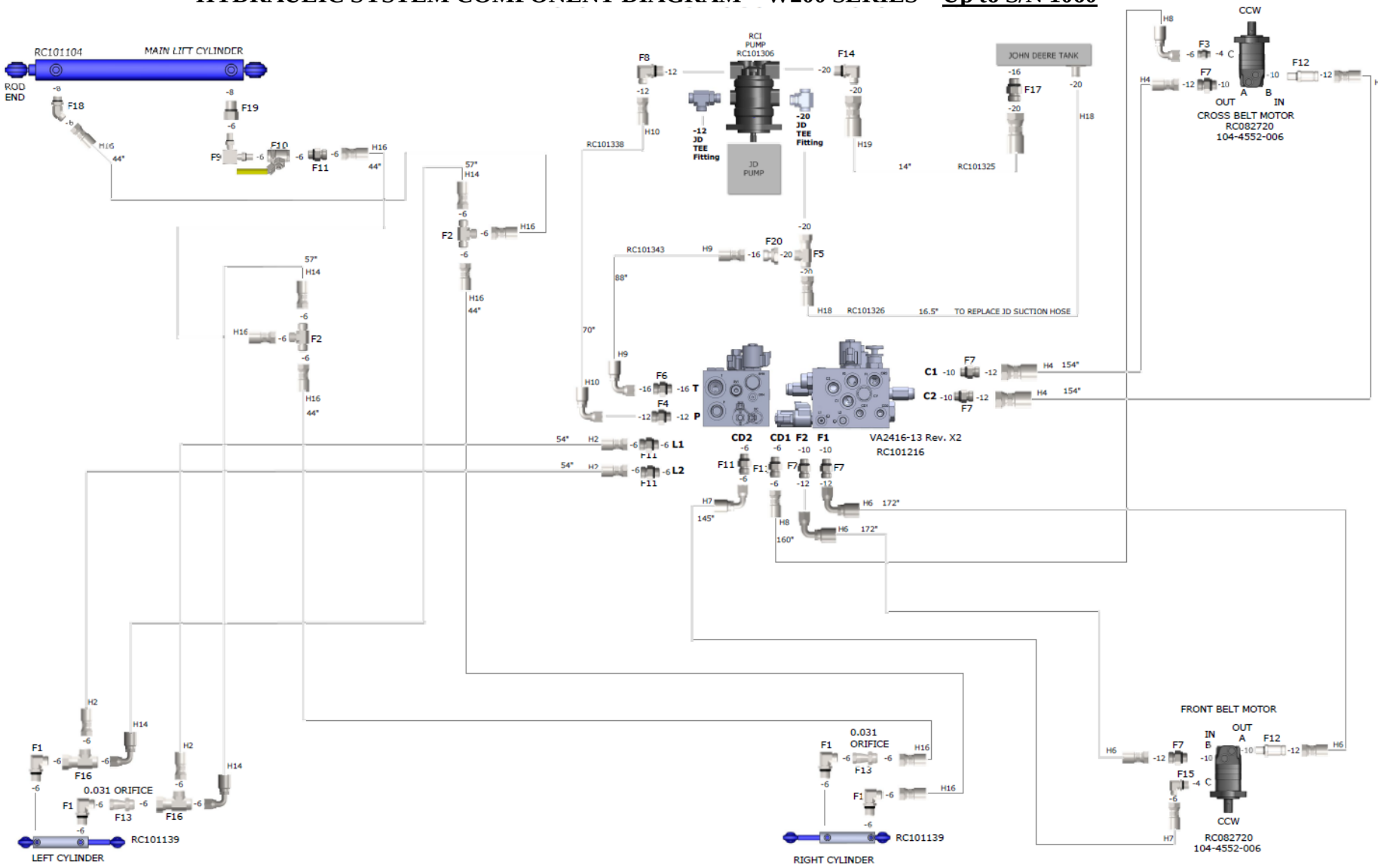
Merger Attachment Hydraulic Manifold Functional Schematic – <u>Up to S/N 1060</u>



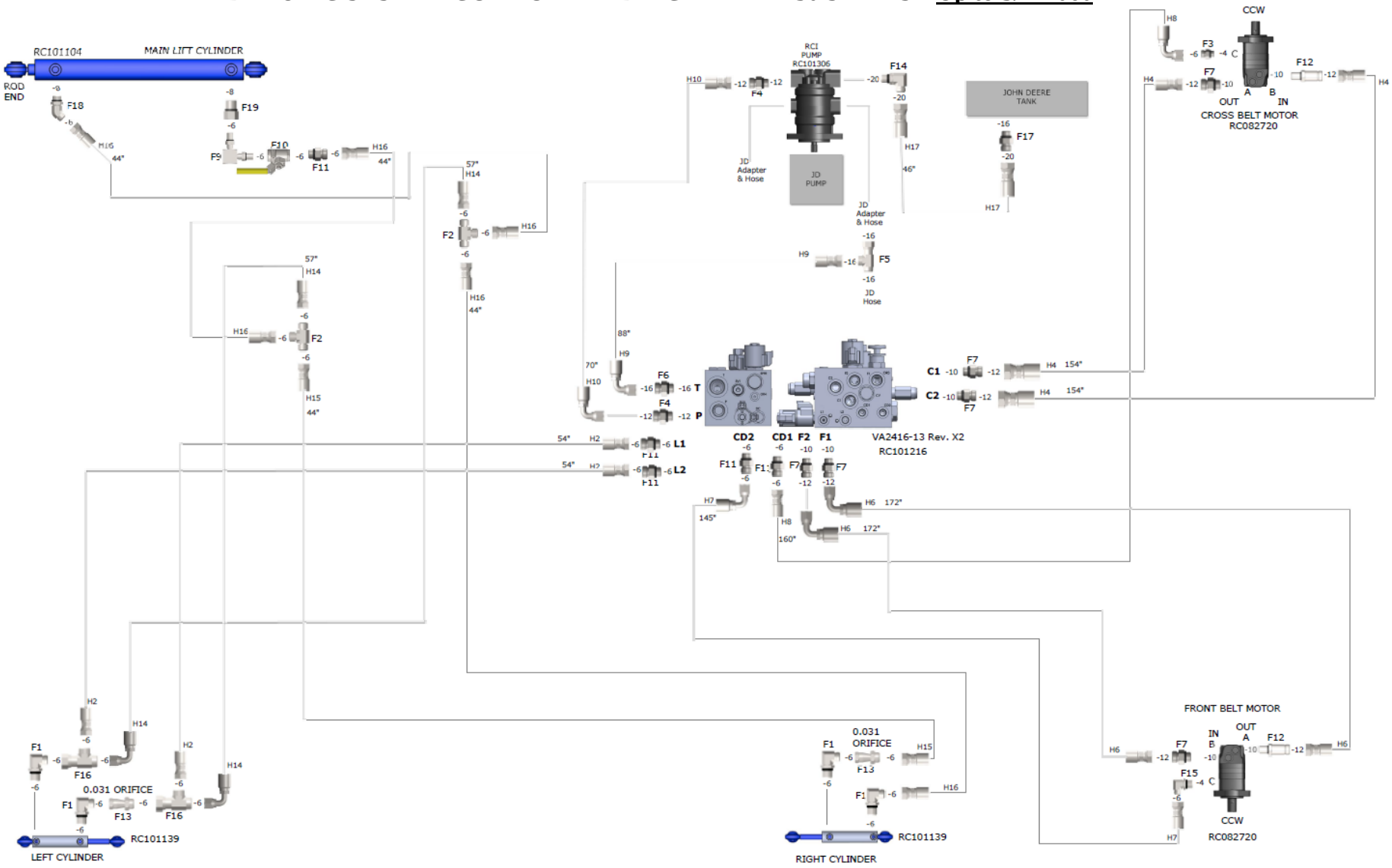
Merger Attachment Hydraulic Manifold Functional Schematic – <u>S/N 1061 and Above</u>



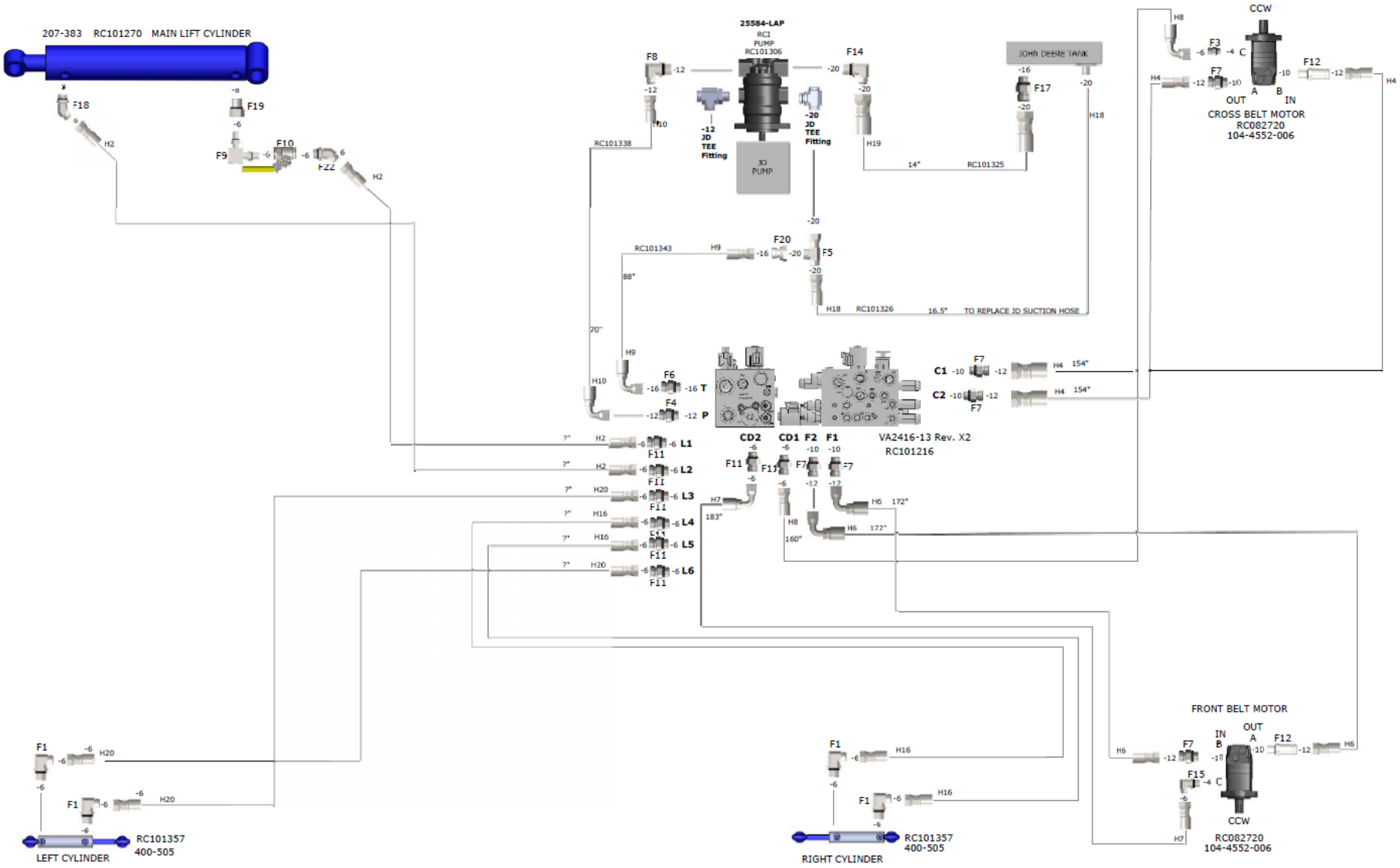
HYDRAULIC SYSTEM COMPONENT DIAGRAM – W200 SERIES – Up to S/N 1060



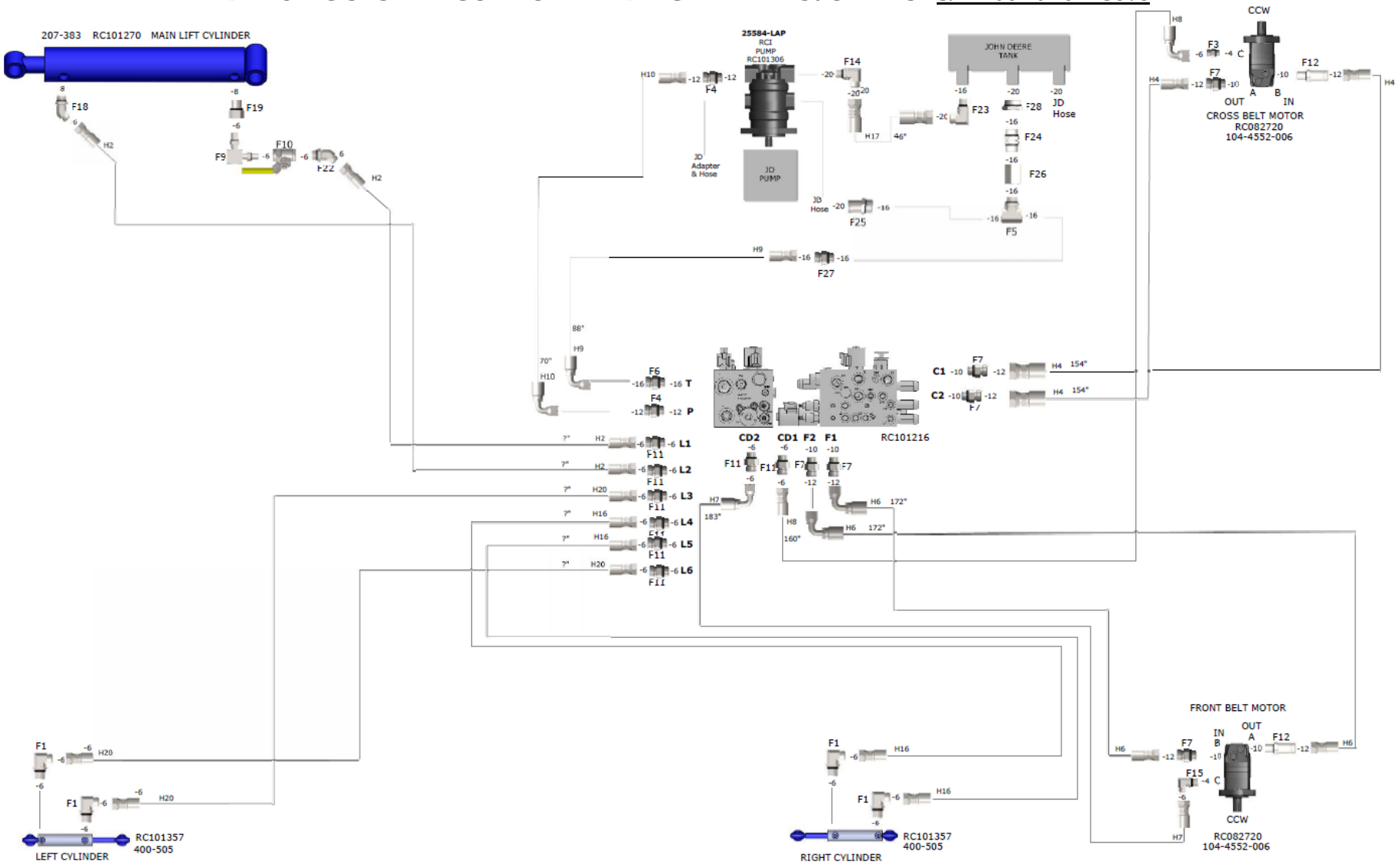
HYDRAULIC SYSTEM COMPONENT DIAGRAM – R450 SERIES – <u>Up to S/N 1060</u>



HYDRAULIC SYSTEM COMPONENT DIAGRAM – W200 SERIES –S/N 1061 and Above



HYDRAULIC SYSTEM COMPONENT DIAGRAM – R450 SERIES –S/N 1061 and Above



SPECIFICATIONS

Dimensions And Weights

All values are approximate and are subject to change without notice.

Shipping Weight: 3,100 lbs (1400 kg)

Installed Weight: 2,450 lbs (1111 kg)

Shipping Dimensions:

Width:	86 in (218 cm)
Height:	54 in (137 cm)
Length:	132 in (335 cm)

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INSTALLATION INSTRUCTIONS

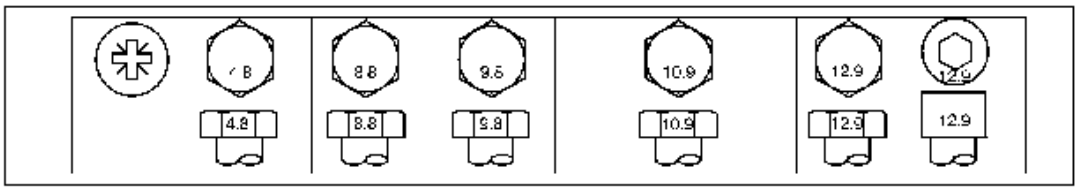
General Comments

The following is a list of special tools that will be needed to complete the installation.

¾” drill bit
13/32” drill bi**t**
11/64” drill bit
7/16” drill bit
1/2” drill (with chuck to fit all bits)
fork lift/lifting device

Parts of the installation will require the help of an assistant due to the size of components being handled. Always use appropriate safety equipment and safe practices during the installation and setup of the merger.

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.

Standard Bolt and Screw Torque Values

Bolt or	SAE Grade 1				SAE Grade 2[a]				SAE Grade 5, 5.1 or 5.2				SAE Grade 8 or 8.2			
Screw	Lubricated[b]		Dry[c]		Lubricated[b]		Dry[c]		Lubricated[b]		Dry[c]		Lubricated[b]		Dry[c]	
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
1/4	3.7	33	4.7	42	6	53	7.5	66	9.5	84	12	106	13.5	120	17	150
													N·m	lb-ft	N·m	lb-ft
5/16	7.7	68	9.8	86	12	106	15.5	137	19.5	172	25	221	28	20.5	35	26
									N·m	lb-ft	N·m	lb-ft				
3/8	13.5	120	17.5	155	22	194	27	240	35	26	44	32.5	49	36	63	46
			N·m	lb-ft	N·m	lb-ft	N·m	lb-ft								
7/16	22	194	28	20.5	35	26	44	32.5	56	41	70	52	80	59	100	74
	N·m	lb-ft														
1/2	34	25	42	31	53	39	67	49	85	63	110	80	120	88	155	115
9/16	48	35.5	60	45	76	56	95	70	125	92	155	115	175	130	220	165
5/8	67	49	85	63	105	77	135	100	170	125	215	160	240	175	305	225
3/4	120	88	150	110	190	140	240	175	300	220	380	280	425	315	540	400
7/8	190	140	240	175	190	140	240	175	490	360	615	455	690	510	870	640
1	285	210	360	265	285	210	360	265	730	540	920	680	1030	760	1300	960
1-1/8	400	300	510	375	400	300	510	375	910	670	1150	850	1450	1075	1850	1350
1-1/4	570	420	725	535	570	420	725	535	1280	945	1630	1200	2050	1500	2600	1920
1-3/8	750	550	950	700	750	550	950	700	1700	1250	2140	1580	2700	2000	3400	2500
1-1/2	990	730	1250	930	990	730	1250	930	2250	1650	2850	2100	3600	2650	4550	3350

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 plastic insert or crimped steel type lock nuts, for stainless steel fasteners, or for nuts on U-bolts, see the tightening instructions for the specific application. Shear bolts are designed to fail under predetermined loads. Always replace shear bolts with identical grade.

Replace fasteners with the same or higher grade. If higher grade 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] Grade 2 applies for hex cap screws (not hex bolts) up to 6. in (152 mm) long. Grade 1 applies for hex cap screws over 6 in. (152 mm) long, and for all other types of bolts and screws of any length.

[b] "Lubricated" means coated with a lubricant such as engine oil, fasteners with phosphate and oil coatings, or 7/8 in. and larger fasteners with JDM F13C zinc flake coating.

[c] "Dry" means plain or zinc plated without any lubrication, or 1/4 to 3/4 in. fasteners with JDM F13B zinc flake coating.

Preparation of Machine

Remove platform. Refer to Platform Operator Manual.

Remove forming shields. Refer to Platform Operator Manual.

For the W200 Series, remove toolbox and supporting bracket at LH side of machine. The toolbox is not compatible with the merger attachment. Reinstall the hardware in the locations on the frame that it is removed. See Figure 40.

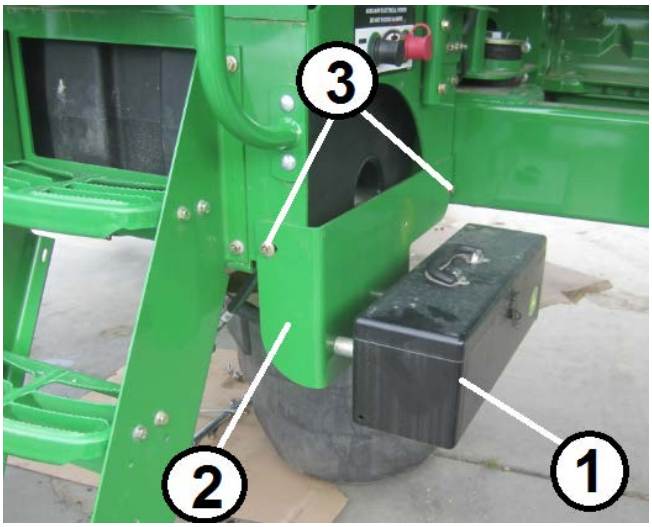


Figure 40. Toolbox Location
Key 1 – Toolbox Key 2 – Support Bracket
Key 3 – Hardware (reinstall)

Arrange the machine such that the rear wheels are trailing the machine to maximize the clearance under the center of the machine for the installation of the merger. (ie machine is ready to drive forward with wheels already behind the frame).

Remove the front belt frame from the top of the shipping crate and set to the ground. Take care to not damage the belt during removal.

Open the shipping crate and release all components from the crate. The crate can be returned for a deposit. Do not destroy the crate. Contact RCI when installation is complete to arrange for crate shipping/pickup.

Hydraulic Installation

W200 Series Windrowers

Drain hydraulic reservoir. (To drain reservoir, see DRAIN AND FILL HYDRAULIC RESERVOIR in Windrower Technical Manual.)

Note: LH (Left Hand) and RH (Right Hand) description depict positioning referenced when sitting in the driver seat of the windrower.

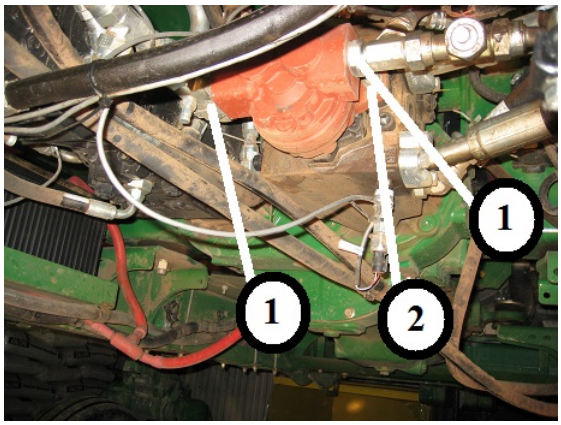


Figure 41. Original Hydraulic Fittings
Key 1 – Hydraulic Fittings
Key 2 – M12x35 bolts

Remove hydraulic fittings from the pump and remove auxiliary hydraulic pump from the main hydrostatic pump. Two (2) M12x35 bolts are removed. See Figures 41 and 42 for reference.

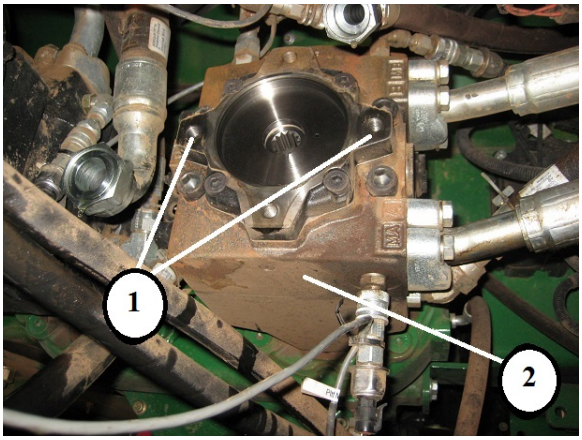


Figure 42. Main Hydrostatic Pump
Key 1 – Mounting Hole Locations (M12)
Key 2 – Main Hydrostatic Pump

Install Merger Hydraulic Pump

Install hydraulic fittings in pump prior to pump installation. Orient the fittings as indicated, but do not tighten fittings at this time.

Note: The pump section closest to the splined shaft end replaces the original windrower charge pump. The section at the rear of the pump is for the operation of the merger attachment.

Install merger hydraulic pump with original o-ring and reuse two (2) M12x35 bolts. Orient the pump such that the suction ports are facing the right side of the machine. See Figure 43.

Install Suction lines on the right side of RCI auxiliary hydraulic pump to tank ports. The original hydraulic suction hose for the auxiliary pump of the base machine is replaced with a new hose and is routed from the rear right port of the pump to the original back right port of the tank shown in Figure 43. The hose removed should be saved with the original charge pump for the customer.

Note: New suction line is equipped with a straight fitting rather than a 90 degree at the end of the hose that connects to a T-fitting at the back right port of the pump. The T-fitting must be rotated such that the -20 port is facing up. See Figure 44 for functional layout of the fittings in this area. See Figures 45 through 50 for illustrations of the installation.

The suction line for the pumps front right port is routed to the back left port of the tank. See Figure 44, Key 2.

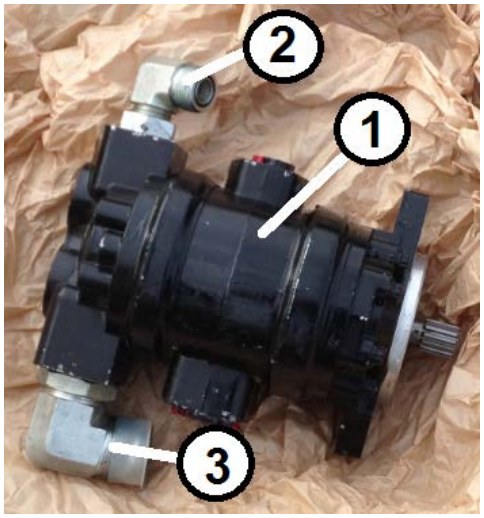


Figure 43. Hydraulic Pump Assembly
Key 1 – Pump Key 2 – 90 deg, -12
Key 3 – 90 deg -20 to -16

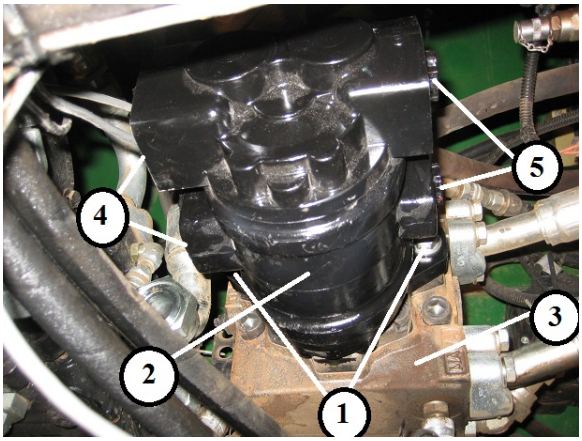


Figure 44. Orientation of Installed RCI Auxiliary Hydraulic Pump
Key 1 – M12x35 Bolts
Key 2 – Merger Hydraulic Pump
Key 3 – Hydrostatic Pump
Key 4 - -20 ports (RH side of pump)
Key 5 - -12 ports (LH side of pump)
Note: Reuse original hose clamp with replacement suction hose.

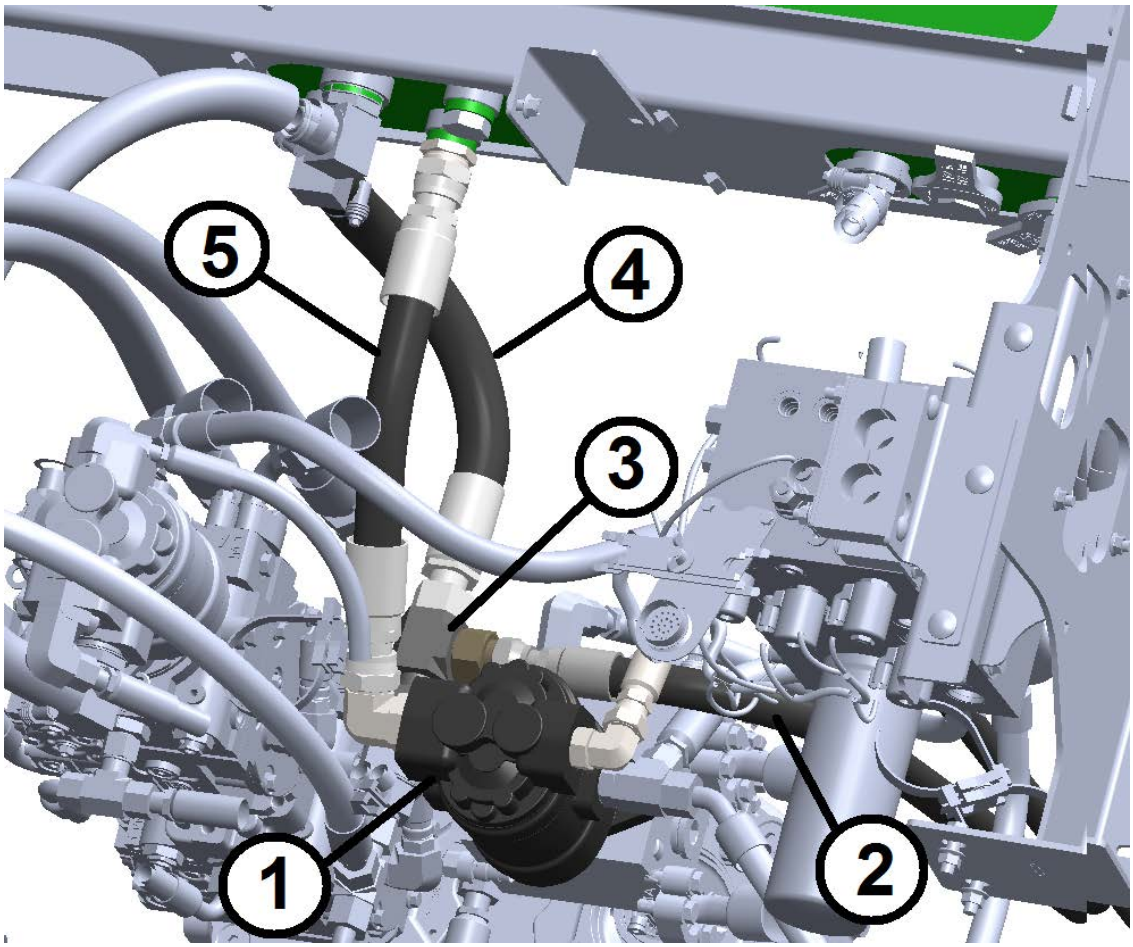


Figure 45. W200 Series Pump Installation and Hose Routing

Key 1 – Pump Key 2 – Return from Merger Manifold

Key 3 – T-Fitting at Charge Pump Key 4 – New Charge Pump Section Suction Hose

Key 5 – Merger Pump Section Suction Hose

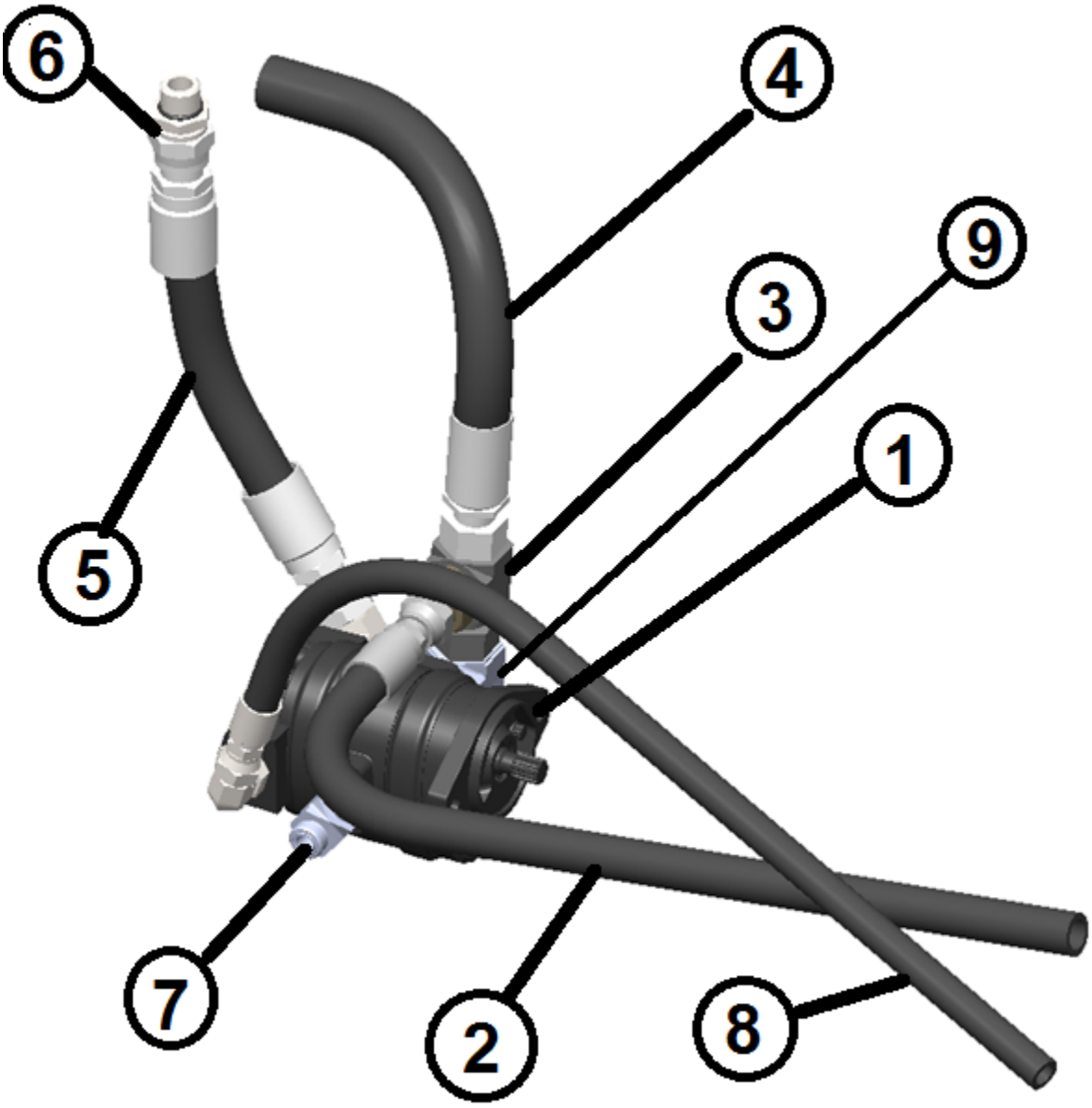


Figure 46. W200 Series Pump Installation and Hose Routing (isolated view)

Key 1 – Pump Key 2 – Return from Merger Manifold

Key 3 – T-Fitting at Charge Pump Key 4 – New Charge Pump Section Suction Hose

Key 5 – Merger Pump Section Suction Hose Key 6 – Suction Fitting at Tank

Key 7 – Original Pressure Port Fitting on Charge Pump

Key 8 – Merger Pressure Line to Merger Manifold Key 9 – Original T-Fitting at Charge Pump

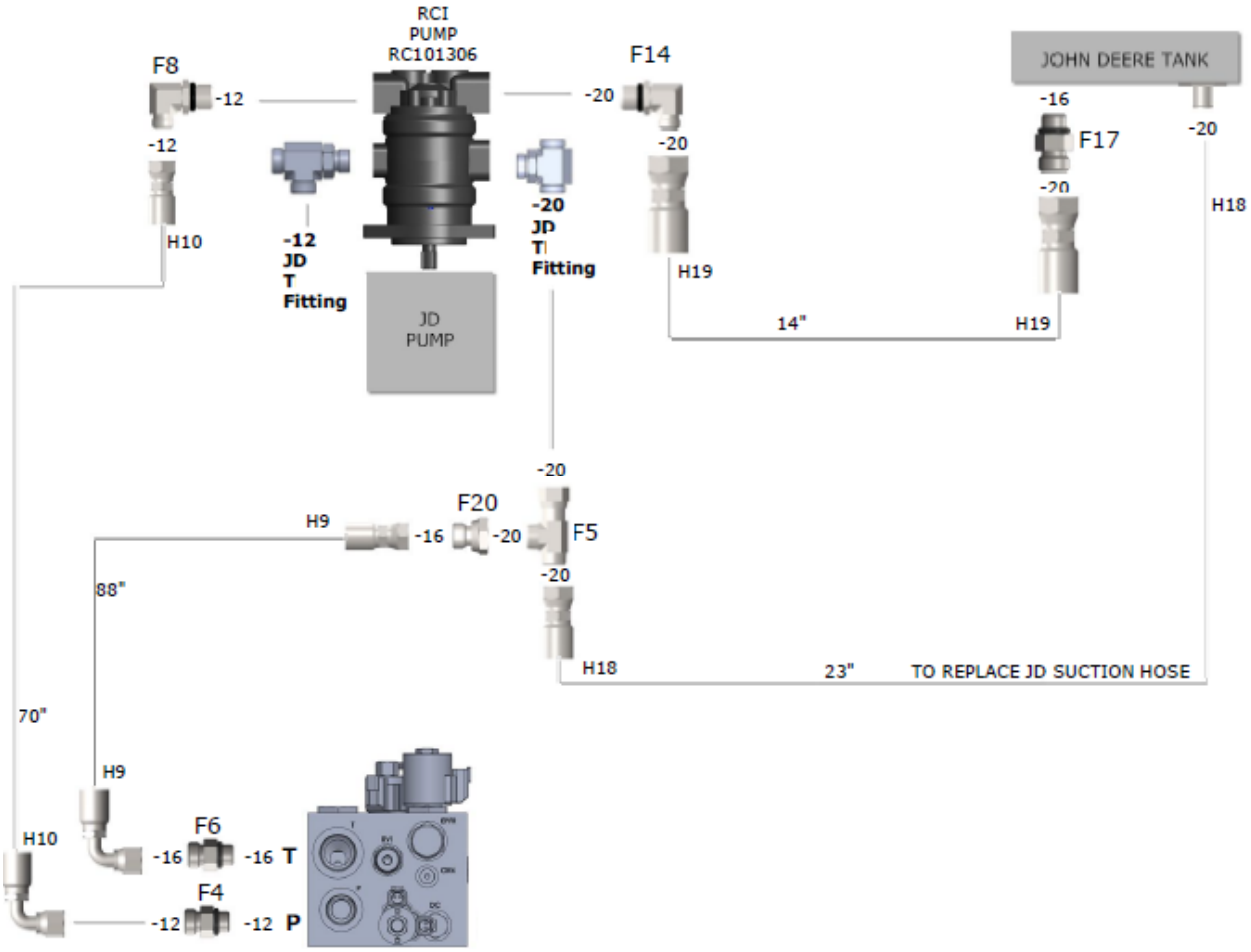


Figure 47. Functional Layout of Pump Installation – W200 Series

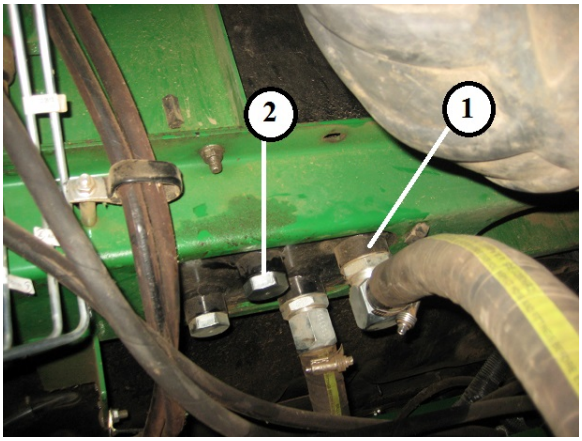


Figure 48. Tank Port Locations
Key 1 – Charge Pump Suction Port
Key 2 – Merger Pump Section Suction Port

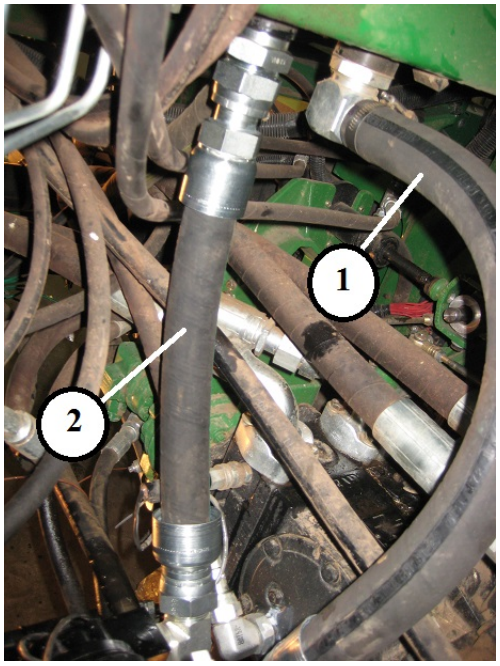


Figure 49. Suction Line Locations
Key 1 – Charge Pump Section Suction Hose
Key 2 – Merger Pump Section Suction Hose

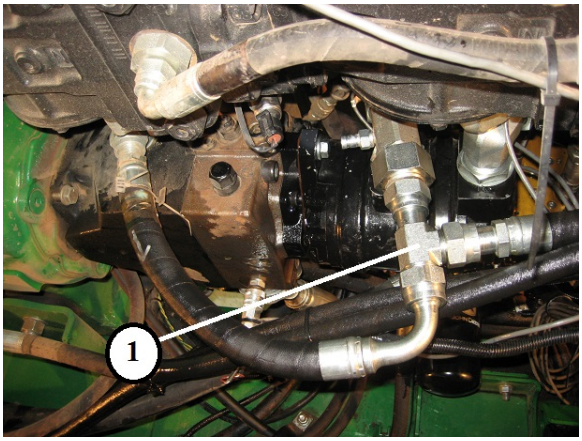


Figure 50. Original Line Re-Connection
Key 1 – Original T-Fitting at Charge Pump Suction Port

Install pressure lines on the left side of the pump. Original supply line routed to the machine manifold passes to the back port on the left side of the pump. The front port on the left side of the pump is routed to the merger manifold at the rear merger and will be installed after the attachment is mounted. See Figure 51. Tighten all hardware, fittings and hoses properly.

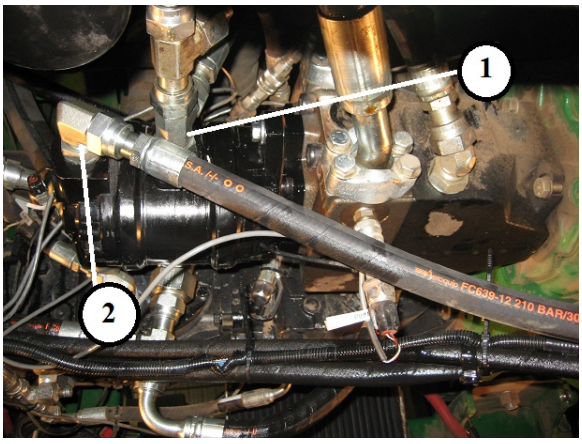


Figure 51. Pressure Lines at Pump
Key 1 – Original Pressure Line to Windrower Manifold.
Key 2 – Pressure Line to Merger Manifold (to be installed after merger is mounted).

Hydraulic Installation

R450 Series Windrowers

Preparation of Machine

Before proceeding, reference Figure 56 to become familiar with new components prior to installation.

Drain hydraulic reservoir. (To drain reservoir, see DRAIN AND FILL HYDRAULIC RESERVOIR in R450 Windrower Technical Manual.)

Remove auxiliary pump drive on LH pump stack on R450. This is the shorter of the two stacks. See Figure 52 for reference.

Install Merger Hydraulic Pump

Install hydraulic fittings in pump prior to pump installation. Orient the fittings as indicated, but do not tighten fittings at this time.

Note: The pump section closest to the splined shaft end replaces the original windrower charge pump. The section at the rear of the pump is for the operation of the merger attachment.

Install merger hydraulic pump with original o-ring and reuse two (2) M12x35 bolts. Orient the pump such that the suction ports are facing the right side of the machine. See Figure 53.

Install suction lines on the right side of RCI auxiliary hydraulic pump to tank ports. The original hydraulic suction hose for the auxiliary pump of the base machine is replaced with a new hose routed from the rear right port of the pump to the original back right port of the tank shown in Fig. 55.

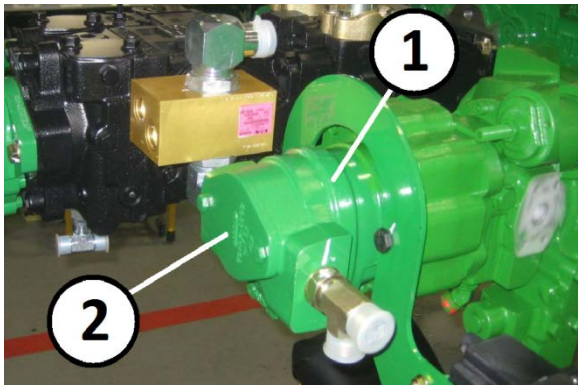


Figure 52. Pump Drive Location
(Note: components removed for clarity)
Key 1 – LH Pump Stack Key 2 – Cover

Note: New suction line is equipped with a straight fitting rather than a 90 degree at the end of the hose that connects to a T-fitting at the back right port of the pump. The T-fitting must be rotated such that the -20 port is facing up. The suction line for the pumps front right port is routed to the side port of the tank. See Figure 55, Key 2.

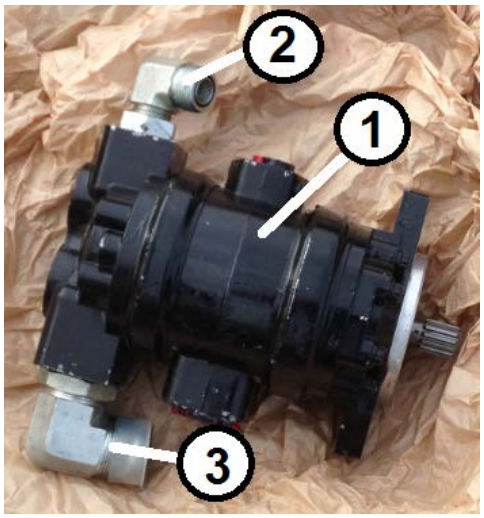


Figure 53. Hydraulic Pump Assembly
Key 1 – Pump Key 2 – 90 deg, -12
Key 3 – 90 deg -20 to -16
Note: The suction hose and charge pump removed should be saved for the customer.

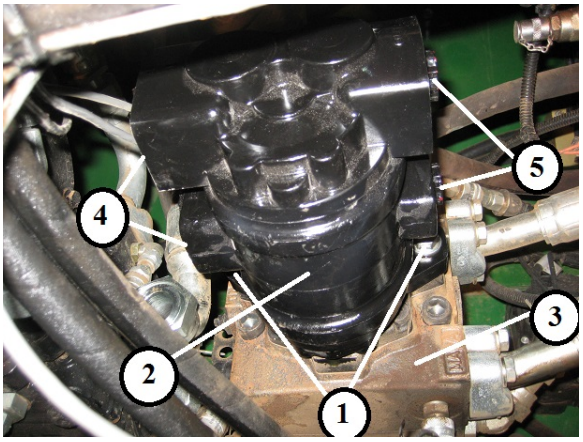


Figure 54. Orientation of Installed RCI Auxiliary Hydraulic Pump
Key 1 – Original M12x35 Bolts
Key 2 – Merger Hydraulic Pump
Key 3 – Hydrostatic Pump
Key 4 - -20 ports (RH side of pump)
Key 5 - -12 ports (LH side of pump)

Note: Reuse original hose clamp with replacement suction hose.

Remove plug at tank. Install SAE ORB-ORFS adapter. Install suction hose from tank to pump. See Figure 56. Route hose such that fittings align as shown in Figure 55.

See R450 Hydraulic Functional Schematic in Figure 56.

Take care to route all hoses such that they do not rub on any sharp edges and do not have any sharp bends.

Tighten all hardware, fittings, and hoses properly.

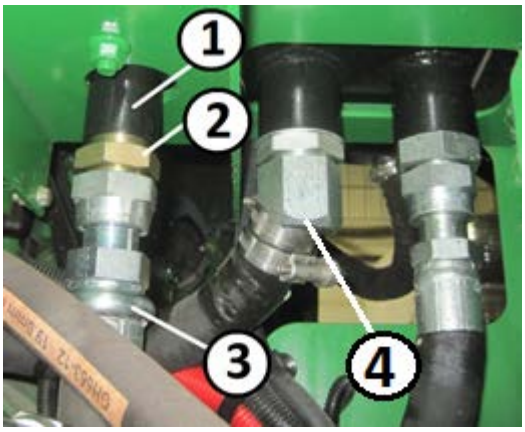


Figure 55. Suction Port at Left End of Tank
Key 1 – Suction Port Key 2 – Adapter
Key 3 – Suction Hose Key 4 – Remove for T-Fitting and Return Hose

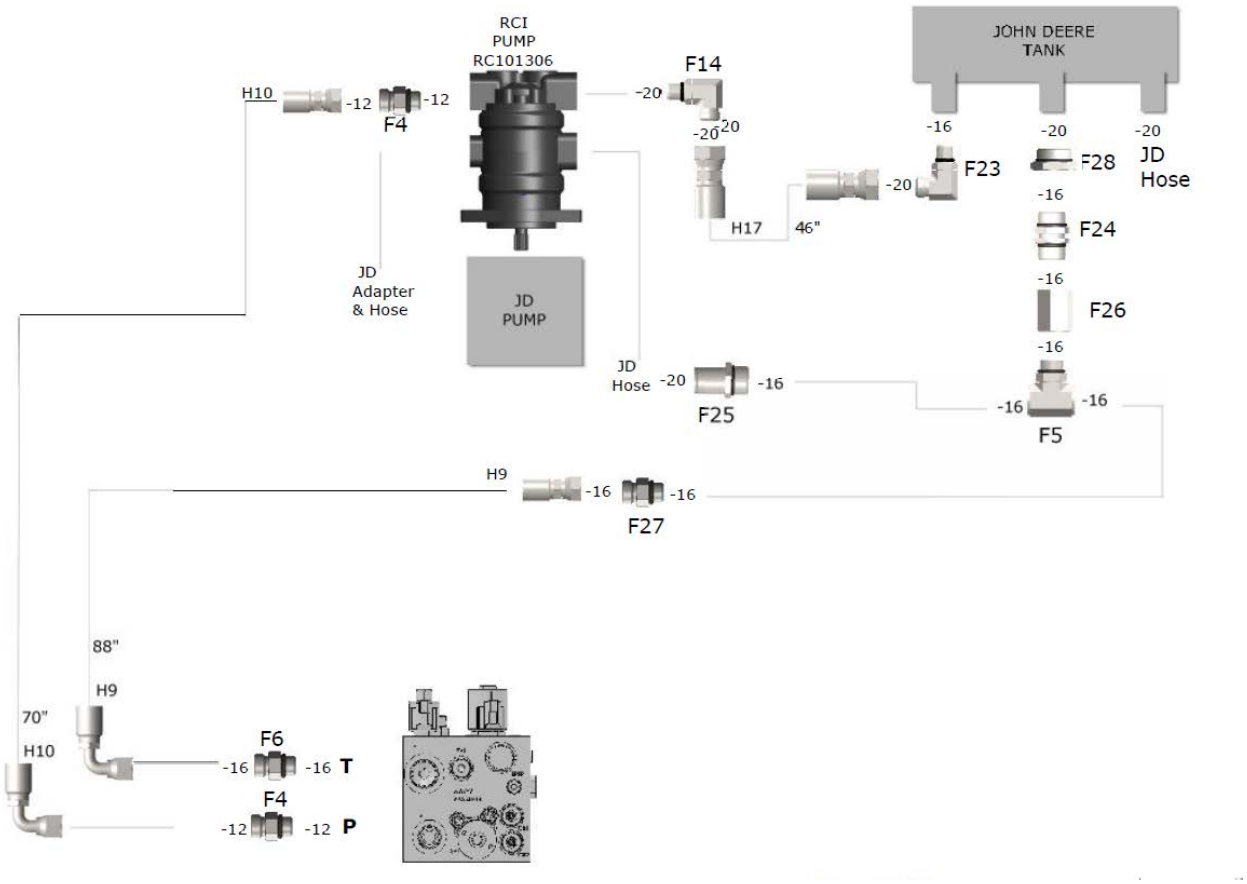


Figure 56. Hydraulic Functional Layout – R450 Series

Deflector Shield Installations

Front Deflector Assembly Installation

A large deflector assembly is used to shield the bottom of the main frame of the windrower from crop flow from the platform.

Use a fork lift or other lifting device to position the deflector assembly under the machine in line with the mounting holes from the original forming shields. Refer to Figure 58 for location of mounting holes. Original pins and cotter pins from the forming shields are used for installation.

When installing on the R450, install spacers at the pin locations as indicated in Figure 61 on the following page.

See Figures 57 through 61.

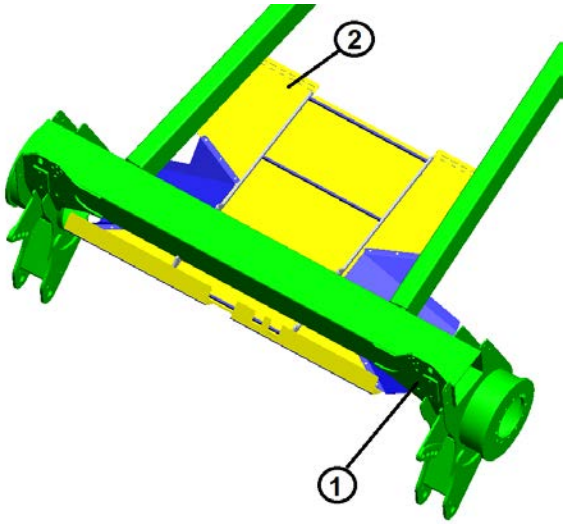


Figure 57. Front Deflector Installation
Key 1 – Windrower Frame
Key 2 – Front Deflector

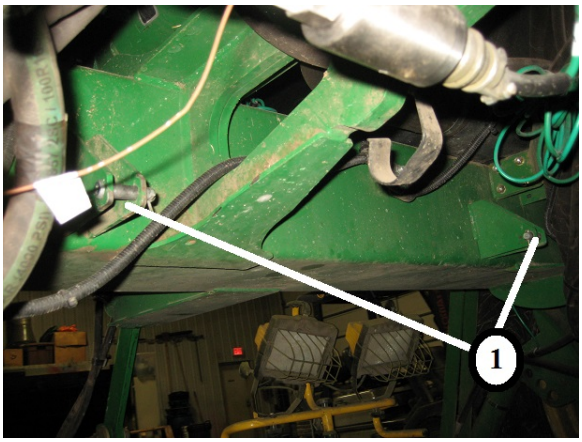


Figure 58. Mounting hole locations
Key 1 – Forming Shield Mounting Location

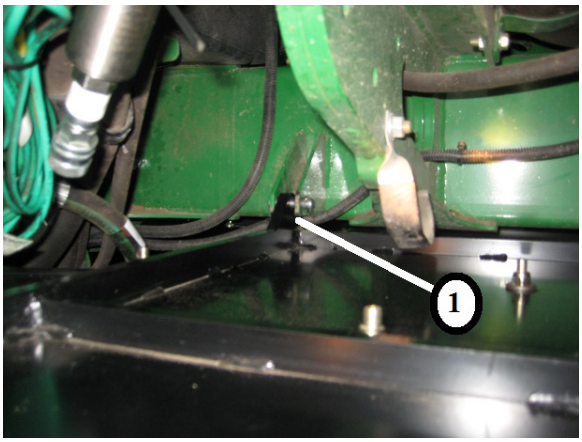


Figure 59. Deflector Shield Installation
Key 1 – Pin and Cotter Pin

Figure 60. Front View of Deflector Shield

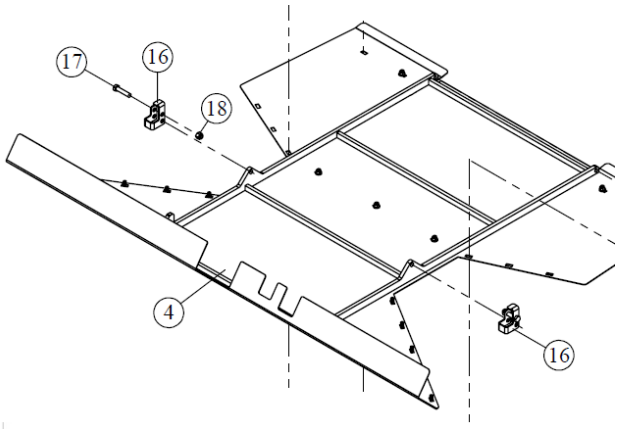


Figure 61. R450 Spacers
Key 16 – Bracket, Extension
Key 17 – Bolt ½ x 2-1/4
Key 18 – Nut ½ Nylock

Front Belt Installation

Install Belt Frame Support Brackets
Drill the holes in the jack stand brackets at the wheel drops to ¾" diameter through all.

This hole is the mounting location for the front belt frame supports.

See Figure 62.

Depending on machine tolerances (especially on R450 wheel drops), a notch may need to be made on the main frame wheel drop plate to provide clearance to the bolt hole. See Key 2 – Figure 63. Modify as needed and grind edges smooth.

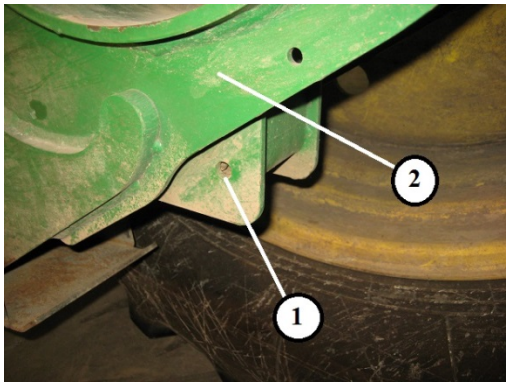


Figure 62. Jack Stand Bracket
Key 1 – ½" Hole (to be drilled to ¾")
Key 2 – Windrower Main Frame

Install the front merger support bracket to the inside of the axle frame and secure with ¾"x5½" grade 8 hex bolt. Use washers supplied at the inside of the bracket as needed to shim the connection so that it is tight after installation. See Figures 63 and 64.

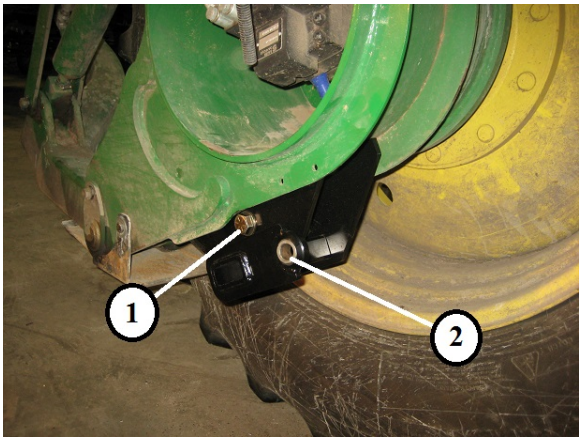


Figure 63. Front Belt Frame Support
Key 1 – Bolt ¾"x5½" Grade 8
Key 2 – Swivel

Repeat this process on the opposite side of the frame.

Tighten all hardware properly.

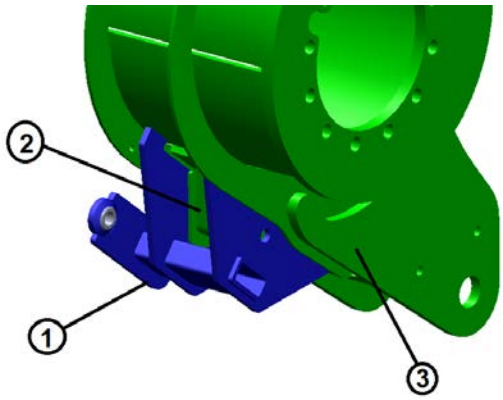


Figure 64. Front Belt Frame Support
Key 1 – Support Key 2 – Jack Stand
Key 3 – Windrower Frame

Positioning Front Belt Frame

Safely move belt frame assembly under the machine from the front with a fork lift or other lifting device to align with the upper mounting holes at the sides. See Figure 65.

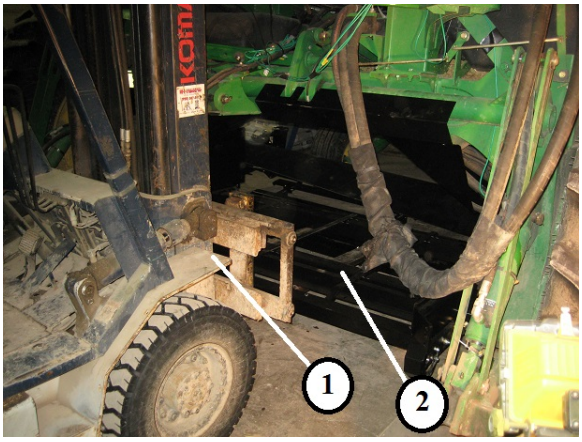


Figure 65. Positioning Front Belt Frame
Key 1 – Fork Lift (lifting device)
Key 2 – Front Belt Frame

Install Front Belt Frame to Support Bracket

Install the front belt frame to the support bracket through the swivel on the support and the top hole of the frame. See Figure 66. Use supplied bushings and washers to center the front belt frame on the windrower frame.

Specification:
Bolt Torque Value 640 lb-ft (870 N-m)

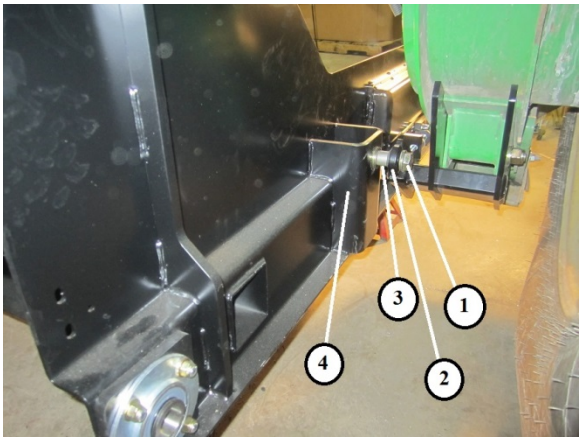


Figure 66. Fastening Front Belt Frame
Key 1 – Bolt 7/8”-9x4 Grade 8
Key 2 – Swivel Key 3 – Bushing
Key 4 – Front Belt Frame

Repeat installation at opposite side.

Install Lift Arm Supports

Install Lift arm assemblies to each lift arm as shown in Figures 67 through 69.

Install the bottom of the link in the lower hole on the bracket mounted to the lift arm.

Install the top of the link in the middle hole of the arm on the front belt frame.

Use washers to space the link such that there is no interference throughout the travel of the link.

Attach the stretch cord to the bushing on the arm of the front belt frame.

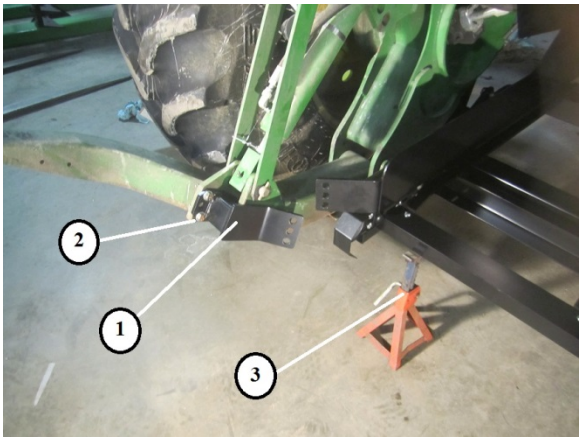


Figure 67. Front Belt Frame Mounting
Key 1 – Support Bracket
Key 2 – Bolt ½-13 x 1¾ Gr 5 YZ Hex
Key 3 – Jack Stand

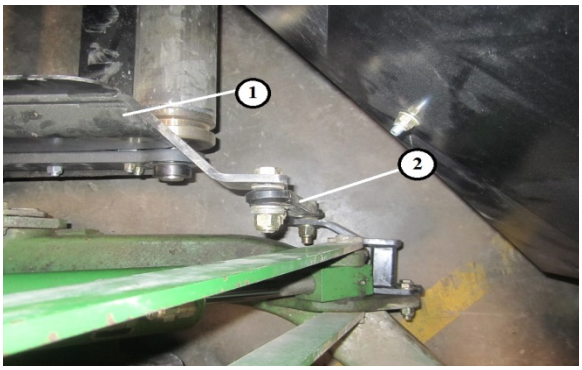


Figure 68. Link Arm Mounting
Key 1 – Front Belt Key 2 – Link Arm

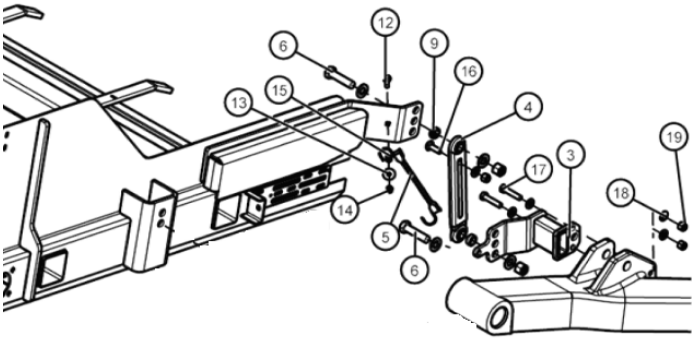


Figure 69. Link Arm Assembly
See parts pages for further detail.

Cross Belt Frame Installation

W200 Series Windrowers

Mount Support Brackets

Right side support bracket mounting requires the removal of three wire ground mounts and one hose mount on the inside of the machine frame. See Figure 70.

Mount RH support brackets on the RH of the machine frame as shown in Figure 71. Outside support bracket must overlap inside bracket. Use three (3) ½”-13x2” Grade 8 bolts to fasten the two support brackets together.

DO NOT TIGHTEN the ½”x2” bolts beyond hand tight until the frame is completely mounted. This is to allow the frame to conform to the frame of the windrower during installation. Fastening these bolts will be completed last.

Fasten the three wire ground mounts and one hose clamp mount back to their original locations.

Remove the filler pan at the RH side of the engine. Keep this part for the customer, but a replacement part is provided with the attachment and will be installed towards the end of this document.

Check for clearance to components on frame rail before proceeding. (ie. Press plates flat to frame rail by hand and check for interference to welded features on frame. Adjust as necessary. The hydraulic hose support on the RH frame rail is most critical is it is not held well in the manufacturing process and can vary from machine to machine.)

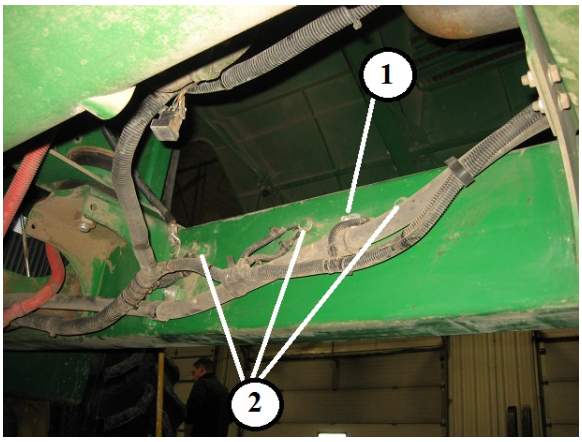


Figure 70. RH Side Mounting Location
Key 1 – Hose Mount
Key 3 – Wire Ground Mounts

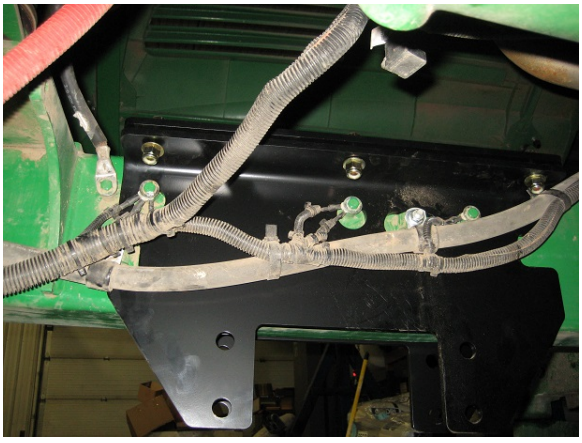


Figure 71. RH Support Brackets

Left hand support bracket mounting requires the removal of the p-clamp shown in Figure 72. This allows for the repositioning of the hydraulic hoses to mount the supports. LH support brackets mount the same as the RH support brackets. LH support bracket mounts over the inside bracket and the two brackets are fastened with three ½”-13x2” Grade 8 Bolts.

DO NOT TIGHTEN the ½”x2” bolts beyond hand tight until the frame is completely mounted.

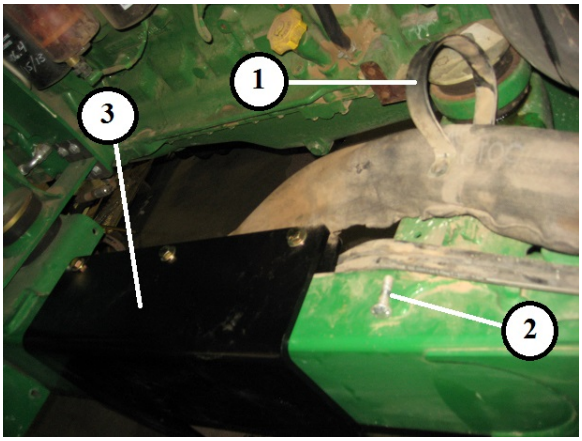


Figure 72. LH Side Mounting Location
Key 1 – P-Clamp
Key 2 – Bolt Removed from P-Clamp
Key 3 – LH Frame Plate

Support Bracket Mounting
R450 Series Windrowers

Mount RH support brackets on the RH of the machine frame as shown in Figure 73.

Install the brackets around the engine mount bracket at the frame rail.

Use provided hardware to fasten the support brackets together.

DO NOT TIGHTEN the ½"x2" bolts beyond hand tight until the frame is completely mounted. This is to allow the frame to conform to the frame of the windrower during installation. Fastening these bolts will be completed last.

Tighten the Engine Frame Isolator Bolt / Mount Bolt properly. Refer to R450 Repair Manual.

Also install rear deflector mounting brackets around main frame as shown in Figure 73.

Refer to parts pages in this manual for clarification of components.

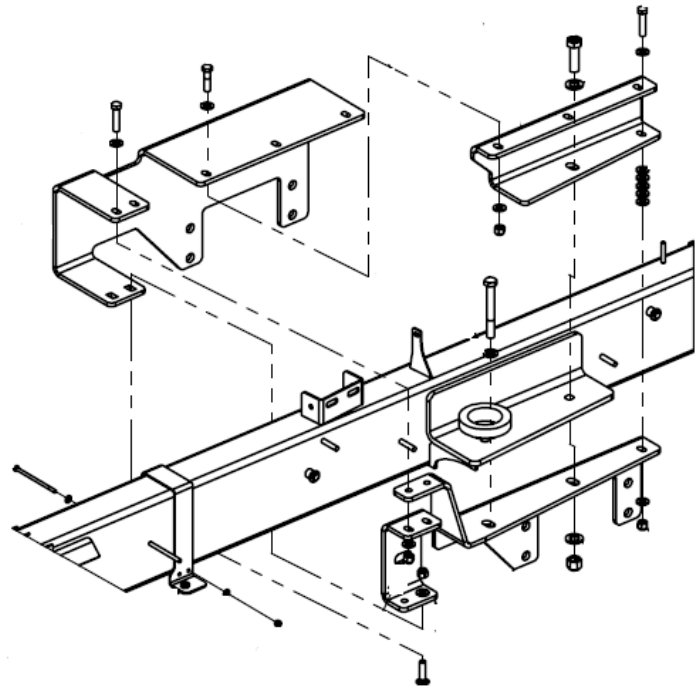


Figure 73. RH Side Mounting Location

Mount LH support brackets on the LH of the machine frame as shown in Figure 74.

Install the brackets around the engine mount bracket at the frame rail.

Use provided hardware to fasten the support brackets together.

DO NOT TIGHTEN the ½”x2” bolts beyond hand tight until the frame is completely mounted. This is to allow the frame to conform to the frame of the windrower during installation. Fastening these bolts will be completed last.

Tighten the Engine Frame Isolator Bolt / Mount Bolt properly. Refer to R450 Repair Manual.

Also install rear deflector mounting brackets around main frame as shown in Figure 74.

Refer to parts pages in this manual for clarification of components.

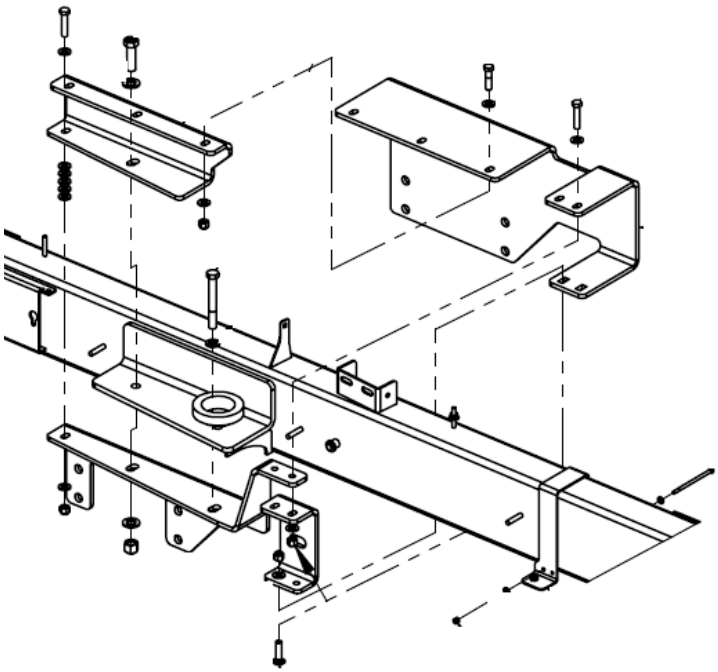


Figure 74. LH Side Mounting Location

Install Cross Belt

Lift the cross belt assembly on the shipping skid with a forklift or other portable lifting device from the right side discharge end of the belt. Keep the shipping skid under the belt frame for the duration of the installation.

IMPORTANT:
Use fork extensions or other device when picking up the cross belt assembly, even if on the shipping crate. Take care to not damage the belt during this operation.

Properly secure the cross belt assembly to the lifting device. Failure to follow these guidelines may result in personal injury or damage to components.

Use a forklift or other lifting device to move the cross belt and pivot frame assembly on the original shipping skid to under the machine from the RH side of the windrower. Note: It may be easiest to align one hole on each set of plates and then use a set of punches to align the other holes as the pivot frame has the ability to move slightly on the shipping crate.

When the belt frame is positioned under the machine in line with the support brackets, raise the belt frame up with the lifting device. Support brackets align with the belt frame on the side of the belt frame brackets that do not have a weld. See Figure 75 for the LH side alignment and Figure 76 for the RH alignment.

See Figures 75 through 80.

IMPORTANT:
In general, the plates of the cross beam should be outside the plates on the windrower frame. The exception is on the left end plate. The cross frame will rest inside the left end plate on the main frame.

Install the ¾ x 2¼ bolts that secure the belt frame to the support brackets from the outside of the frame towards the inside and torque to specification.

Specification:
Main frame mounting bolt torque
400 lb-ft (540 N-m)

Tighten the ½-13 x 2 bolts that secure the outside and inside support brackets together to specification.

SPECIFICATION
Support bracket bolt torque
115 lb-ft (155 N-m)

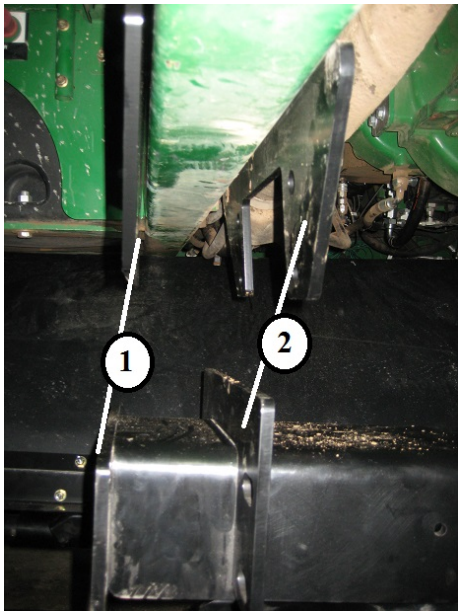


Figure 75. LH Side Support Alignments
Key 1 – Outside Support Alignment
Key 2 – Inside Support Alignment

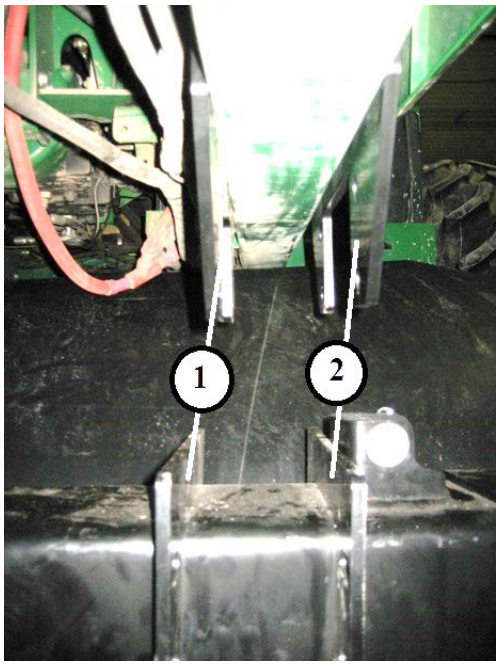


Figure 76. RH Side Support Alignments
Key 1 – Inside Support Alignment
Key 2 – Outside Support Alignment

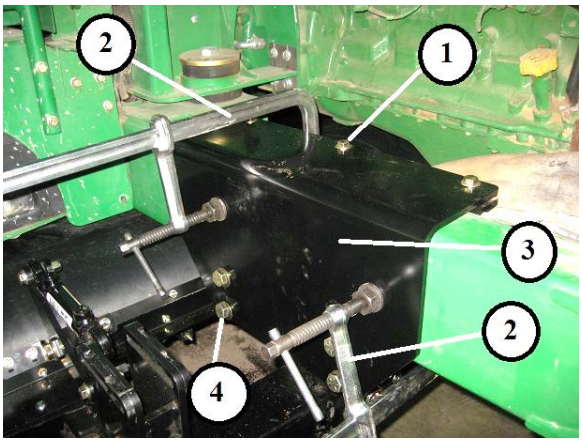


Figure 77. Supports at Belt Frame
Key 1 – Bolt ½-13 x 2 Gr 8 (qty 3)
Key 2 – C-Clamps (optional)
Key 3 – Outside Support
Key 4 – Bolt ¾-10 x 2-¼ Gr 8 (qty 8)

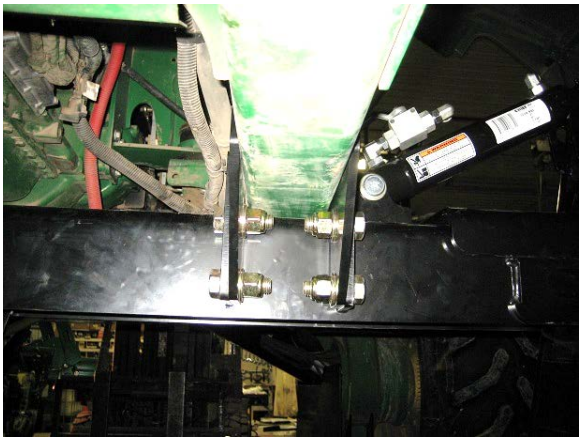


Figure 78. Supports Install at RH Frame

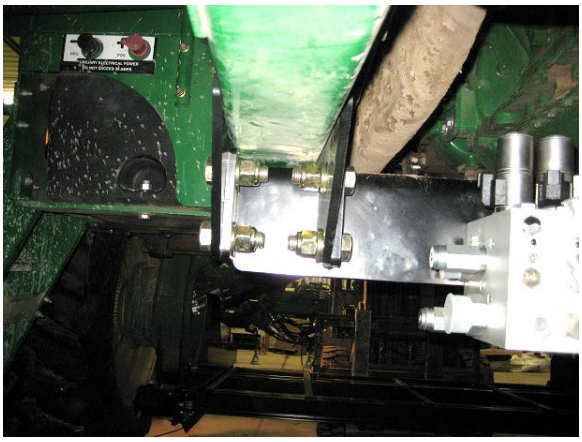


Figure 79. Supports Installed at LH Frame.

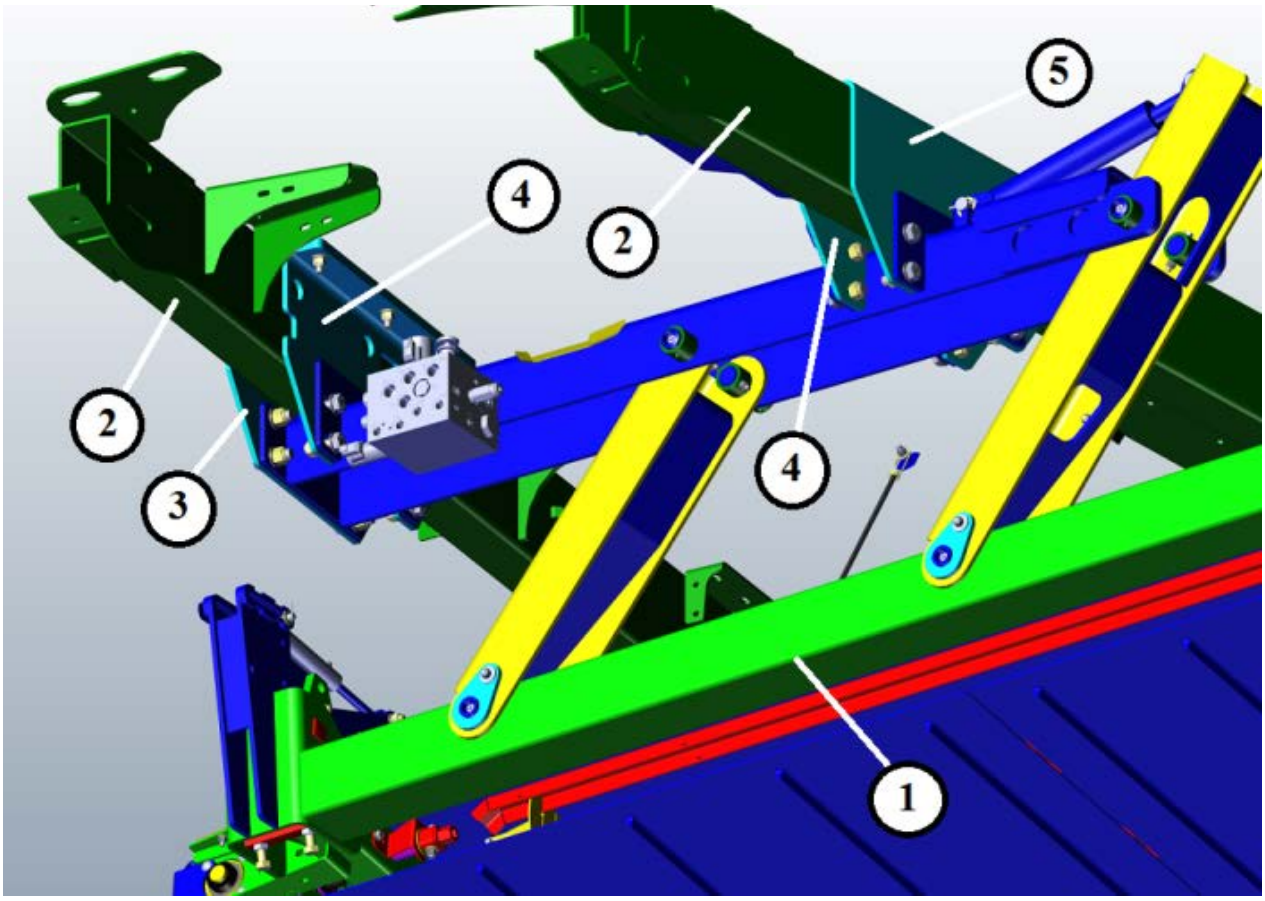


Figure 80. Mounting Cross Belt Frame

Key 1 – Cross Belt Key 2 – Windrower Frame Key 3 – LH Outside Support Bracket
Key 4 – Inside Support Brackets Key 5 – RH Outside Support Bracket

Ladder Spacer and Cover Plate Installation
W200 Series

Remove ladder from the machine frame. Install step cover plate to the back side of the ladder. Reuse existing hardware for center bolts. Reuse bolts from ladder mount to main frame for other connections. See Figure 81.

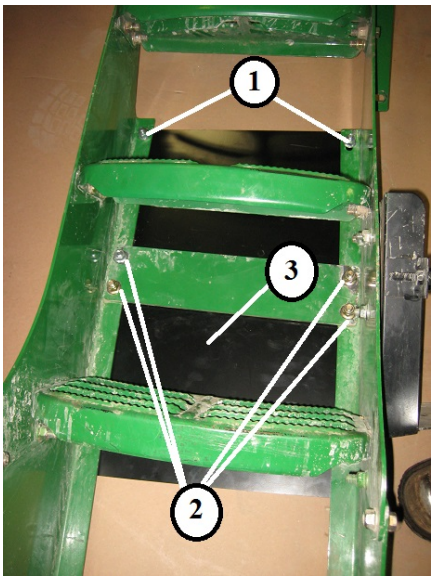


Figure 81. Step Cover Plate Installation
Key 1 –M10x30 Flange Bolt (reuse)
Key 2 – Install using existing hardware
Key 3 – Step Cover Plate (reference)

Re-install the ladder with spacers between the ladder and the machine frame. Fasten with M10 x 50 flange bolt (4), 2 for each spacer, supplied. See Figure 82.

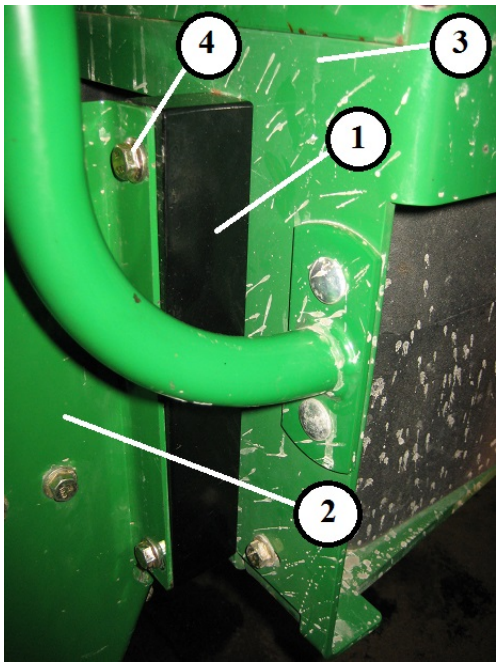


Figure 82. Ladder Spacer Installation
Key 1 – Ladder Spacer
Key 2 – Ladder Frame
Key 3 – Machine Frame
Key 4 – Bolt, M10x50 Flange

Ladder Spacer and Cover Plate Installation
R450 Series

A deeper ladder is needed with the R450 for clearance to the merger in transport position.

Remove ladder from the machine frame. Disassemble ladder to remove steps.

Assemble new ladder using new side sheets provided with the merger attachment.

Install additional step provided with bundle.

Install step cover plate to the back side of the ladder. Reuse existing hardware for center bolts. Re-install the ladder to windrower. Reuse original hardware. See Figure 83.

See parts catalog pages in this manual for further detail of components.

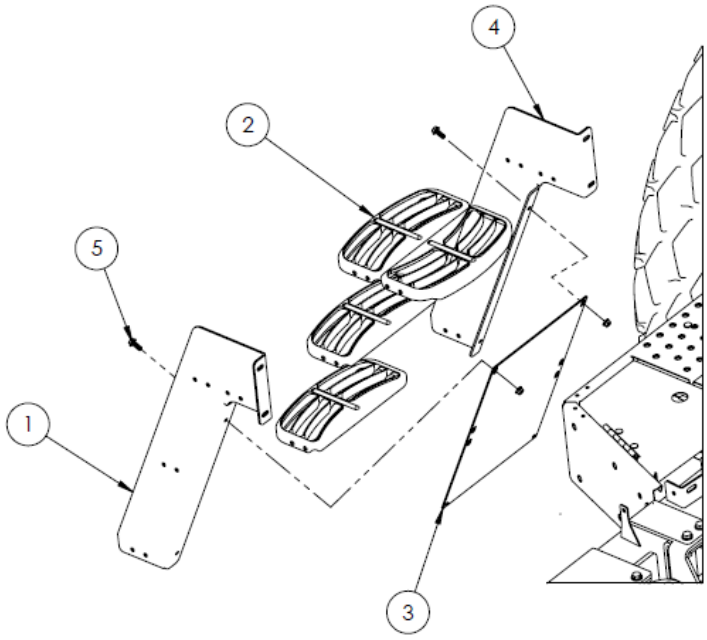


Figure 83. Ladder Assembly and Installation

Engine Shield Installation
W200 Series Only

Install new engine shield in place of original engine shield on the RH side of the engine. Re-use original hardware. See Figure 84.

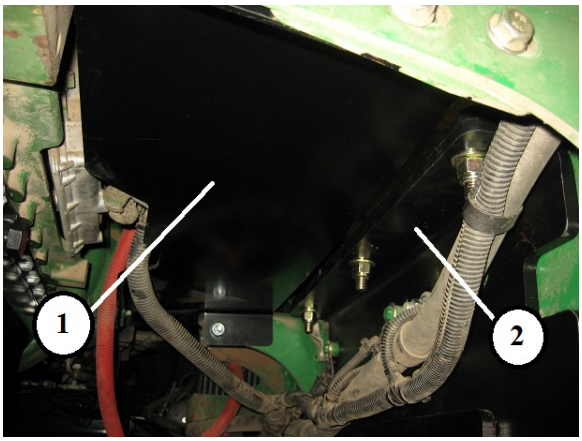


Figure 84. Engine Shield Installation
Key 1 – Engine Shield
Key 2 – RH Inside Support Bracket of Frame Mount (Reference)

Remove edge trim from original shield and install on new shield as shown in Figure 85.

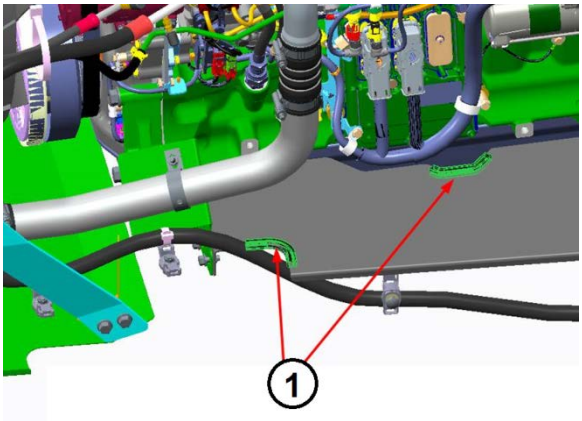


Figure 85. Edge Trim at Engine Shield
Key 1 – Edge Trim

Grab Handle Installation

W200 Series Only

Install handle at the right side of the machine between the cab platform and toolbox.

Figure 86 shows the location of the grab handle installation next to the right front tire.

All four (4) holes must be drilled for mounting. Use 7/16” drill bit to allow holes for 3/8” x 16 x 1” carriage bolts with washer and nut. File corners of the holes to fit the carriage bolts. Install carriage bolts from the inside of the frame for ease of assembly.

Tighten all hardware properly.

See Figure 86.

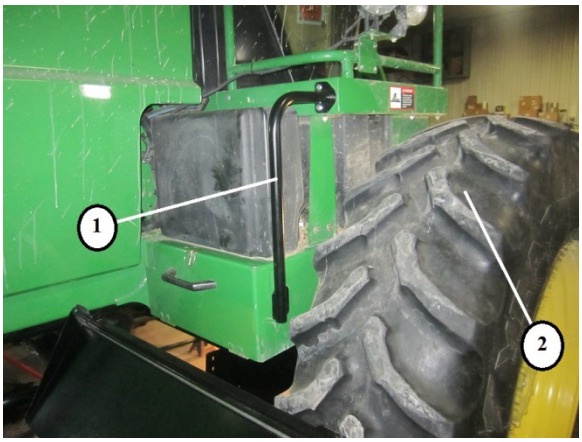


Figure 86. Grab Handle Installation
Key 1 – Grab Handle
Key 2 – RH Side of Machine

Electrical Installation

Install controller at the right side of the machine frame in the location shown in Figure 87.

Locate controller and mark two mounting holes.

Drill ¼” diameter holes to fit provided screws.

Install machine screws provided to fasten the controller to the frame in the control panel.

Install wire harness beginning at the controller. Connect two Deutsch connectors to the controller ports as shown in Figure 88.

Connect the CAN connection to the port provided in the main machine wire harness as shown in Figure 88.

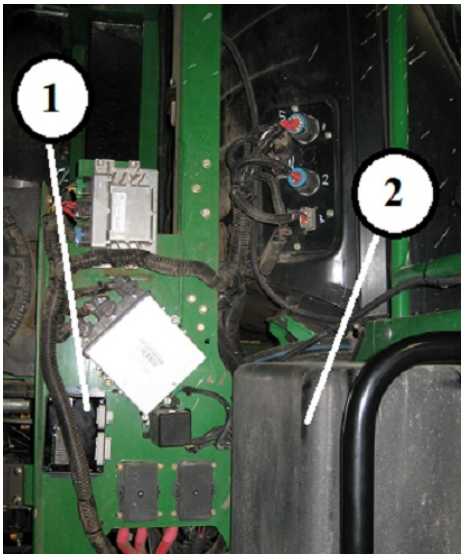


Figure 87. Electrical Control Board Installation Location
Key 1 – RCI Electrical Control Board
Key 2 – Tank RH Side of Machine (reference only)

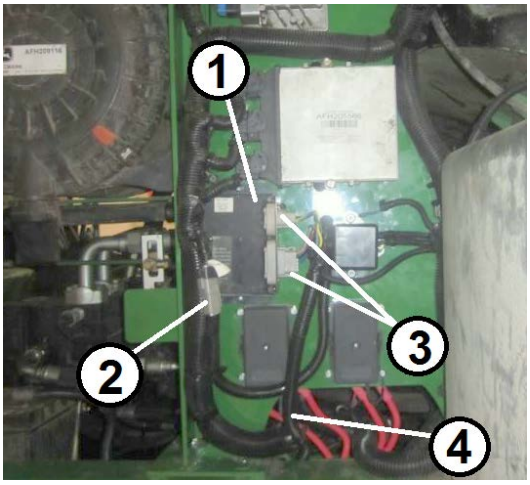


Figure 88. Wire Harness Connections
Key 1 – Controller
Key 2 – CAN Connection
Key 3 – Controller Connections
Key 4 – Harness Routing

Route harness along hoses on RH frame rail towards the rear of the machine.

Route the harness to the manifold at the rear of the merger pivot frame as shown in Figure 90. Secure with tie bands provided as needed. Do not secure to any battery cables or hydraulic pressure hoses, but rather to return hoses and existing clamps on the frame of the windrower.

At the manifold, connect the following for the wire harness.

Green Wire = Position 1 (raise)
Blue Wire = Position 2 (lower)
Tan Wire = Position 3 (larger coil)
Violet Wire = Position 4 (smaller coil)

See Figure 91.

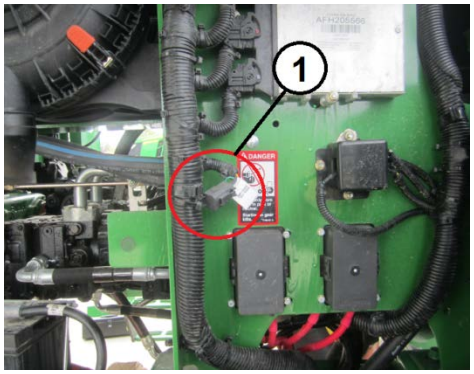


Figure 89. CAN Connection
Key 1 – Port on Windrower Wire Harness

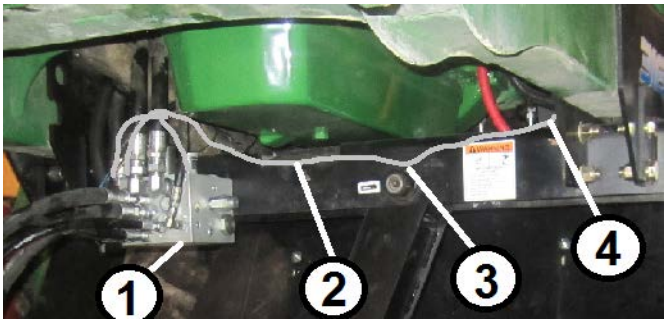


Figure 90. Wire Harness Installation
Key 1 – Manifold Key 2 – Harness
Key 3 – Tie Band Location (at pin boss)
Key 4 – Routing along main frame.

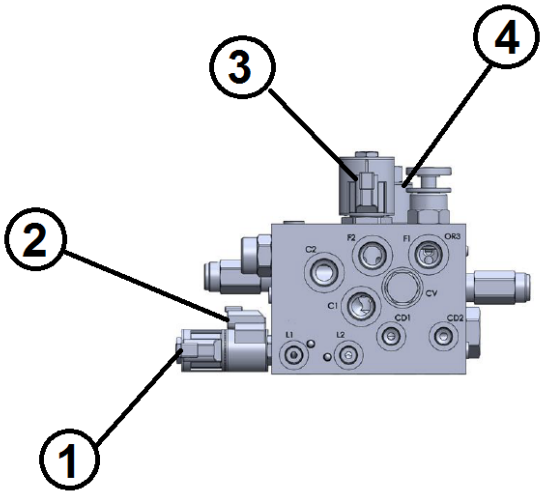


Figure 91. Manifold Wiring Locations
Key 1 – Blue Wire Key 2 – Green Wire
Key 3 – Tan Wire Key 4 – Violet Wire

Software Changes

W200-Series

The software of the W200-Sereies Self Propelled Windrower must be changed to acknowledge the installation of the merger attachment.

To change the diagnostic address, access the addresses through the armrest display in the cab of the machine.

NOTE: Do not start the engine for this adjustment, but the key must be in the "ON" position.

Press the button in the armrest indicated in Figure 92, Key 2.

Select "Message Center" as shown in Figure 93, Key A.

Next, select "Address" as shown in Figure 94, Key A. Then select "OOC" in the dropdown, Key B. Press "Enter."

Scroll to address 172. Change the second to right digit to "1". The display should read as follows:

XX1X

Save the setting and exit the menu.

Remove the cap indicated in Figure 94, Key 1. This button is used for disabling the front belt.

Figure 92. Armrest Buttons
Key 1 – Remove Cap Key 2 – Menu Button

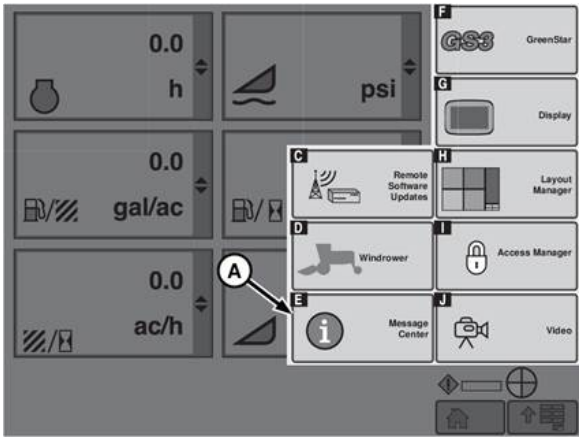


Figure 93. Message Center
Key A – Message Center Link

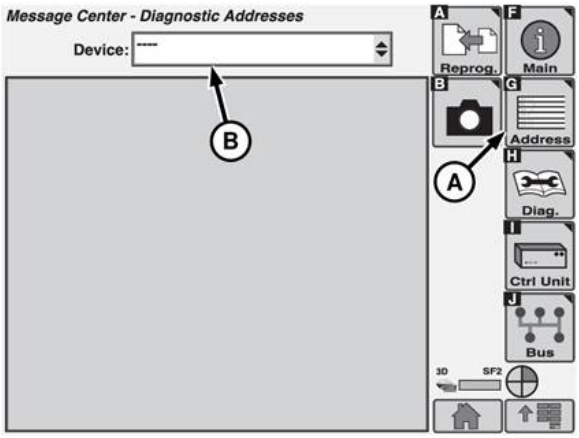


Figure 94. Address Link
Key A – Address Link Key B – Device List

R450

The software of the R450 Self-Propelled Windrower must be changed to acknowledge the installation of the merger attachment.

To change the settings, press and hold the “Diagnostic” button on the armrest of the machine while turning the key to the “On” position.

WARNING:

DO NOT START THE ENGINE. FAILURE TO DO SO MAY RESULT IN MACHINE DAMAGE.

Immediately after the display is illuminated, navigate to the CAB controller address 67. For more information on the navigation in the display, consult the R450 Self-Propelled Windrower Operator Manual.

Change the fifth digit in this address from a “zero” to a “one”. The display should read as follows:

XXXX

1 XXX

Save the setting. Exit the address. Turn the key to “Off” and remove the key from the ignition. See Figure 95.

Figure 95. Display for CAB Controller

Hydraulic Hose Routing

The hoses for the front conveyor, supply pressure, and return need to be routed properly for function.

Three lines are secured together for the front belt frame. The hoses should be routed along other hoses at the main frame rail along the LH side of the frame towards the wheel drop. See Figure 96.

The two larger lines are labeled to match ports A&B at the front belt motor.

Hose F2 connects to Port A.

Hose F1 connects to Port B.

The case drain line will split from the other two hoses to attach with a shorter bend radius to the fitting at the case drain of the front belt motor. Secure hoses to fittings properly. See Figure 97. Inspect and adjust to ensure the hoses are not rubbing on other components and are secured properly. Use supplied tie bands to secure the hoses.

Slide the hose wrap located around the two main hoses to be located at the nearest point to the wheel drop to prevent excessive wear to the hoses.

Refer to the HYDRAULIC SYSTEM COMPONENT DIAGRAM in this manual as needed.

Route the pressure and return hoses from the manifold to the appropriate ports at the pump assembly. Take care to route the hoses such that they do not rub on sharp corners, moving components, or other components that may be damaged by the hoses. See HYDRAULIC SYSTEM INSTALLATION for details of routing.

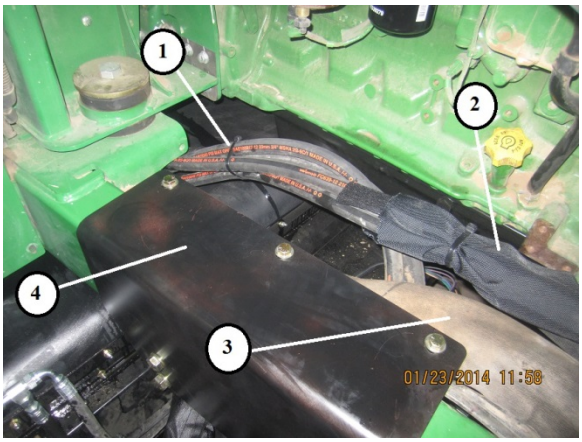


Figure 96. Hydraulic Supply Hose Lines
Key 1 – Tie Location
Key 2 – Hose Wrapping
Key 3 – Steering Hydraulic Lines
Key 4 – LH Outside Support Bracket

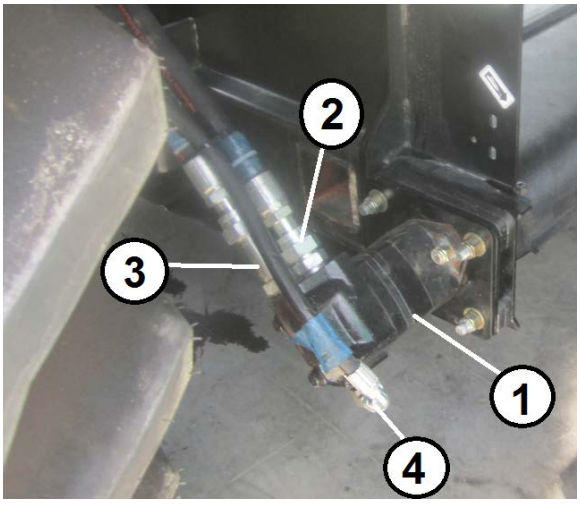


Figure 97. Front Motor Connections
Key 1 – Front Motor Key 2 – Port B
Key 3 – Port A Key 4 – Case Drain

Rear Deflector Installation
W200 Series

Note: The R450 Series features deflector mounts are mounted with the frame mounting plates. Refer to R450 Support Bracket Mounting Section.

Install Rear Deflector mount brackets to the machine frame. The RH side support mounts in front of the battery and LH side support mounts behind the accumulator at the existing frame brackets of the windrower. Brackets are fastened with two (2) 3/8" x 1 1/4" bolts at each location as indicated in Figures 98 and 99.

Install the rear deflector under the machine with the help of an assistant so that small bend is facing down. Remove the pivot pin from the Front Deflector.

Install the pivot pin through the rear deflector such that the rear deflector will pivot about the end of the front deflector.

Align the slotted holes on the rear deflector with the mounting bracket previously installed and fasten with 3/8" x 1 1/2" Flange Head Bolts from the bottom.

Note: Rear shield installation should be done after installation of the cross belt frame for ease of routing hoses and mounting.

See Figure 99.

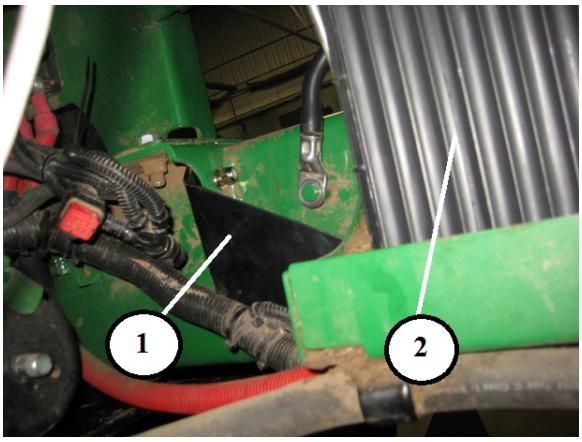


Figure 98. RH Side Mounting Location
Key 1 – Rear Shield RH Support (RC101207-2)
Key 2 – Battery (reference only)

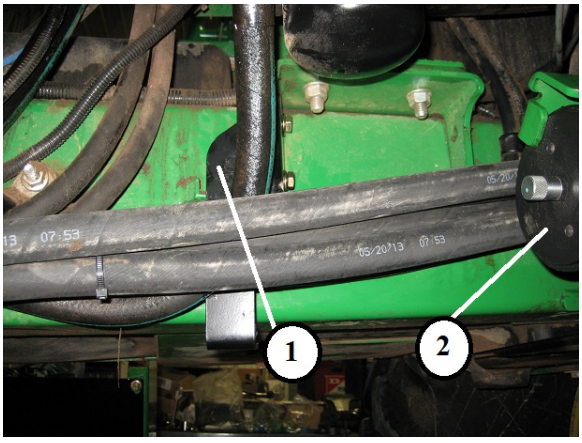


Figure 99. LH Side Mounting Location
Key 1 – Rear Shield LH Support (RC101207-1)
Key 2 – Accumulator (reference only)

Deflector Shielding Installation Diagram

Also reference Deflector parts page at the end of this manual.

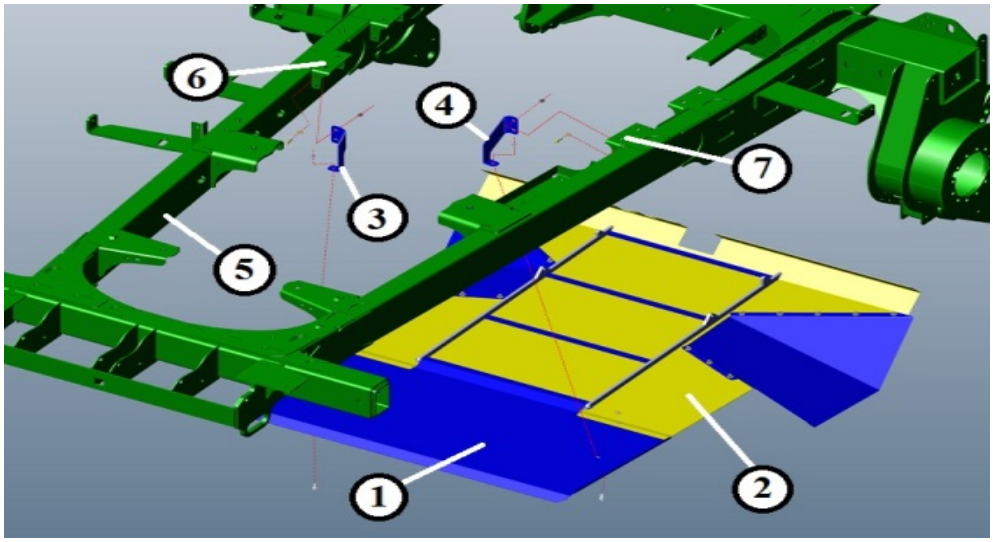


Figure 100. Deflector Mounting

Key 1 – Rear Shield Key 2 – Front Shield Key 3 – LH Bracket
Key 4 – RH Bracket Key 5 – Windrower Frame
Key 6 – LH Mounting Location Key 7 – RH Mounting Location

The plastic deflector sheet of the cross belt will rest above the rear shield of the deflector on the main frame of the unit, Key 1, Figure 100. Install the plastic sheet above the rear shield with the shield lowered. Then install the hardware to hold the rear shield in place. See Figure 101.

Figure 101. Plastic Sheet Install

Key 1 – Plastic Sheet Key 2 – Rear Shield

IMPORTANT:

The deflector shield must be mounted with the bent edge facing down. This is the lip at the rear of the deflector. Failure to do so may result in machine damage.

Install the stretch cord from the center slot of the plastic sheet to hook to the side support of the pump stack by wrapping the cord around the bottom front side of the support and then hook over the support as shown in Figure 102. This is accessible from the right side of the machine through the side panel.

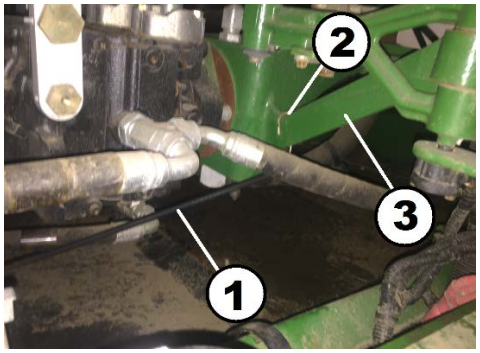


Figure 102. Stretch Cord Install

Key 1 – Stretch Cord Key 2 – Hook Point
Key 3 – Drive Support

Rear Deflector Installation
R450 Series

The deflector installation for the R450 Series is nearly identical to that of the W200 Series, with two exceptions.

First, the front mounting requires an adapter to lower the deflector approximately 1” for frame clearance. These adapters are shown in Figure 104, Key B. Install using pins that were used on the original forming shields.

Second, the rear mounting requires the use of a bracket that wraps around the main frame tube. See Figure 103, Key A. Secure the adapter around the main frame using supplied hardware. Do not tighten until the forming shield is secured to the bottom of the bracket.

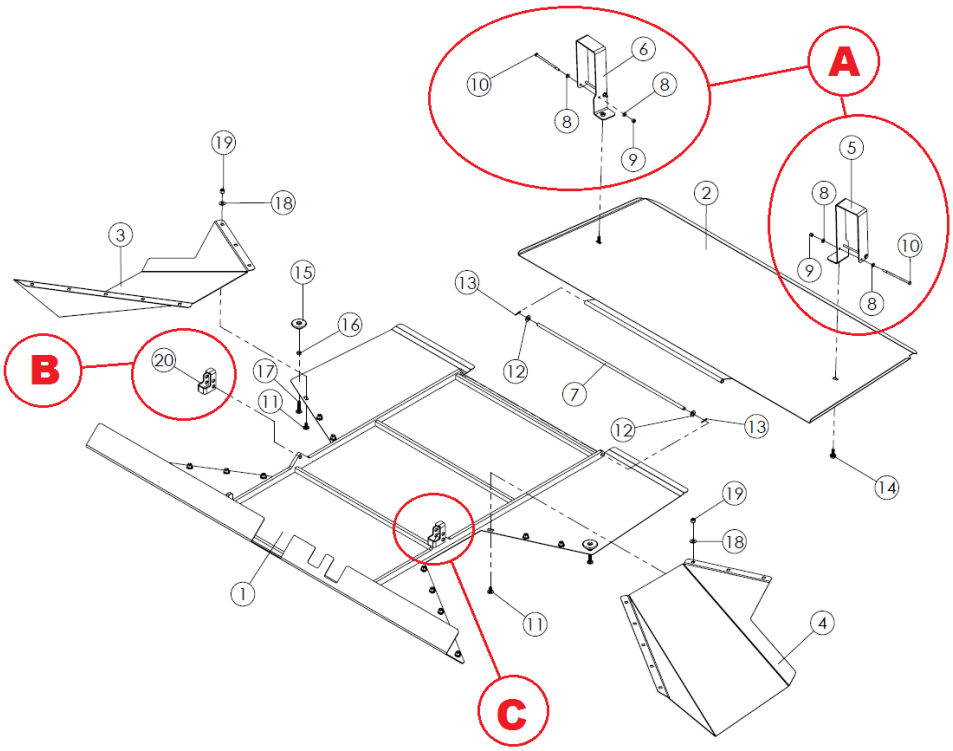


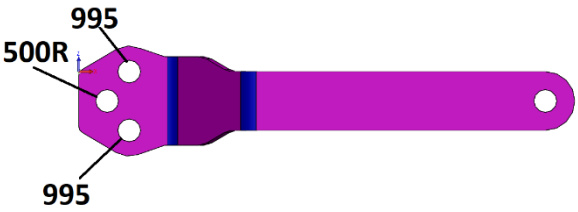
Figure 103. R450 Adapters
Key A – Rear Adapters
Key B – Front Adapters

Forming Shield Installation

Install the forming shield Mount Bracket and link on the middle of the front of the windrower at the Platform Tilt Cylinder mount as shown in Figure 104.

The Mount Bracket replaces original John Deere plate. Reuse original hardware to fasten the bracket. Route hoses and the wire harness for the platform between the ears of the mount bracket and secure in the same manner as the original parts.

IMPORTANT: Different link positions are used on the 995 and 500R Platforms. Spare parts for the links are now a universal link between the two machines. The closer holes are used with the 995 platform and the further holes are used for the 500R. The three-hole end is at the upper pin. Two holes are provided for the 995 location so that both left and right arms can be installed to match position. See image below.



Assemble the sides of the forming shields to the top pan as shown in Figure 105.

IMPORTANT: Keys 6 and 25 in Figure 105 are only used with the 995 and 994 Platfoms. Do not use this filler plate with the 500R as machine damage may result.

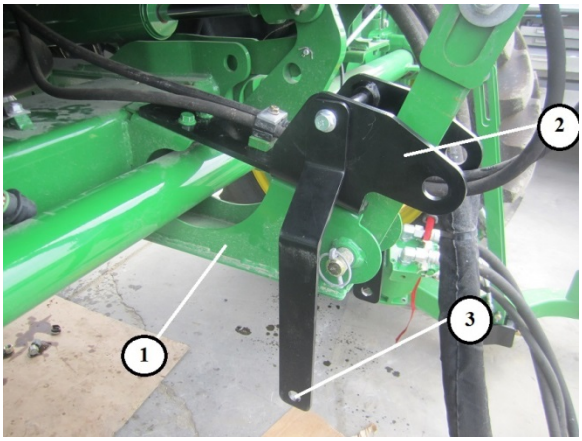


Figure 104. Mounting the forming (header) shield to the front of the windrower
Key 1 – front of the windrower
Key 2 – RCI Bracket Link (RC101304)
Key 3 – RC101236 Link hole location to be fastened to the forming shield

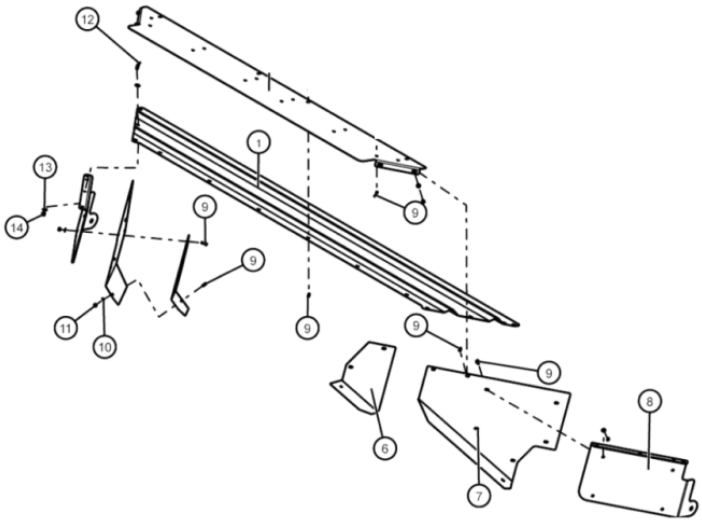


Figure 105. Forming Shield Assembly
Refer to Parts Pages for Further Detail
Note: Keys 6 and 25 are only used only with the 995 and 994 Platforms.

With the help of an assistant and a lifting device, install the new forming shield to the platform at the original pivot location reusing original hardware. See Figures 106 and 107.

IMPORTANT:
For the 995 Platform, use the lower pivot hole.

For the 500R Platform, use the top most hole of the three in the mount.

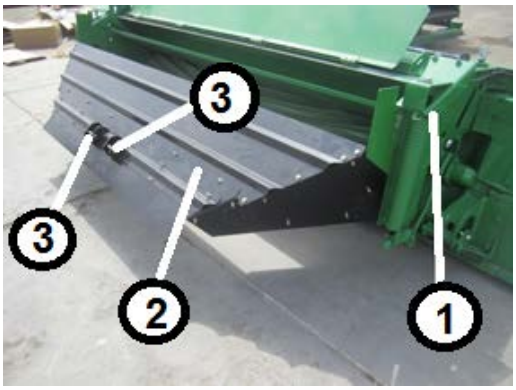


Figure 106. Forming Shield Installation
Key 1 – Platform Key 2 – Forming Shield
Key 3 – Mounting Locations for Pivot Arms

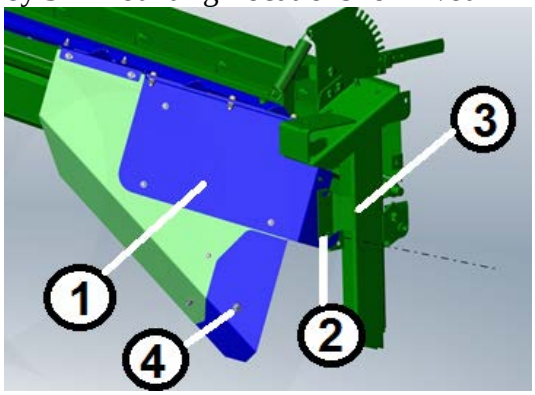


Figure 107. Forming Shield Installation
Key 1 – Support Plate
Key 2 – Mounting Location
Note: reuse original hardware
Key 3 – Header frame

Attach platform to the windrower. Refer to Operator Manual for the Platform and Windrower.

IMPORTANT:

Always configure the machine for field operation before attempting to connect links of the forming shields to the base machine.

- Set float pressure for platform to at least 1,000 psi
- Level the frame of the windrower by adjusting the rear suspension (W200). With the platform in float, the windrower frame should be level or slightly raised in the rear of the unit. See Operator Manual for information regarding adjustments of rear suspension.

Install links, Figure 108, Key 3 to Link Mounts, Key 2, at Forming Shields.

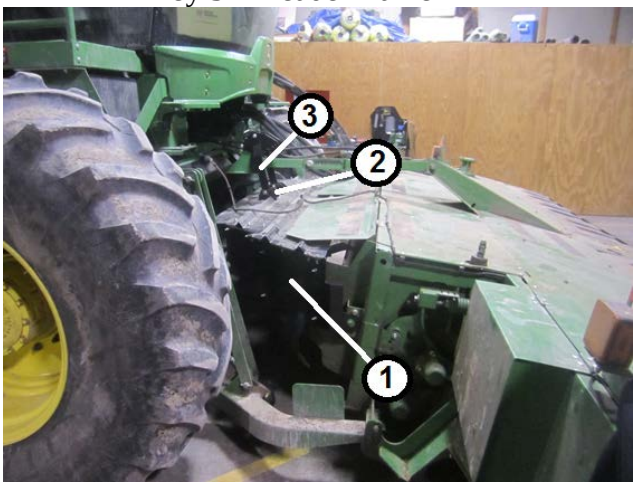


Figure 108. Platform Installation
Key 1- Forming Shield Key 2 – Link Mount
Key 3 – Forming Shield Link

Final Unit Preparations

Fill Hydraulic Reservoir

Fill the hydraulic reservoir. (To fill reservoir, see DRAIN AND FILL HYDRAULIC RESERVOIR in Windrower Technical Manual.)

Install Platform

Install the platform on the machine. See the Operator Manual for the Self Propelled Windrower and Platform.

Level Machine

Adjust rear suspension of the windrower to level the machine when the platform is in float at ground level, on a flat surface. See Operator Manual for the Self-Propelled Windrower.

Final Installation Inspection List

The following is an inspection checklist for the windrow merger attachment. Complete this inspection list prior to delivery of the machine to the customer.

1) Check all settings of the platform on the front of the machine. See 995 SETTINGS AND ADJUSTMENTS section of this manual or the 500R Operator Manual.

2) Check for leaks on all components after a few seconds of run time. Shut off engine and remove key prior to inspection.

   WARNING: Be aware of any potential high pressure leaks and avoid as necessary. Failure to do so may result in serious personal injury.

3) **Check belt tension on both belts. Refer to Belt Tension Adjustment section of INITIAL SETTINGS.**

4) Start engine. Press yellow button on hydrostatic handle to enable the merger. See ENABLE / DISABLE MERGER ATTACHMENT section in this manual.

   If using an R450 Self Propelled Windrower, verify that the icon appears properly in the corner display. If it does not, investigate the change to CAB controller address 67 performed as part of these installation instructions.

   If using a W200 Series Self Propelled Windrower, ensure that the unit is enabled. Refer to OPERATING THE ATTACHMENT section in this manual.

5) Press the button on the armrest to adjust the belt speed. See ADJUST BELT SPEED section in this manual.

   For the R450 only, verify the blue icon appears. Rotate dial clockwise 7 turns to set the belt speed to full speed.

   For the W200 Series only, adjust the belt speed and verify the belt speed changes. Set speed to maximum.

6) With the merger enabled, raise the platform to the highest position. Adjust the platform angle to full tilt forward. Shut off the engine. Remove key. Lock out the platform.

   Perform a visual inspection of the attachment and all new components to verify there is no interference of any components, hoses, or other issues.

If any issues arise, safely start machine, lower platform to ground, shut off engine and remove key before performing any adjustments. Safely address any issues as needed.

7) Repeat Step 4 with platform lowered to floor and platform tilt angled completely forward.

8) Perform all initial settings of machine and attachment. See INITIAL SETTINGS section of this manual.

9) Operate attachment and simulate normal machine operations. See OPERATING THE ATTACHMENT section of this manual.

10) Verify that during the lowering of the platform, with the platform engaged, the cross belt lowers and the belt turns to discharge to the right.

11) Verify that during the raising of the platform, the cross belt shifts to the left and raises.

.

12) Verify that the front belt rotates when the platform is engaged. This belt is visible from the operator station from the seat by looking down out the front window.

13) Adjust the Front Belt Frame Motor Speed as indicated in the next section in this manual.

IMPORTANT:
If the machine raise/lower functions are backwards, simply swap the blue and green wires at the manifold. Do not change the hose routing.

IMPORTANT:
Return all components removed during the installation of the merger to the customer.
NOTE:
If there are any error codes with the windrower for the float control for the platform, resolve the issues before continuing with the merger attachment. The merger attachment will not function properly if the raise/lower circuit of the windrower is not functioning properly.

IMPORTANT!!!!

Adjust Front Belt Frame Motor Speed

Adjust the front belt motor speed to Specification at wide open throttle. Use a photo / non-contact tachometer to measure the roller speed on the drive roller to determine the motor speed.

SPECIFICATION:
Front Belt Motor Speed
930 to 950 RPM

WARNING:
Do not adjust the front belt motor speed above 950 rpm as this will have a negative impact on the reliability of the belt motor.

Adjust front belt motor speed by adjusting the hand valve on the top of the manifold. Ensure that the machine is off and the cross belt is locked out before adjusting the motor speed. Turn counter-clockwise to adjust speed.

Note: The valve will not be able to be adjusted by hand if there is any system pressure on the circuit.

See Figure 110.

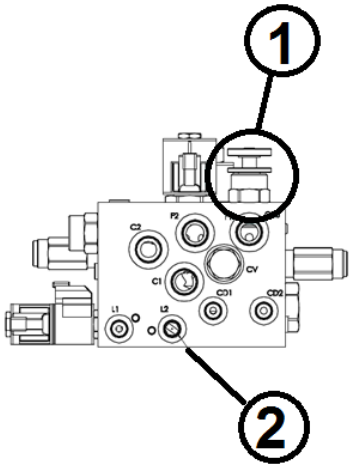


Figure 110. Front Belt Motor Adjustment
Key 1 – Hand Valve
Key 2 – Manifold (reference)

Decal Installation

A window decal for operation of the unit is provided. Install this decal on the door of the cab as indicated in Figure 111.

Figure 111. Decal Installation
Key 1 – Decal Key 2 – Cab Door

Service Information

Belt Tracking Troubleshooting

If an issue arises with belt tracking for either belt, follow this guide for resolution.

1. Check belt tension.
    a. For front conveyor, ensure that the carriage bolts on the bearing carriers are left loose to the point that the washer can be turned by hand.
    b. For the front conveyor, ensure that the bushing over the spring can be rotated by hand with no lateral movement.
    c. Check to see if the belt is hanging below the frame or skid shoe if inspecting the cross belt.
    d. For the cross belt, check tension to specification.
    e. For the cross belt, check the drive roller alignment to ensure that the motor end is approximately ¼" further out than the front end of the drive roller.
    f. If issues still exist, look for crop accumulation inside the belt at the scraper.
        i. A fast way to resolve this accumulation:
            1. Lower unit to ground.
            2. Shut off engine. Remove key from ignition.
            3. Turn cross belt backwards by hand from the drive roller end.
            4. The front belt should turn backwards when the cross belt is turned, if there is no restriction on the rollers.
            5. Turning the belts backwards will pull any accumulation on the top of the scraper to the bottom side.
            6. Remove accumulation from inside belts.
    g. Inspect for crop accumulation at bearings. Remove as needed.
    h. Inspect tension and alignment after crop accumulation is removed.
2. If the belt tracks high on the idler end (ie pushes away from the roller and is not seated on the roller, or jumps out on the idler end), decrease the angle of the drive roller by turning the tensioner on the motor end of the drive roller clockwise one turn.
3. If the belt tracks low on the idler roller end (ie pushes away from the roller and is trying to move away from the v-groove to the front direction of the machine), increase the angle of the drive roller by turning the tensioner on the motor end of the drive roller counterclockwise one turn.
4. Reference the ADJUSTMENTS Section of this manual for more information.

Upgrade of Manifold

The information below outlines the parts needed and instructions for updating an attachment to use the new style manifold. There are no performance improvements gained by switching to the latest style of manifold. This is used for service purposes only. The manifold design changed to incorporate the relief valves needed for the tilt cylinders. Previous versions of machines required relief valves to be incorporated at the tilt cylinders.

Parts List:

Hoses:

1. H20 Hose – RC101362 - (Left Cylinder to manifold) – **Qty 2**
    a. Description
        i. Material: -06 3,000 psi hose
        ii. Ends: both same: -06 ORFS Female Straight
        iii. Hose Cut Length: 57”
2. H16 Hose – RC101337 - (Right Cylinder to manifold) – **Qty 2**
    a. Description
        i. Material: -06 3,000 psi hose
        ii. Ends: both same: -06 ORFS Female Straight
        iii. Hose Cut Length: 141”
3. H2 Hose – RC101329 - (Main Lift Cylinder to manifold) – **Qty 2**
    a. Description
        i. Material: -06 3,000 psi hose
        ii. Ends: both same: -06 ORFS Female Straight
        iii. Hose Cut Length: 132”

Fittings:

1. F11 Adapter Fitting – RC700077 – (Cylinder Hoses) – **Qty 4**
    a. Description
        i. OFS-6400-06-06-0
        ii. -06 ORB Male to -06 ORFS Male Adapter

Instructions:

1. Lower merger attachment to lowest position. Shut off engine. Remove key.
2. Remove tilt cylinder hoses. Leave the 90 degree elbows installed in the cylinder.
3. Remove the relief valve at each tilt cylinder.
4. Engage lock on tilt cylinder.
5. Remove the hoses at the main lift cylinder. Keep the fittings and hand valve in place.

Note: The hoses are connected to each other using T-Fittings. These can remain intact if desired as they will be scrapped.

6. Remove wires on coils on manifold. Take note of colors of wires and location.
    a. For side, double-stacked coil, blue wire should be to outside, green to inside.
    b. For main coils, tan wire should be to larger coil. Violet wire to smaller coil.

7. Remove bolts at back of manifold and lower manifold to a resting position, hanging by pressure and tank lines. The heat shield will come off the unit when removing the manifold.
8. Install new manifold. Reinstall heat shield over manifold during installation.
9. Remove remaining smaller lines for motor circuits from old manifold and reinstall on new manifold at the same designated ports. Each port is labeled on the manifold.
10. Install new lines to the left, right and lift cylinders. Install new adapters in each port on the manifold and reuse two adapters from the old manifold.
    a. H20 lines are for the **left** cylinder.
        i. Rod end of tilt cylinder goes to L3
        ii. Base end of tilt cylinder goes to L6
    b. H16 lines are for the **right** cylinder.
        i. Rod end of tilt cylinder goes to L4
        ii. Base end of tilt cylinder goes to L5
    c. H2 lines are for the lift cylinder.
        i. Rod end of tilt cylinder goes to L2
        ii. Base end of tilt cylinder goes to L1
11. Place a vacuum on the hydraulic tank or drain the hydraulic tank.
12. Move the Tank (T) and Pressure (P) fittings and lines to the new manifold.
13. Reinstall the wiring to the manifold.
14. IMPORTANT: Reset front conveyor belt speed to 930 to 950 RPM.

Reference Schematics on Pages 50 and 51 for more information.

Pre-Season Checklist
316M Merger

Key	Functional Area	Item	Description	Checked
1	Forming Shields	Side Shields	Check for damaged components	
2			Check for loose components	
3			Check for interference with platform	
4		Top Link	Check hardware for tightness	
5			Check for wear on pivot arms and pivot	
6			Check for wear on bushings	
7	Front Conveyor	Belt	Check for cleanliness of assembly	
8			Check for material at scraper	
9			Check for material wrapping at rollers	
10		Rollers	Grease roller at drive motor	
11			Check for interferences	
12			Check for hardware tightness	
13		Motor	Check fittings at motor for leak	
14			Check motor for leak at motor shaft	
15		Tensioner	Check belt tension	
16			Check tensioner that bushing can be turned by hand but not have lateral movement	
17			Check three carriage bolts per side to make sure they are loose enough to slide in frame	
18			Check bearing cover for damage at front of conveyor	
19			Check for belt alignment on rollers	
20			Check that belt does not hang below frame	
21		Mount	Check hardware for tightness	
22			Check for cracks on supports	
23			Inspect stretch cords at front for proper installation	
24	Rear Conveyor	Belt	Check for cleanliness of assembly	
25			Check for material at scraper	
26			Check for material wrapping at rollers	
27		Rollers	Grease roller at drive motor	
28			Check for interferences	
29			Check for hardware tightness	
30		Motor	Check fittings at motor for leak	
31			Check motor for leak at motor shaft	
32		Tensioner	Inspect belt tension per manual	
33			Check for proper lock installation at rear	
34			Inspect bearings and adjusters	
35			Inspect adjuster rod for roll pin damage	
36			Check for belt alignment on rollers	
37			Check that belt does not hang below skid shoe	
38		Mount	Check hardware for tightness	
39			Check for cracks on supports	
40		Alignment	Check motor end for 1/4" offset at drive roller	
41			Check for proper lock installation at rear	

Key	Functional Area	Item	Description	Checked
42	Pivot Mechanism	Greasing	Check for proper greasing of all 8 pin locations plus two at lift cylinder	
43			Check play in pivot pins - look for wear	
44		Cylinder	Inspect for leaks	
45		Mounts	Check hardware for tightness	
46			Inspect for movement on mainframe - tighten if loose	
47			Inspect all components for cracks	
48		Tilt Cylinders	Inspect tilt cylinders for leaks	
49			Inspect tilt cylinders for interference	
50	Shields	Cross Belt	Inspect and adjust belt seals to belt	
51			Inspect plastic sheet and supporting strap for damage	
52	Hydraulic	Manifold	Inspect for leaks	
53			If manifold is wet with oil, retighten all plugs on manifold with allen wrench	
54		Hoses	Inspect all hoses for damage	
55		Fittings	Inspect all fittings for tightness and orientation	
56		Oil	Inspect oil level of windrower	
57	Electrical	Controller	Inspect controller for damage	
58		Harness	Inspect harness for damage	
59			Inspect harness for rubbing - adjust as necessary	
60		Controls	Inspect MHC at armrest for any issues	
61	Decals	Warning	Inspect all decals compared to manual - replace as needed	
62	Manual	Manual	Check for manual in cab of unit	
63		Quick-Start Guide	Check for Quick-Start guide in cab of unit	

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Daily Checklist
316M Merger

Key	Functional Area	Item	Description	Checked
1	Front Conveyor	Belt	Check for cleanliness of assembly	
2			Check for material at scraper	
3			Check for material wrapping at rollers	
4		Rollers	Grease roller at drive motor	
5		Tensioner	Inspect belt tension per manual	
6			Check tensioner that bushing can be turned by hand but not have lateral movement	
7			Check three carriage bolts per side to make sure they are loose enough to slide in frame	
8			Check bearing cover for damage at front of conveyor	
9			Check for belt alignment on rollers	
10			Check that belt does not hang below frame	
11	Rear Conveyor	Belt	Check for cleanliness of assembly	
12			Check for material at scraper	
13			Check for material wrapping at rollers	
14		Rollers	Grease roller at drive motor	
15		Tensioner	Inspect belt tension per manual	
16			Check for proper lock installation at rear	
17			Inspect bearings and adjusters	
18			Check for belt alignment on rollers	
19			Check that belt does not hang below skid shoe	
20	Pivot Mechanism	Greasing	Check for proper greasing of all 8 pin locations plus two at lift cylinder	
21	Shields	Cross Belt	Inspect and adjust belt seals to belt	

REPAIR PARTS

General Comments

The following includes information regarding parts for the windrow merger 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 windrow merger attachment are available through 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

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.

Part Number	Description	Qty per Unit
RC101281	Belt (Cross)	1
RC101280	Belt (Front)	1
RC0359	Bearing	8
RC082610	Bearing, Flange	4

Additional Spare Parts Bundles for machines are available to dealers from RCI. Contact RCI for more information.

Repair Parts Alphabetical Index

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Cross Belt Rear Shielding…..…….....……...…….…...111

Cross Belt Frame Motor End.……..…….……..113

Cross Belt Idler End...……....…….……..……..……115

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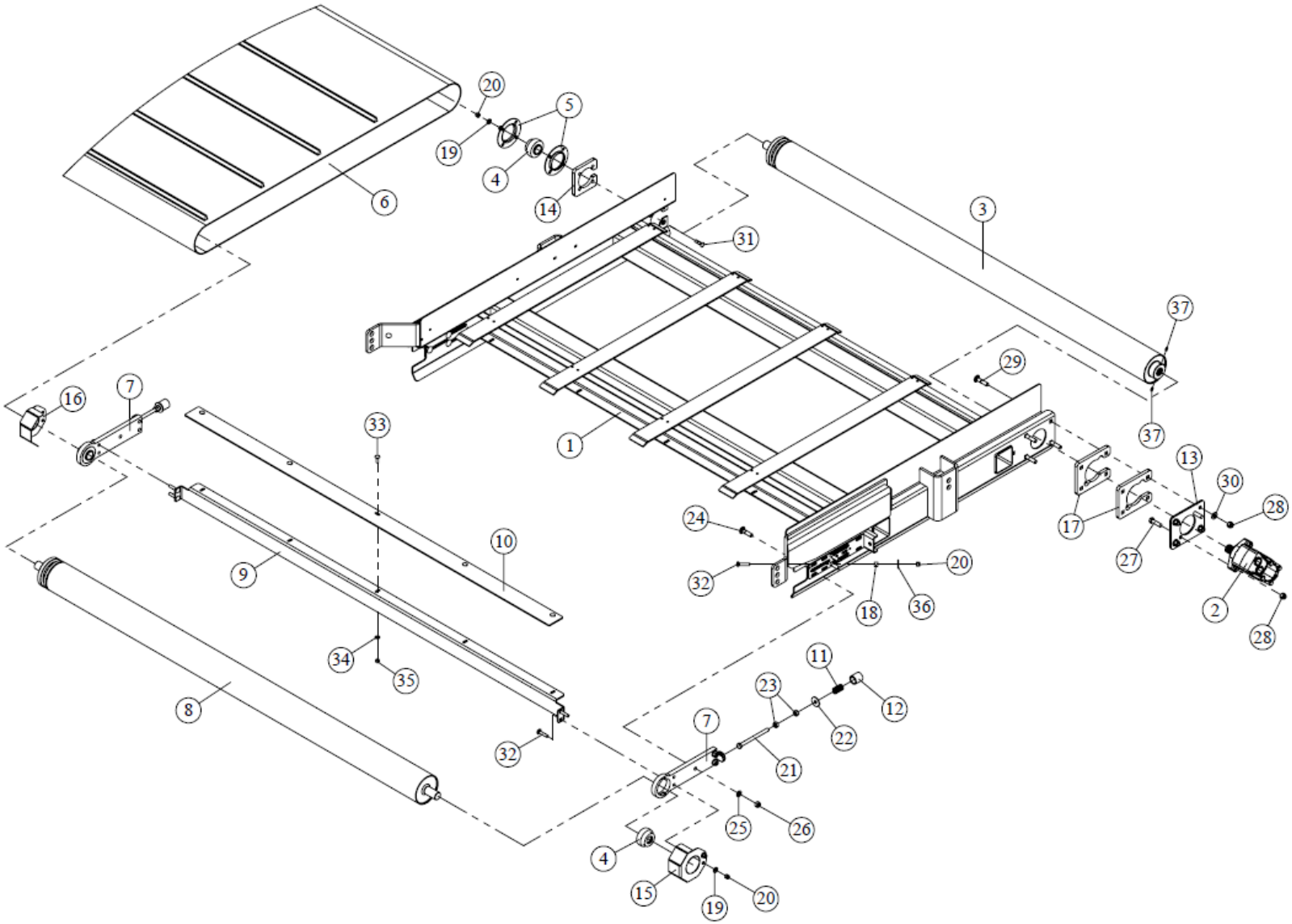
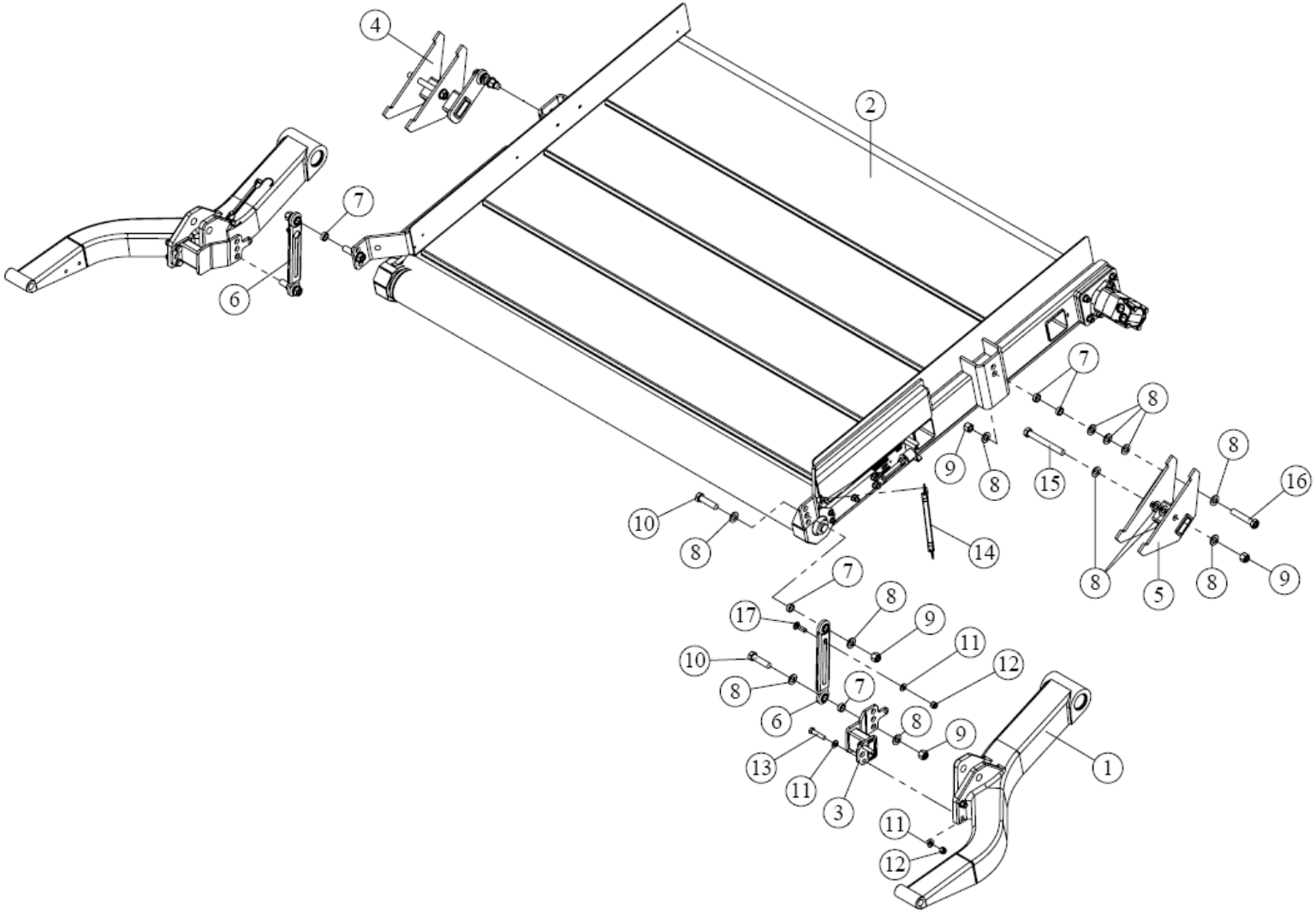
FRONT BELT FRAME



FRONT BELT FRAME

KEY	PART NUMBER	DESCRIPTION	QTY	COMMENTS
1	RC101019	Weldment, Belt Frame	1	
2	RC082720	Motor, Hydraulic	1	
3	RC101022	Roller, Drive	1	
4	RC0359	Bearing	3	
5	RC082031	Retainer, Bearing	2	
6	RC101280	Belt, Conveyor	1	Includes Pin
7	RC0410	Weldment, Bearing Support	2	
8	RC101027	Roller, Driven	1	
9	RC101061	Base	1	
10	RC101062	Scraper	1	
11	RC0347	Spring	2	
12	RC101313	Bushing	2	
13	RC101264	Plate, Motor	1	
14	RC101266	Spacer, Bearing	1	
15	RC101271	Cover, Left	1	
16	RC101272	Cover, Right	1	
17	RC101316	Spacer, Motor	2	
18	RC0432	Bushing	2	
19	RC900677	Washer, 3/8 SAE YZ Flat	8	
20	RC900583	Nut, 3/8-16 YZ Nylock	10	
21	RC901627	Bolt, M12-1.75 x 150 Gr 8.8 FT Hex	2	
22	RC901628	Washer, M12 Fender	2	
23	RC901629	Nut, M12-1.75 YZ Hex	4	
24	RC901630	Bolt, M12-1.75 x 50 Carriage	6	
25	RC901631	Washer, M12 YZ Flat	6	
26	RC901281	Nut, M12-1.75 Nylock	6	
27	RC900136	Bolt, 1/2-13 x 1 3/4 Gr 5 YZ Hex	2	
28	RC900588	Nut, 1/2-13 YZ Nylock	6	
29	RC901699	Bolt, 1/2-13 x 2-1/4 G5 Carriage	4	
30	RC900686	Washer, 1/2 SAE Flat	4	
31	RC901601	Bolt, Plow, 3/8-16 x 1-1/2	4	
32	RC901566	Bolt, 3/16-16 x 1-3/4 CZ Carriage	6	
33	RC901558	Bolt, 5/16-18 x 1 CZ Carriage	5	
34	RC900672	Washer, 5/16 SAE YZ Flat	5	
35	RC900579	Nut, 5/16-18 YZ Nylock	5	
36	RC900680	Washer, 3/8 Extra Heavy Fender	2	
37	RC902080	Zerk,1/4-28 UNF Grease	2	

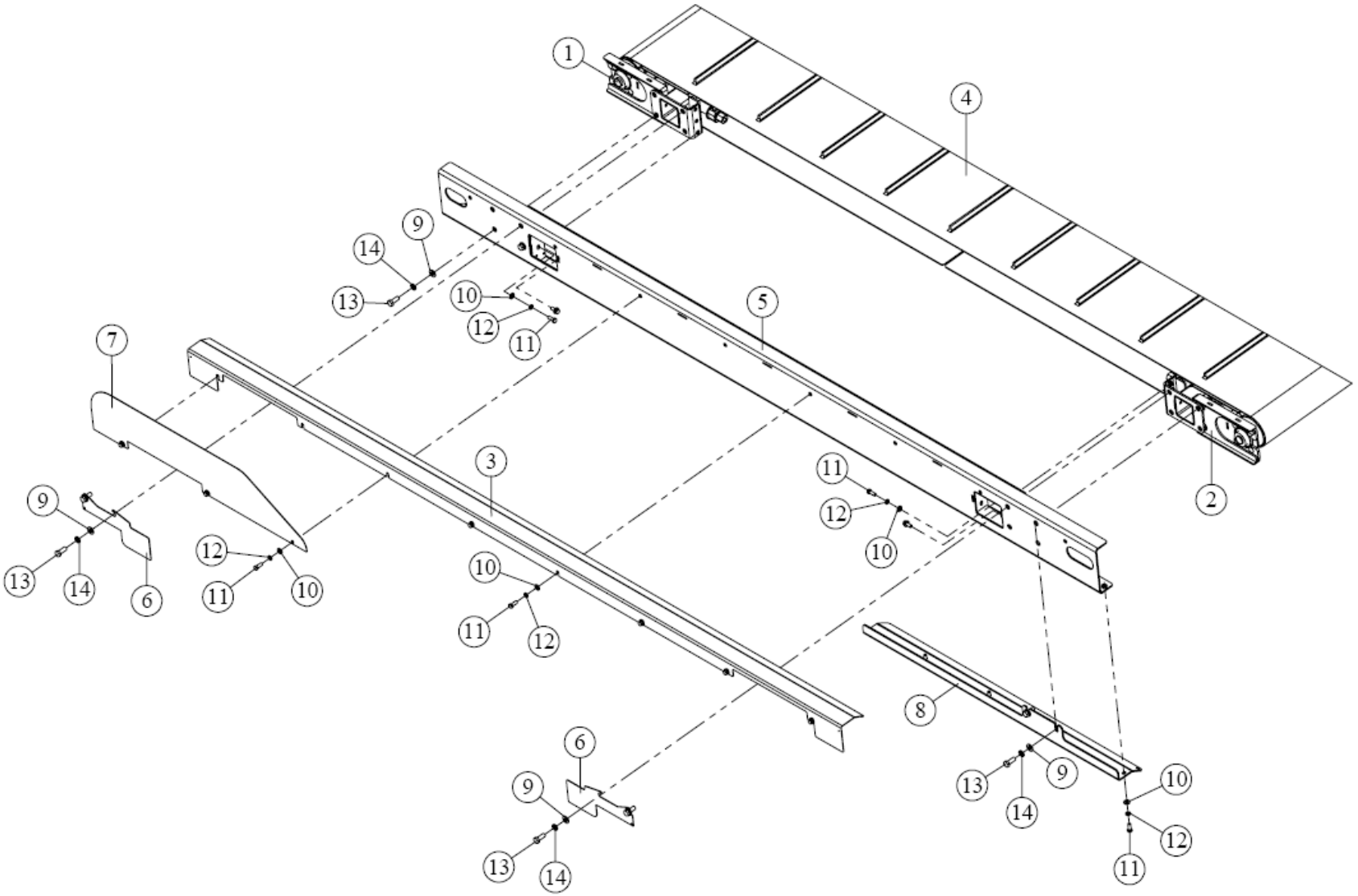
FRONT BELT FRAME MOUNTING



FRONT BELT FRAME MOUNTING

KEY	PART NUMBER	DESCRIPTION	QTY.	COMMENTS
1	E131228	Arm, For Reference Only	1	JD Part - For Reference Only
2	RC101020	Assembly, Front Belt Frame	1	
3	RC101031	Support	2	
4	RC101037	Support	1	
5	RC101053	Support	1	
6	RC101233	Arm, Assembly	2	
7	RC101314	Bushing	8	
8	RC900703	Washer, 3/4 SAE YZ Flat	26	
9	RC900597	Nut, 3/4-10 Gr 8 Nylock	8	
10	RC900318	Bolt, 3/4-10 x 3 Gr 8 YZ Hex	4	
11	RC900686	Washer, FLAT, 1/2 SAE	10	
12	RC900588	Nut, 1/2-13 YZ Nylock	6	
13	RC900283	Bolt, 1/2-13 x 2-1/4 Gr 8 YZ Hex	4	
14	RC901698	Strap, 10" Bungee	2	
15	RC900322	Bolt, 3/4-10 x 6-1/2 Gr 8 YZ Hex	2	
16	RC900320	Bolt, 3/4-10 x 4 Gr 8 YZ Hex	2	
17	RC901674	Bolt, 1/2-13 x 1-3/4 CZ Carriage	2	

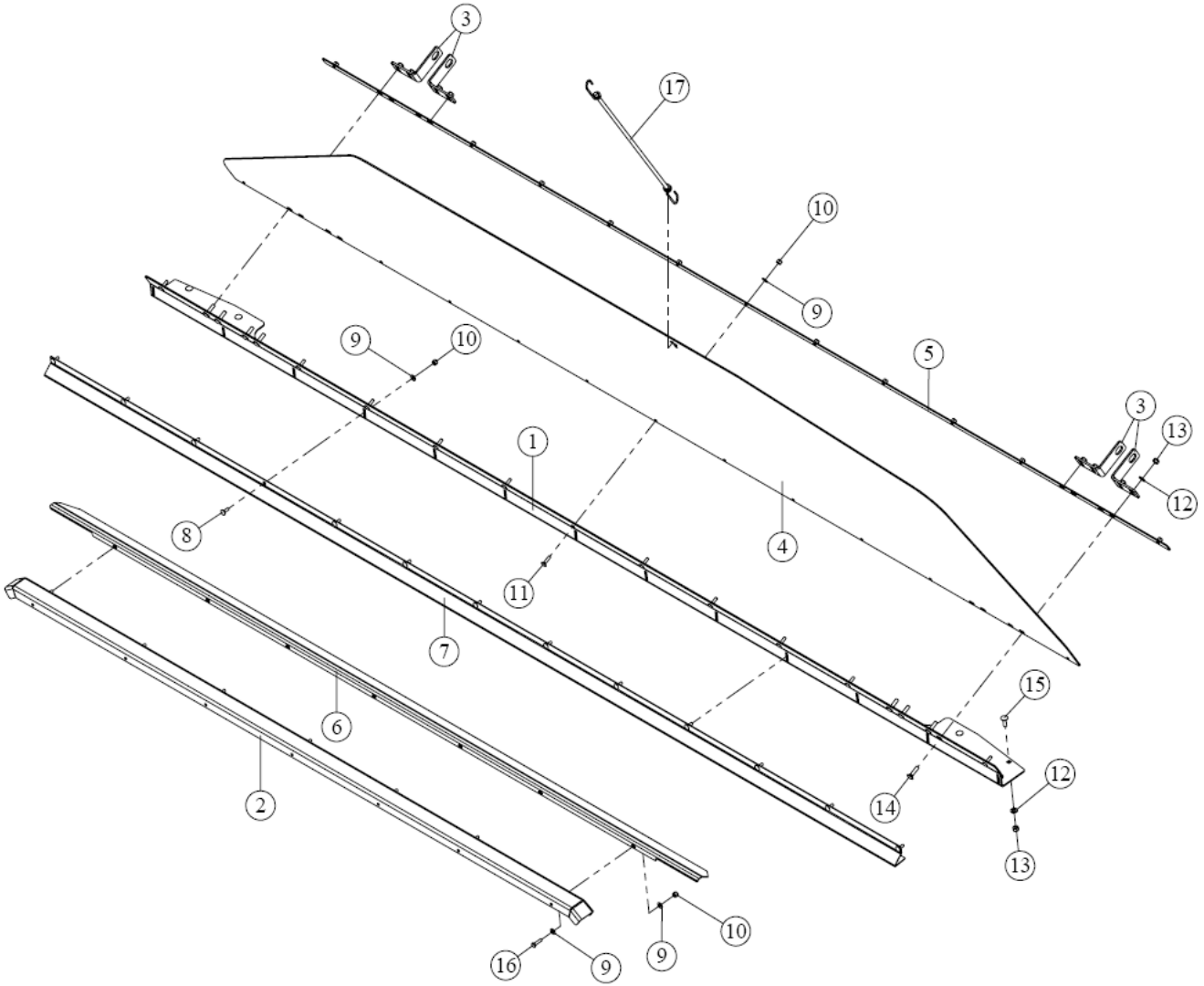
CROSS BELT FRAME FRONT SHIELDING AND BELT



CROSS BELT FRAME FRONT SHIELDING

KEY	PART NUMBER	DESCRIPTION	QTY.	COMMENTS
1	RC082454	Motor End, Cross Belt Frame	1	
2	RC101223	Idler End, Cross Belt Frame	1	
3	RC101122	Shingle	1	
4	RC101281	Belt, Cross	1	Includes Pin
5	RC101412	Shoe Assy	1	
6	RC101367	Cover	2	
7	RC101501	Guard	1	
8	RC101420	Pan, Skid	1	
9	RC900686	Washer, FLAT, 1/2 SAE	8	
10	RC900677	Washer, 3/8 SAE Flat	15	
11	RC900088	Bolt, 3/8-16 x 1 Gr 5 YZ Hex	15	
12	RC900728	Washer, 3/8 YZ Lock	15	
13	RC900281	Bolt, 1/2-13 x 1-1/4 Gr 8 YZ Hex	8	
14	RC900731	Washer, Lock, 1/2	8	

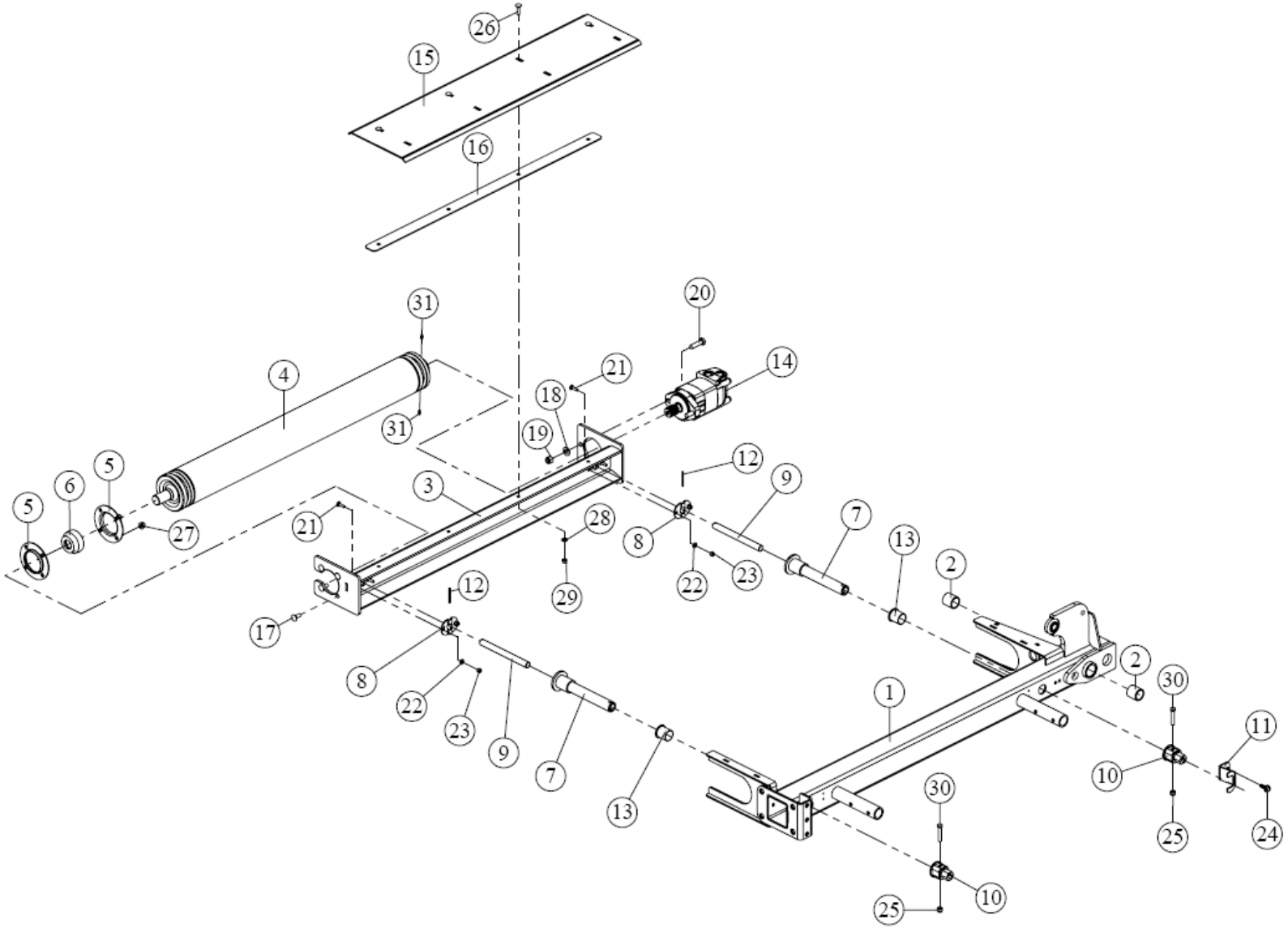
CROSS BELT FRAME REAR SHIELDING



CROSS BELT FRAME REAR SHIELDING

KEY	PART NUMBER	DESCRIPTION	QTY.	COMMENTS
1	RC101115	Seal, Fixed	1	
2	RC101130	Plate, Support	1	
3	RC101123	Bracket	4	
4	RC101263	Shield, Back	1	
5	RC101277	Strip, Shield	1	
6	RC101373	Guard	1	
7	RC101506	Shingle, Rear	1	
8	RC901556	Bolt, 1/4-20 x 3/4 CZ Carriage	13	
9	RC900668	Washer, 1/4 YZ Flat	38	
10	RC900575	Nut, 1/4-20 YZ Nylock	31	
11	RC901557	Bolt, 1/4-20 x 1 CZ Carriage	11	
12	RC900672	Washer, 5/16 SAE YZ Flat,	12	
13	RC900579	Nut, 5/16-18 YZ Nylock	12	
14	RC901559	Bolt, 5/16-18 x 1-1/4 CZ Carriage	8	
15	RC901558	Bolt, 5/16-18 x 1 CZ Carriage	4	
16	RC900042	Bolt, 1/4-20 x 1 Gr. 5 YZ Hex	7	
17	RC901697	Cord, 24" HD Bungee	1	

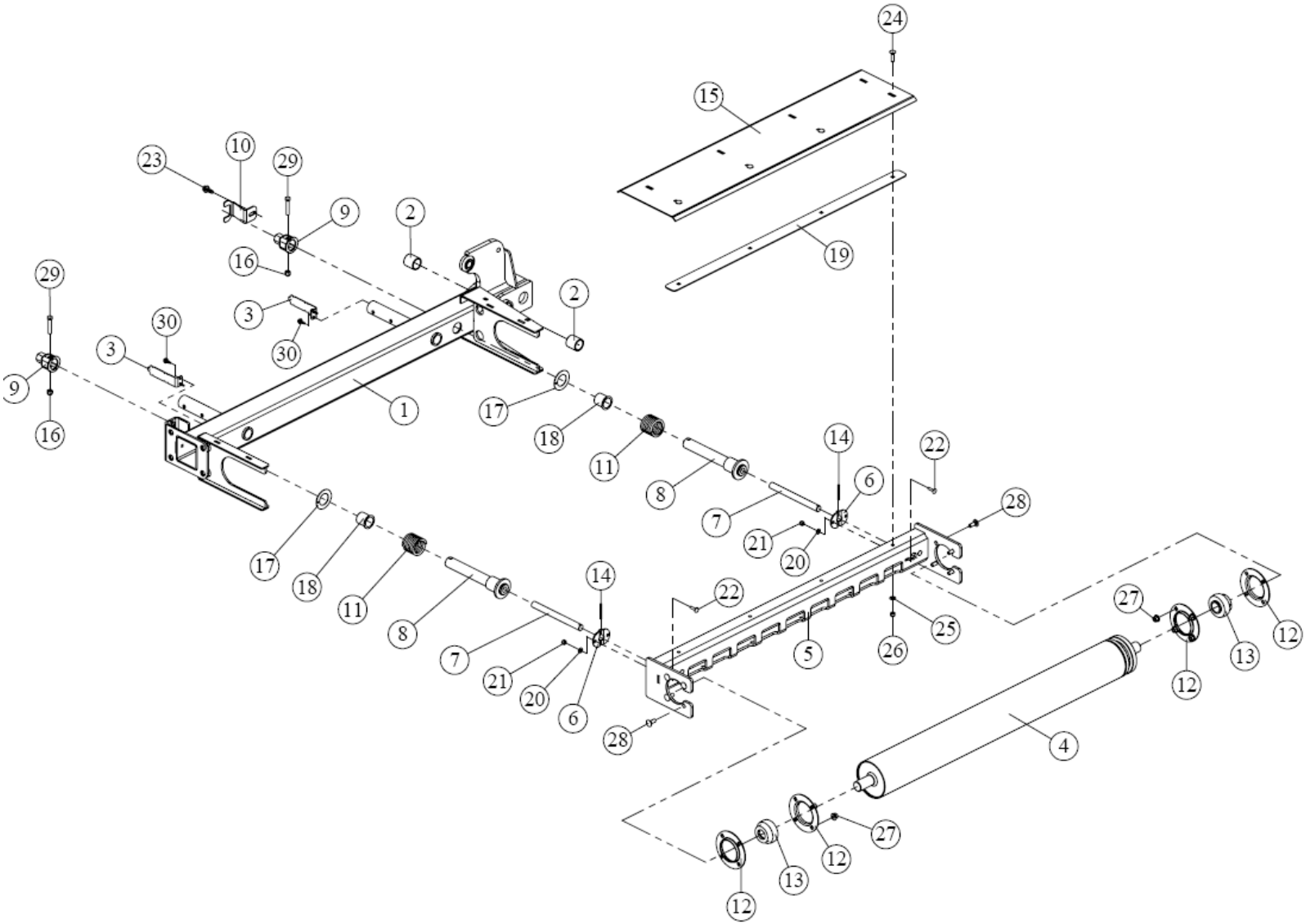
CROSS BELT FRAME – MOTOR END



CROSS BELT FRAME - MOTOR END

KEY	PART NUMBER	DESCRIPTION	QTY.	COMMENTS
1	RC082437	Arm, Pivot Assy Rt	1	
2	RC082094	Bushing	2	
3	RC082427	Bracket, Brg Assy	1	
4	RC082601	Roller,Drive	1	
5	RC082031	Retainer, Bearing	2	
6	RC0359	Bearing	1	
7	RC082057	Adjuster Assy	2	
8	RC082440	Plate, Takeup	2	
9	RC082442	Rod, Th'rd	2	
10	RC082450	Adjuster Assy	2	
11	RC082452	Lock	1	
12	RC101503	Pin, Spiral Roll	2	
13	RC082610	Bearing, Flange	2	
14	RC082720	Motor, Hydraulic	1	
15	RC082456	Scraper	1	
16	RC101351	Strip, Spacer	1	
17	RC900402	Bolt, 3/8-16 x 1 CZ Carriage	4	
18	RC900686	Washer, 1/2 SAE YZ Flat	2	
19	RC900588	Nut, 1/2-13 YZ Nylock	2	
20	RC900136	Bolt, 1/2-13 x 1 3/4 Gr 5 YZ Hex	2	
21	RC901557	Bolt, 1/4-20 x 1 CZ Carriage	4	
22	RC900668	Washer, 1/4 YZ Flat	4	
23	RC900575	Nut, 1/4-20 YZ Nylock	4	
24	RC901576	Screw, 3/8-16 x 1 Gr 5 Thread Rolling	1	
25	RC900583	Nut, 3/8-16 YZ Nylock	2	
26	RC901559	Bolt, 5/16-18 x 1-1/4 CZ Carriage	4	
27	RC901734	Nut, 3/8-16 CZ Top Lock Flange	4	
28	RC900672	Washer, 5/16 SAE YZ Flat	4	
29	RC900579	Nut, 5/16-18 YZ Nylock	4	
30	RC900099	Bolt, 3/8-16 x 2 Gr 5 YZ Hex	2	
31	RC902080	Zerk, 1/4-28 UNF Grease	2	

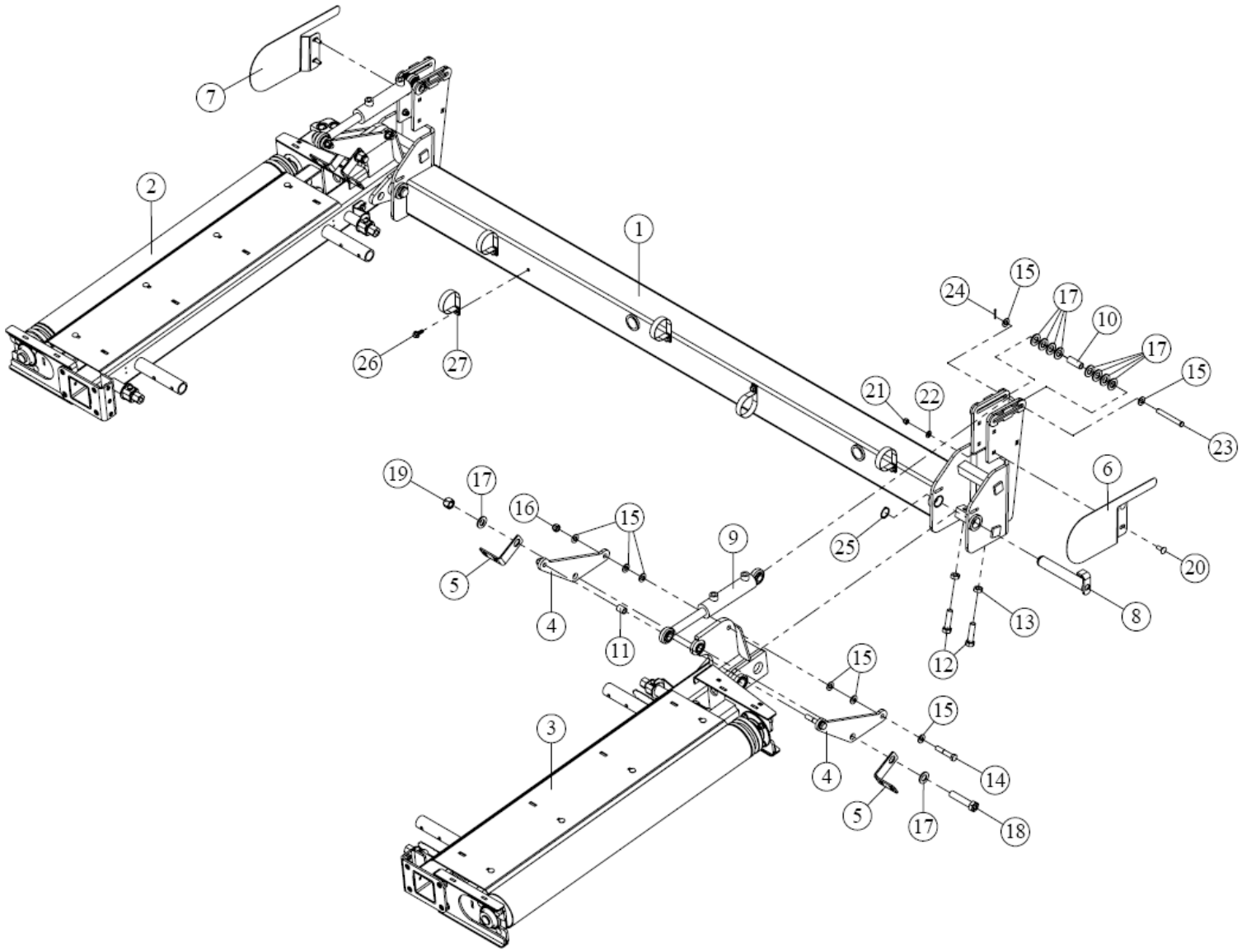
CROSS BELT FRAME – IDLER END



CROSS BELT FRAME – IDLER END

KEY	PART NUMBER	DESCRIPTION	QTY	COMMENTS
1	RC082434	Arm, Pivot Assy Lt	1	
2	RC082094	Bushing	2	
3	RC101368	Indicator	2	
4	RC082045	Roller, Idler	1	
5	RC082431	Takeup Assy Lt	1	
6	RC082440	Plate, Takeup	2	
7	RC082442	Rod, Th'rd	2	
8	RC082057	Adjuster Assy	2	
9	RC082450	Adjuster Assy	2	
10	RC082452	Lock	1	
11	RC082607	Spring, Comp	2	
12	RC082031	Retainer, Bearing PF72	4	
13	RC0359	Bearing	2	
14	RC101503	Pin, Spiral Roll	2	
15	RC082456	Scraper	1	
16	RC900583	Nut, 3/8-16 YZ Nylock	2	
17	RC082609	Washer, Thrust	2	
18	RC082610	Bearing, Flange	2	
19	RC101351	Strip, Spacer	1	
20	RC900668	Washer, 1/4 YZ Flat	4	
21	RC900575	Nut, 1/4-20 YZ Nylock	4	
22	RC901557	Bolt, 1/4-20 x 1 CZ Carriage	4	
23	RC901576	Screw, 3/8-16 x 1 Gr 5 Thread Rolling	1	
24	RC901559	Bolt, 5/16-18 x 1-1/4 CZ Carriage	4	
25	RC900672	Washer, 5/16 SAE YZ Flat	4	
26	RC900579	Nut, 5/16-18 YZ Nylock	4	
27	RC901734	Nut, 3/8-16 CZ Top Lock Flange	8	
28	RC900402	Bolt, 3/8-16 x 1 CZ Carriage	8	
29	RC900099	Bolt, 3/8-16 X 2 G5	2	
30	RC901651	Screw, 1/4-14 x 3/4 Drill	4	

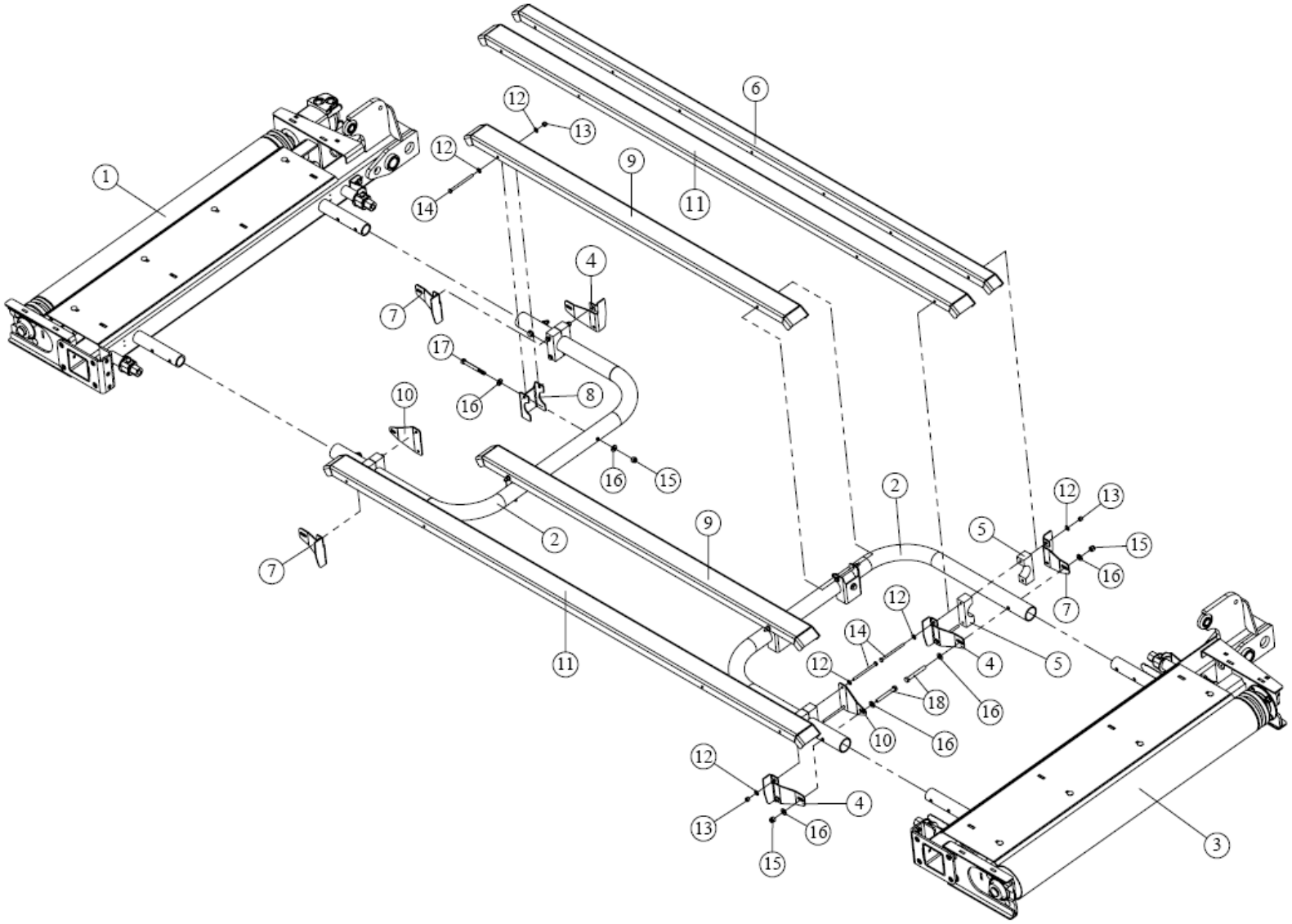
CROSS BELT FRAME



CROSS BELT FRAME

KEY	PART NUMBER	DESCRIPTION	QTY	COMMENTS
1	RC101007	Frame, Cross Belt	1	
2	RC082454	Motor End, Cross Belt Frame	1	
3	RC101223	Idler End, Cross Belt Frame	1	
4	RC101113	Plate	4	
5	RC101123	Bracket	4	
6	RC101225	Guard	1	
7	RC101226	Guard, RH	1	
8	RC082113	Pin, Pivot Assy	2	
9	RC101357	Cylinder, Hydraulic Tilt	2	
10	RC101507	Bushing	2	
11	RC101358	Bushing	2	
12	RC901671	Bolt, 5/8-11 x 2-1/2 Gr 8 YZ Hex Tap	4	
13	RC900613	Nut, 5/8-11 Zinc Hex Jam	4	
14	RC901669	Bolt, 1/2-13 x 2-3/4 Gr 8 YZ Hex	4	
15	RC900686	Washer, FLAT, 1/2 SAE	20	
16	RC900588	Nut, 1/2-13 YZ Nylock	4	
17	RC900703	Washer, 3/4 SAE YZ Flat	20	
18	RC900319	Bolt, 3/4-10 x 3-1/2 Gr 8 YZ Hex	2	
19	RC900597	Nut, 3/4-10 Gr 8 Nylock	2	
20	RC900402	Bolt, 3/8-16 x 1 CZ Carriage	4	
21	RC900583	Nut, 3/8-16 YZ Nylock	4	
22	RC900677	Washer, 3/8 SAE Flat	4	
23	RC901687	PIN, 1/2 X 4" CZ CLEVIS	2	
24	RC900839	Pin, 1/8 x 1 YZ Cotter	2	

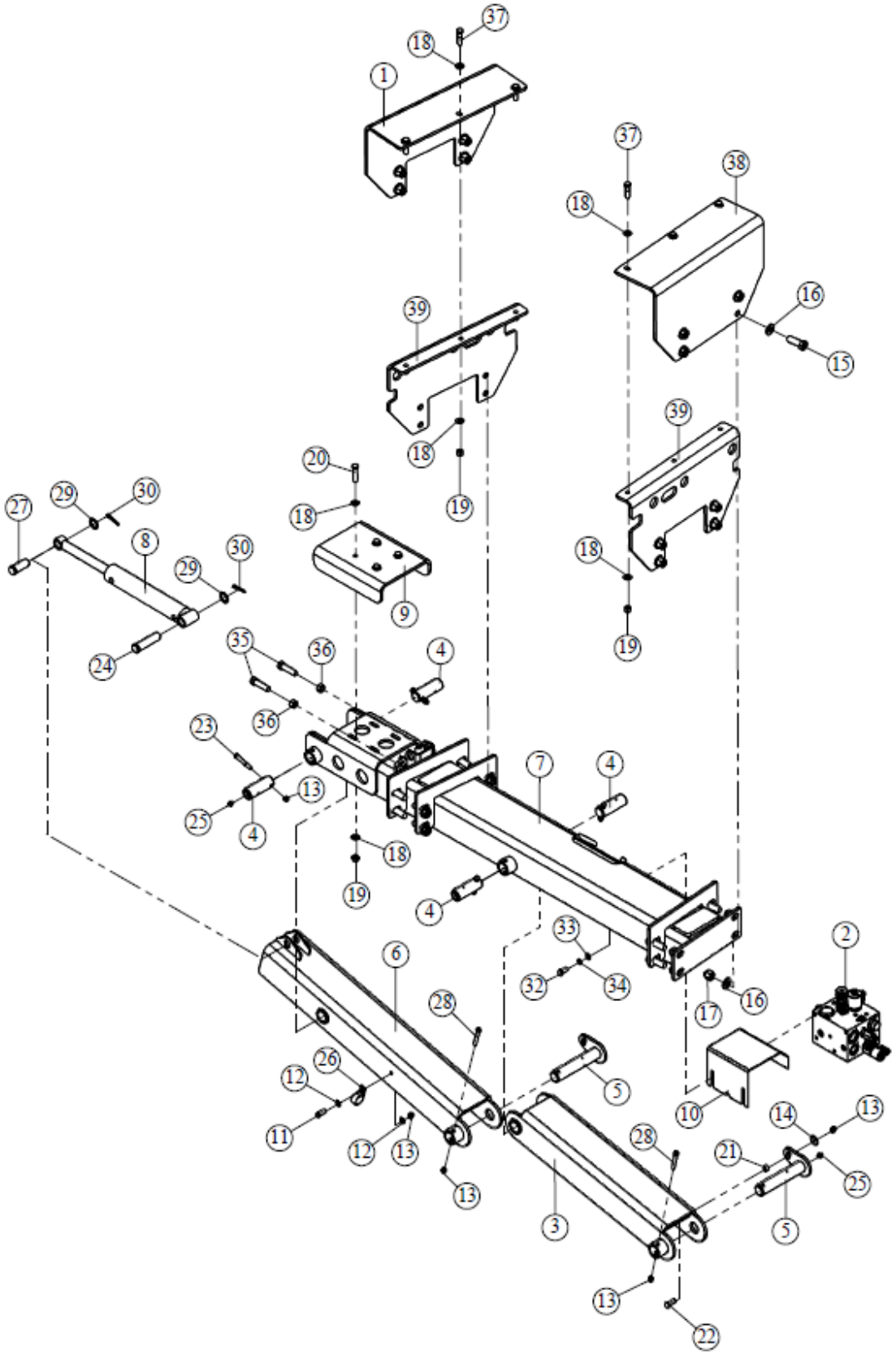
CROSS BELT FRAME – BELT SUPPORTS



CROSS BELT FRAME – BELT SUPPORTS

KEY	PART NUMBER	DESCRIPTION	QTY.	COMMENTS
1	RC082454	Arm, Rt Ass'bld	1	
2	RC082436	Guide, Conveyor	2	
3	RC101223	Arm, LH Assembly	1	
4	RC082490	BRACKET, SLIDE RT	3	
5	RC082128	Clamp 561190000000	4	
6	RC101130	Plate, Support	1	
7	RC082491	BRACKET, SLIDE LT	3	
8	RC082445	Bracket	4	
9	RC101121	Plate, Support	2	
10	RC082473	Bracket	2	
11	RC101120	Plate, Support	2	
12	RC900668	Washer, 1/4 YZ Flat	24	
13	RC900575	Nut, 1/4-20 YZ Nylock	12	
14	RC900053	Bolt, 1/4-20 x 3-3/4 Gr 5 YZ Hex	12	
15	RC900583	Nut, 3/8-16 YZ Nylock	8	
16	RC900677	Washer, 3/8 SAE Flat	16	

PIVOT MECHANISM – W200 SERIES

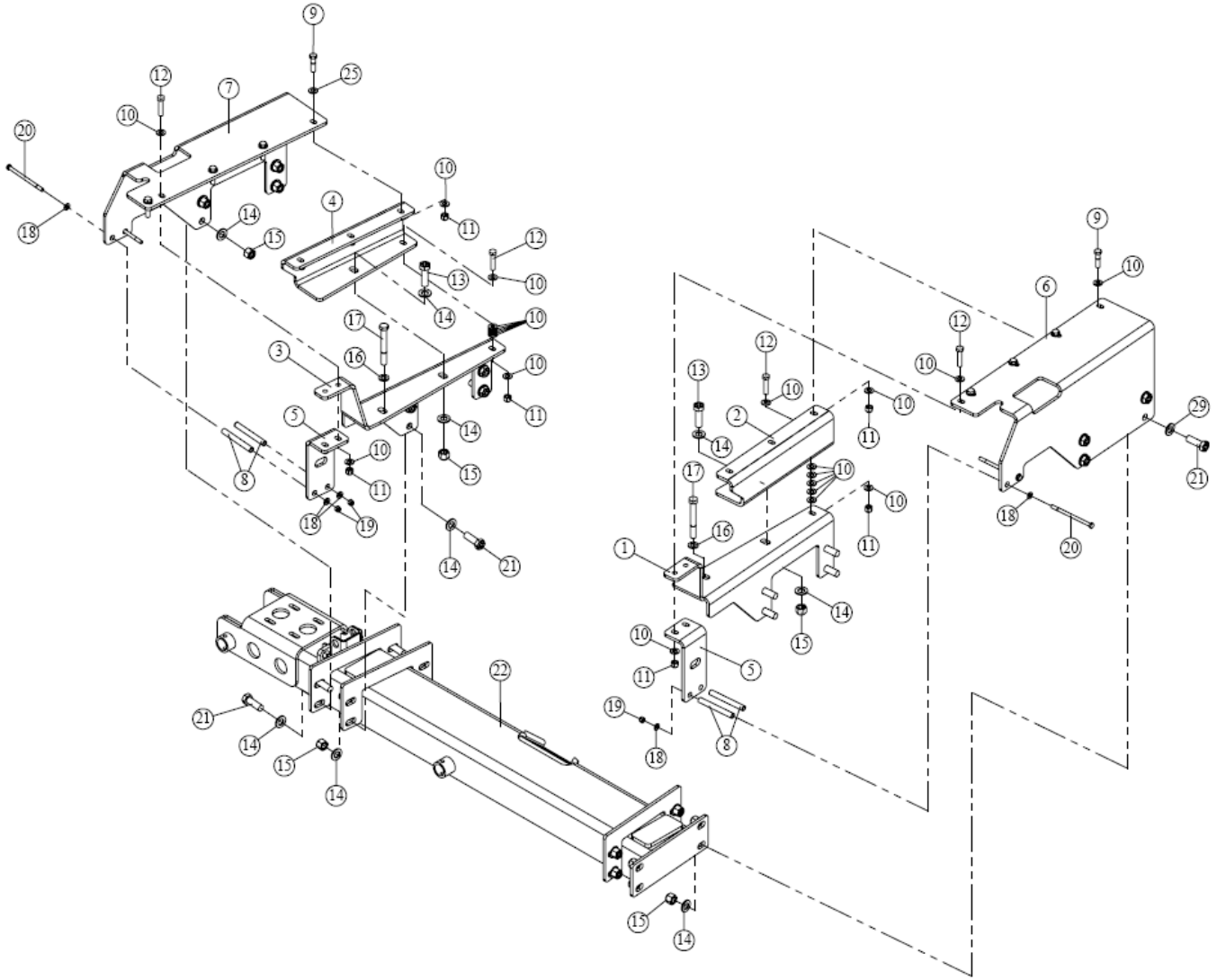


PIVOT MECHANISM – W200 SERIES

KEY	PART NUMBER	DESCRIPTION	QTY	COMMENTS
1	RC101049	Support	1	
2	RC101216	Manifold	1	
3	RC101067	Arm, Pivot	1	
4	RC052026	Pin	4	
5	RC101319	Pin, Pivot	2	
6	RC101218	Arm, RH Pivot	1	
7	RC101046	Beam, Cross	1	
8	RC101270	Cylinder, Hydraulic 2X8	1	
9	RC101276	Stop, Arm	1	
10	RC101375	Guard, Wind	1	
11	RC900091	Bolt, 3/8-16 x 1-1/4 Gr 5 YZ Hex	1	
12	RC900677	Washer, 3/8 SAE YZ Flat	2	
13	RC900583	Nut, 3/8-16 YZ Nylock	9	
14	RC900680	Washer, 3/8 Extra Heavy Fender	2	
15	RC900311	Bolt, 3/4-10 x 2-1/4 Gr 8 YZ Hex	16	
16	RC900703	Washer, 3/4 SAE YZ Flat	32	
17	RC900597	Nut, 3/4-10 Gr 8 Nylock	16	
18	RC900686	Washer, 1/2 SAE YZ Flat	20	
19	RC900588	Nut, 1/2-13 YZ Nylock	10	
20	RC900283	Bolt, 1/2-13 x 2-1/4 Gr 8 YZ Hex	4	
21	RC0432	Bushing	2	
22	RC900406	Bolt, 3/8-16 x 1-1/2 CZ Carriage	2	
23	RC901358	Bolt, 3/8-16 x 2-3/4 Gr 8 YZ Hex	4	
24	RC901612	Pin, 1" x 4" Clevis	1	
25	RC901714	Zerk, M10-1 Grease	6	
26	RC901689	Clamp, 1-1/2 I.D. x 3/4" P	1	
27	RC901610	Pin, 1 x 2-1/2 CZ Clevis	1	
28	RC901722	Screw, 3/8-16 x 2-3/4 BO Socket Cap	2	
29	RC901679	Washer, 1" Narrow YZ Flat	2	
30	RC900832	Pin, 3/16 x 1-1/2 SS Cotter	2	
31	RC901700	Bolt, 3/8-16 x 1 Gr 8 CZ Flange	2	
32	RC901188	Bolt, M10-1.5 x 30 Gr 10.9 YZ Hex	2	
33	RC901704	Washer, M10 DIN 125 YZ Flat	2	
34	RC901293	Washer, M10 DIN127B Lock	2	
35	RC900172	Bolt, 5/8 x 2-1/2 Gr 5 YZ Hex	2	
36	RC900535	Nut, 5/8-11 YZ Hex	2	
37	RC901364	Bolt, 1/2-13 x 2 Gr 8 YZ Hex	6	
38	RC101048	Support	1	
39	RC101044	Support	2	

FRAME MOUNTING PLATES – R450 SERIES

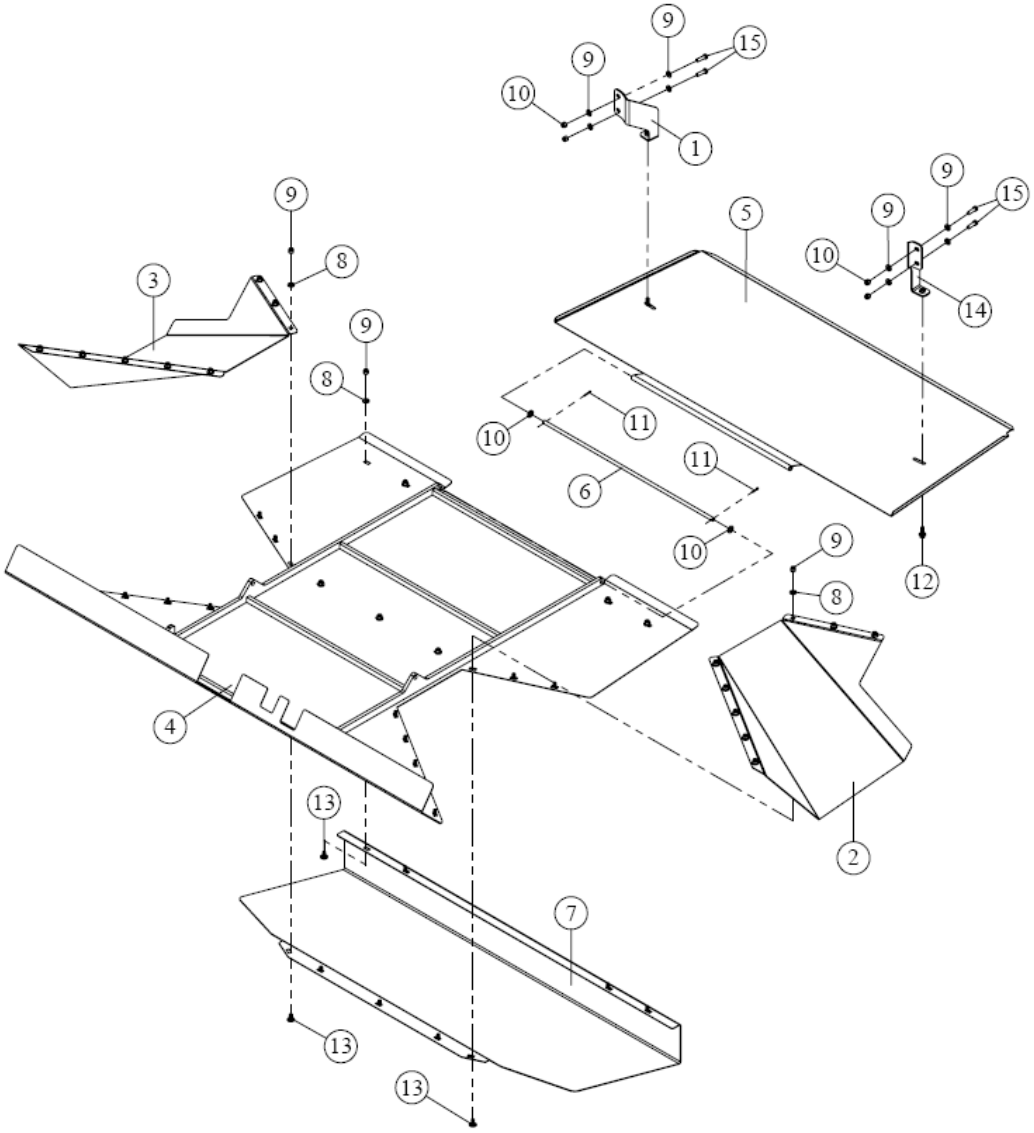
Note: All other pivot frame components are the same as for the W200 Series.



FRAME MOUNTING PLATES – R450 SERIES

KEY	PART NUMBER	DESCRIPTION	QTY	COMMENTS
1	RC101238	Bracket, R450 Left	1	
2	RC101240	Bracket, R450 Left Upper	1	
3	RC101239	Bracket, R450 Right	1	
4	RC101241	Bracket, R450 Right Upper	1	
5	RC101244	Bracket, Support	2	
6	RC101261	Bracket, Left	1	
7	RC101262	Bracket, Right	1	
8	RC101352	Tube, Frame Plate	4	
9	RC901364	Bolt, 1/2-13 x 2 Gr 8 YZ Hex	6	
10	RC900686	Washer, 1/2 SAE YZ Flat	34	
11	RC900588	Nut, 1/2-13 YZ Nylock	12	
12	RC900283	Bolt, 1/2-13 x 2-1/4 Gr 8 YZ Hex	6	
13	RC900312	Bolt, 3/4-10 x 2-1/2 Gr 8 Hex	2	
14	RC900703	Washer, 3/4 SAE YZ Flat	36	
15	RC900597	Nut, 3/4-10 Gr 8 Nylock	18	
16	RC901695	Washer, M16	2	
17	RC901703	Bolt, M16-2.0 x 130mm Gr 10.9 YZ Hex	2	
18	RC900677	Washer, 3/8 SAE	8	
19	RC900583	Nut, Nylock 3/8-16	4	
20	RC901736	Bolt, 3/8-16 x 6 Gr 8 YZ Hex	4	
21	RC900311	Bolt, 3/4-10 x 2-1/4 Gr 8 YZ Hex	16	
22	RC101046	Beam, Cross	1	

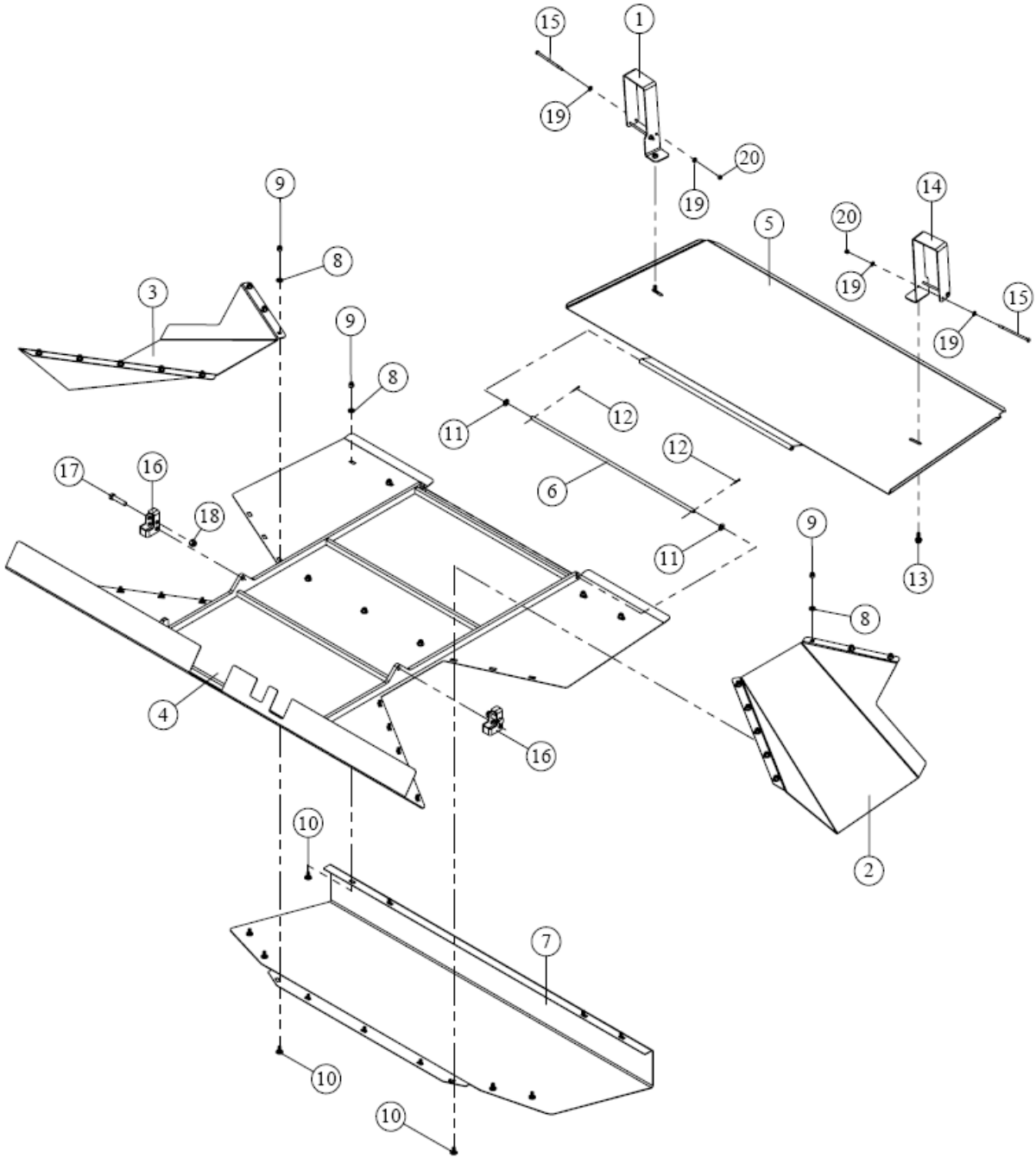
DEFLECTOR SHIELDS – W200



DEFLECTOR SHIELDS – W200

KEY	PART NUMBER	DESCRIPTION	QTY.	COMMENTS
1	RC101320	Bracket, Shield	1	
2	RC101072	Cover, Hydraulic Hose	1	
3	RC101071	Cover, Hydraulic Hose	1	
4	RC101076	Weldment, Deflector	1	
5	RC101204	Shield, Rear	1	
6	RC101206	Shaft, Shield Pivot	1	
7	RC101396	Pan	1	
8	RC900677	Washer, 3/8 SAE Flat	31	
9	RC900583	Nut, 3/8-16 YZ Nylock	27	
10	RC900685	Washer, 7/16 SAE YZ Flat	2	
11	RC900825	Pin, 1/8 x 3/4 SS Cotter	2	
12	RC901700	Bolt, 3/8-16 x 1 Gr 8 CZ Flange Hex	2	
13	RC901688	Bolt, 3/8-16 X 3/4 CZ Short Neck Carriage	23	
14	RC101321	Bracket, Shield	1	
15	RC900091	Bolt, 3/8-16 x 1-1/4 Gr 5 YZ Hex	4	

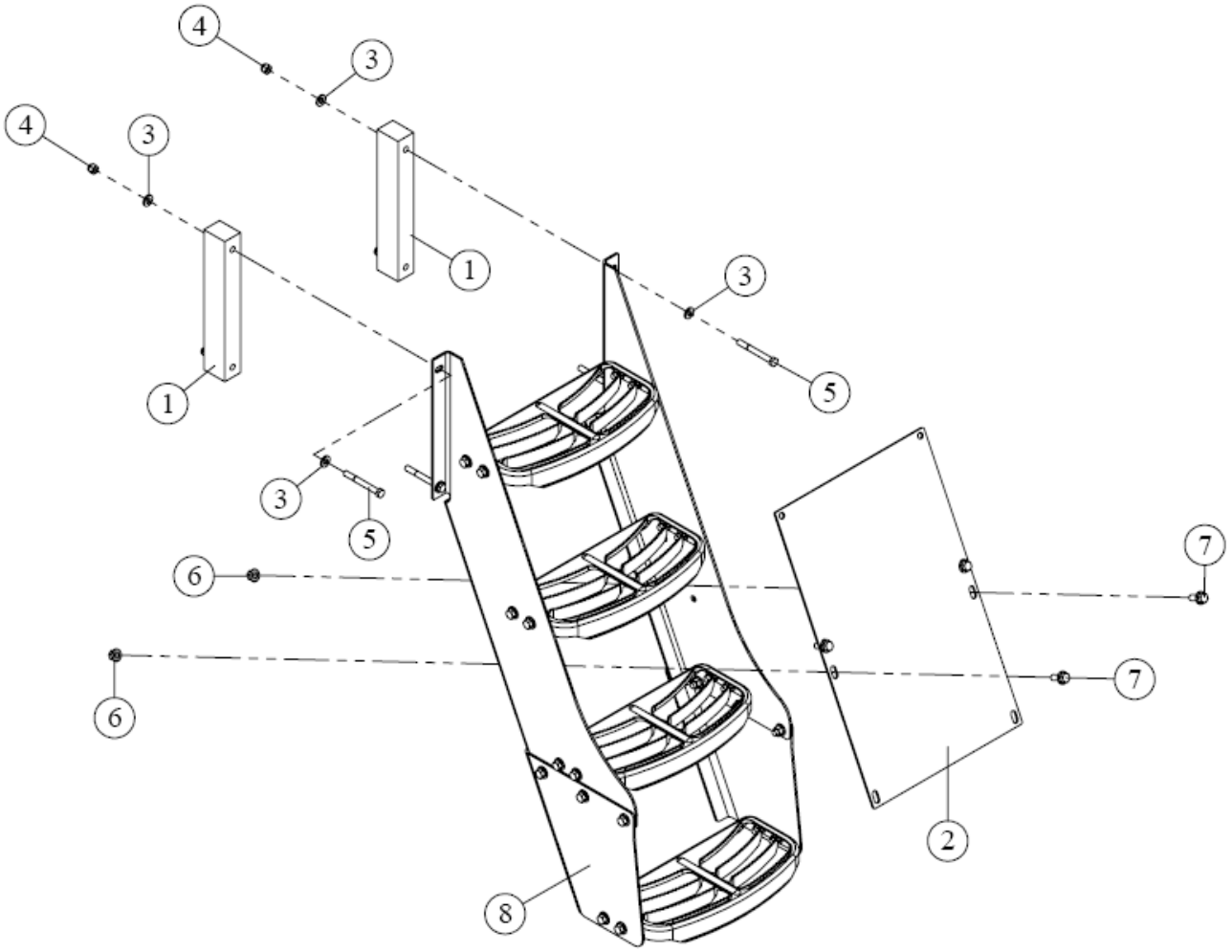
DEFLECTOR – R450



DEFLECTOR – R450

KEY	PART NUMBER	DESCRIPTION	QTY.	COMMENTS
1	RC101354	Bracket, R450 Right Shield	1	
2	RC101072	Cover, Hydraulic Hose	1	
3	RC101071	Cover, Hydraulic Hose	1	
4	RC101076	Weldment, Deflector	1	
5	RC101204	Shield, Rear	1	
6	RC101206	Shaft, Shield Pivot	1	
7	RC101396	Pan	1	
8	RC900677	Washer, 3/8 SAE Flat	23	
9	RC900583	Nut, 3/8-16 YZ Nylock	23	
10	RC901688	Bolt, 3/8-16 X 3/4 CZ Short NeckCarriage	23	
11	RC900685	Washer, 7/16 SAE YZ Flat	2	
12	RC900825	Pin, 1/8 x 3/4 SS Cotter	2	
13	RC901700	Bolt, 3/8-16 x 1 Gr 8 CZ Flange Hex	2	
14	RC101355	Bracket, R450 Left Shield	1	
15	RC901681	Bolt, 1/4-20 x 5 Gr 8 YZ Hex	4	
16	RC101356	Bracket Extension	2	
17	RC900283	Bolt, 1/2-13 x 2-1/4 Gr 8 YZ Hex	2	
18	RC900588	Nut, 1/2-13 YZ Nylock	2	
19	RC900688	Washer, 1/4 YZ Flat	8	
20	RC900575	Nut, 1/4-20 YZ Nylock	4	

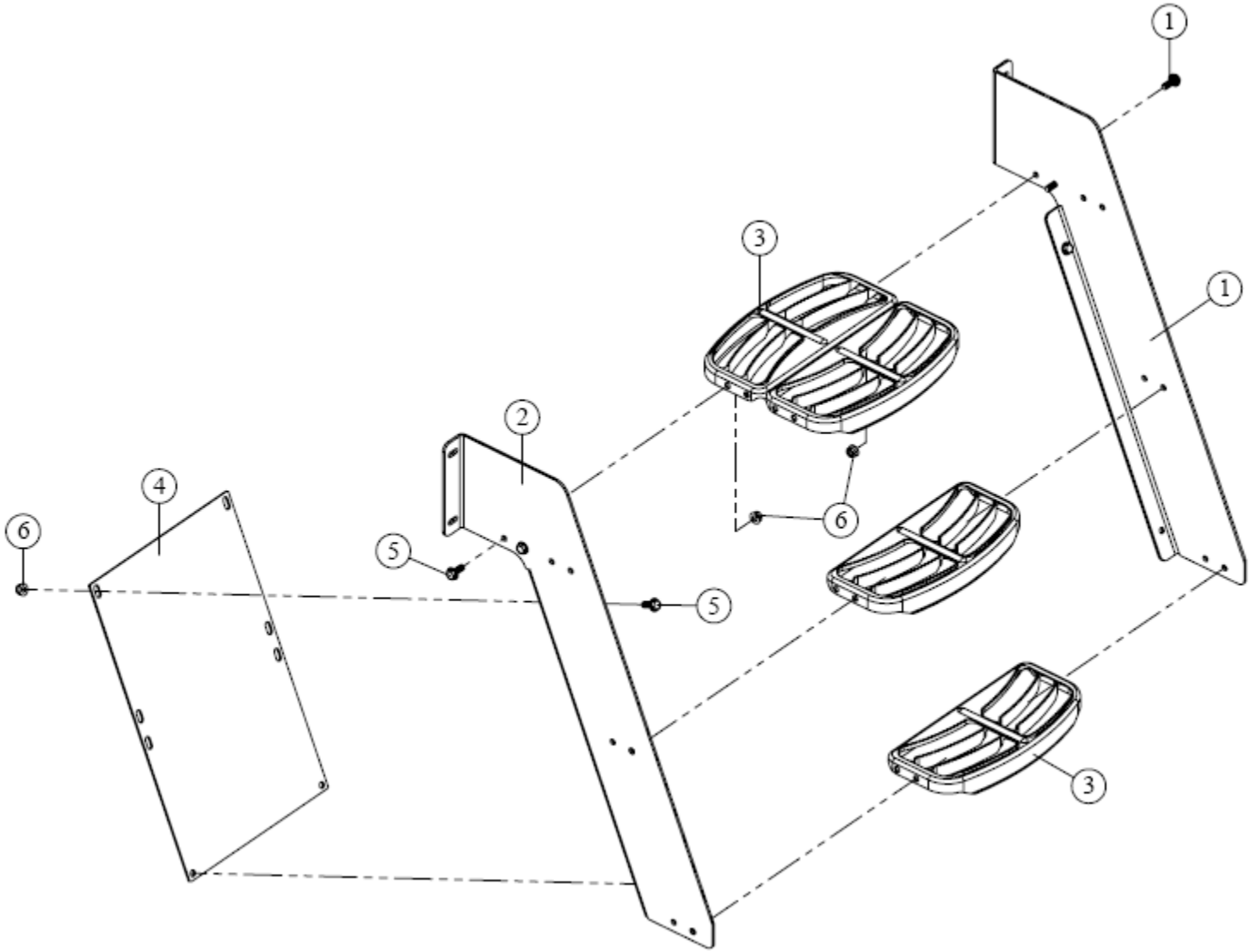
LADDER – W200 SERIES



LADDER – W200 SERIES

KEY	PART NUMBER	DESCRIPTION	QTY	COMMENTS
1	RC101245	Spacer, Ladder	2	
2	RC101054	Plate, Step Cover	1	
3	RC900677	Washer, 3/8 SAE	8	
4	RC900583	Nut, Nylock 3/8-16	4	
5	RC901705	Bolt, 3/8-16 x 3-1/4 Gr 8 YZ Hex	4	
6	14M7518	Bolt	4	USED FROM MACHINE
7	19M7785	Nut	4	USED FROM MACHINE
8	ETN86202	Ladder	1	USED FROM MACHINE

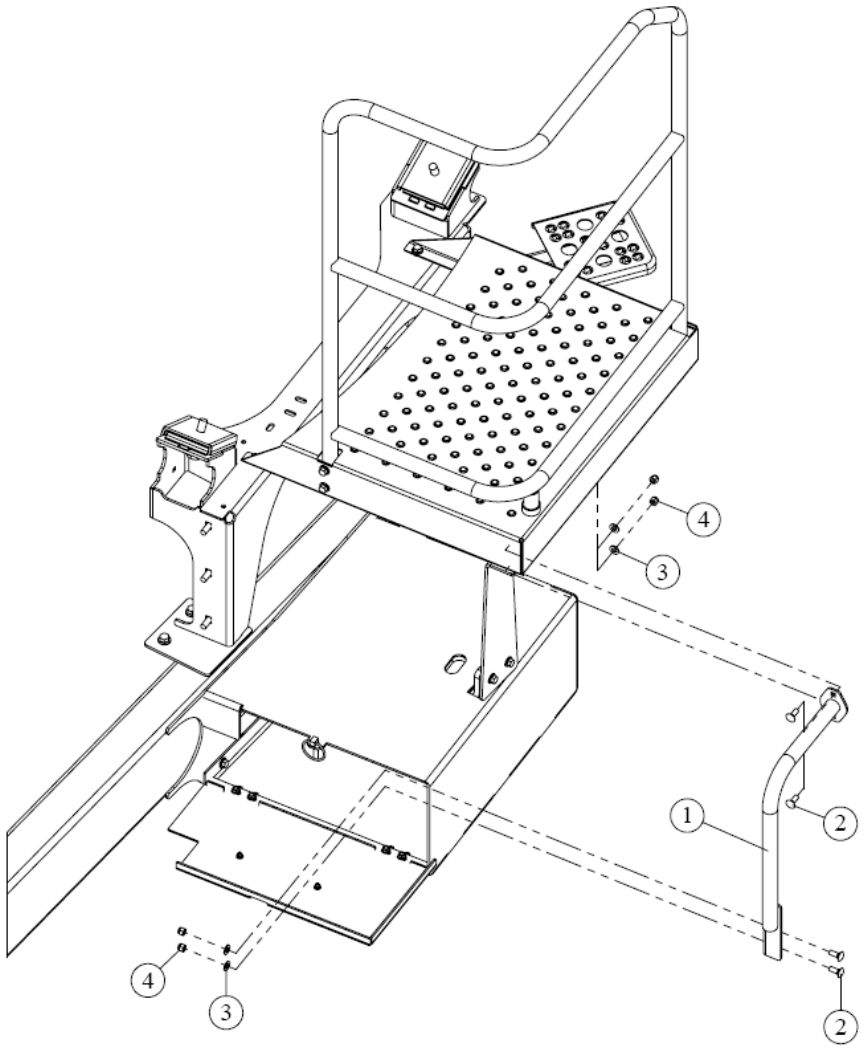
LADDER – R450 Series



LADDER – R450 SERIES

KEY	PART NUMBER	DESCRIPTION	QTY	COMMENTS
1	RC101278	Plate, Ladder	1	
2	RC101279	Plate, Ladder	1	
3	R151799	Step	4	3 USED FROM MACHINE; JD Part
4	RC101054	Plate, Step Cover	1	
5	RC901377	Bolt, M10x1.5-25mm Flange	6	
6	RC901379	Nut, M10-1.5 Flange	6	

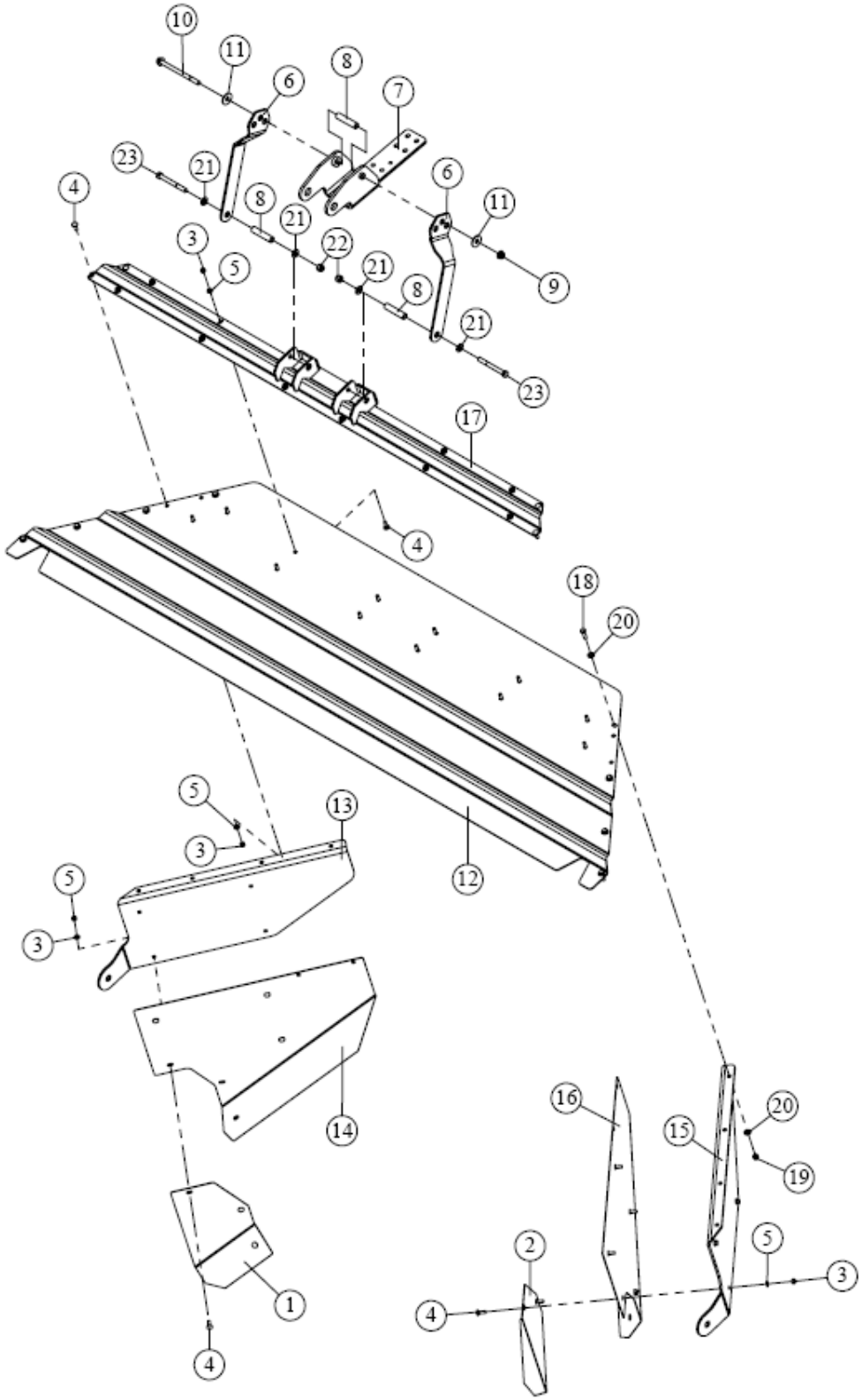
HANDLE – W200 Series



HANDLE – W200 SERIES

KEY	PART NUMBER	DESCRIPTION	QTY	COMMENTS
1	RC082454	Handle, Grab	1	
2	RC082436	Bolt, 3/8-16 x 1 CZ Carriage	4	
3	RC101223	Washer, 3/8 SAE YZ Flat	4	
4	RC082490	Nut, 3/8-16 YZ Nylock	4	

FORMING SHIELDS



FORMING SHIELDS

KEY	PART NUMBER	DESCRIPTION	QTY	COMMENTS
1	RC101300	SHIELD, 995 RIGHT	1	For 995 Head
2	RC101299	SHIELD, 995 LEFT	1	For 995 Head
3	RC900579	Nut, 5/16-18 YZ Nylock	28	
4	RC901558	Bolt, 5/16-18 x 1 CZ Carriage	28	
5	RC900672	Washer, 5/16 SAE YZ Flat	28	
6	RC101236	Link, Universal	1	For both 995 and 500R-see manual
7	RC101304	Bracket, Link	1	
8	RC101305	Bushing, Link	3	
9	RC901702	Nut, M12-1.75 Flange	1	
10	RC901701	Bolt, M12-1.75 x 170 Gr 10.9 Flange	1	
11	RC901628	Washer, M12 Fender	2	
12	RC101500	Cover	1	
13	RC101002	Support	1	
15	RC101212	Guide	1	
16	RC101003	Support	1	
17	RC101213	Guide, LH	1	
18	RC101302	Support, Shield	1	
19	RC900091	Bolt, 3/8-16 x 1-1/4 Gr 5 YZ Hex	8	
20	RC900583	Nut, 3/8-16 YZ Nylock	8	
21	RC900677	Washer, 3/8 SAE Flat	16	
22	RC900686	Washer, 1/2 SAE Flat	4	
24	RC900588	Nut, 1/2-13 YZ Nylock	2	
25	RC900148	Bolt, 1/2-13 x 4-1/2 Gr 5 YZ Hex	2	
*	RC101004	Assembly, Hood	1	Entire Assembly

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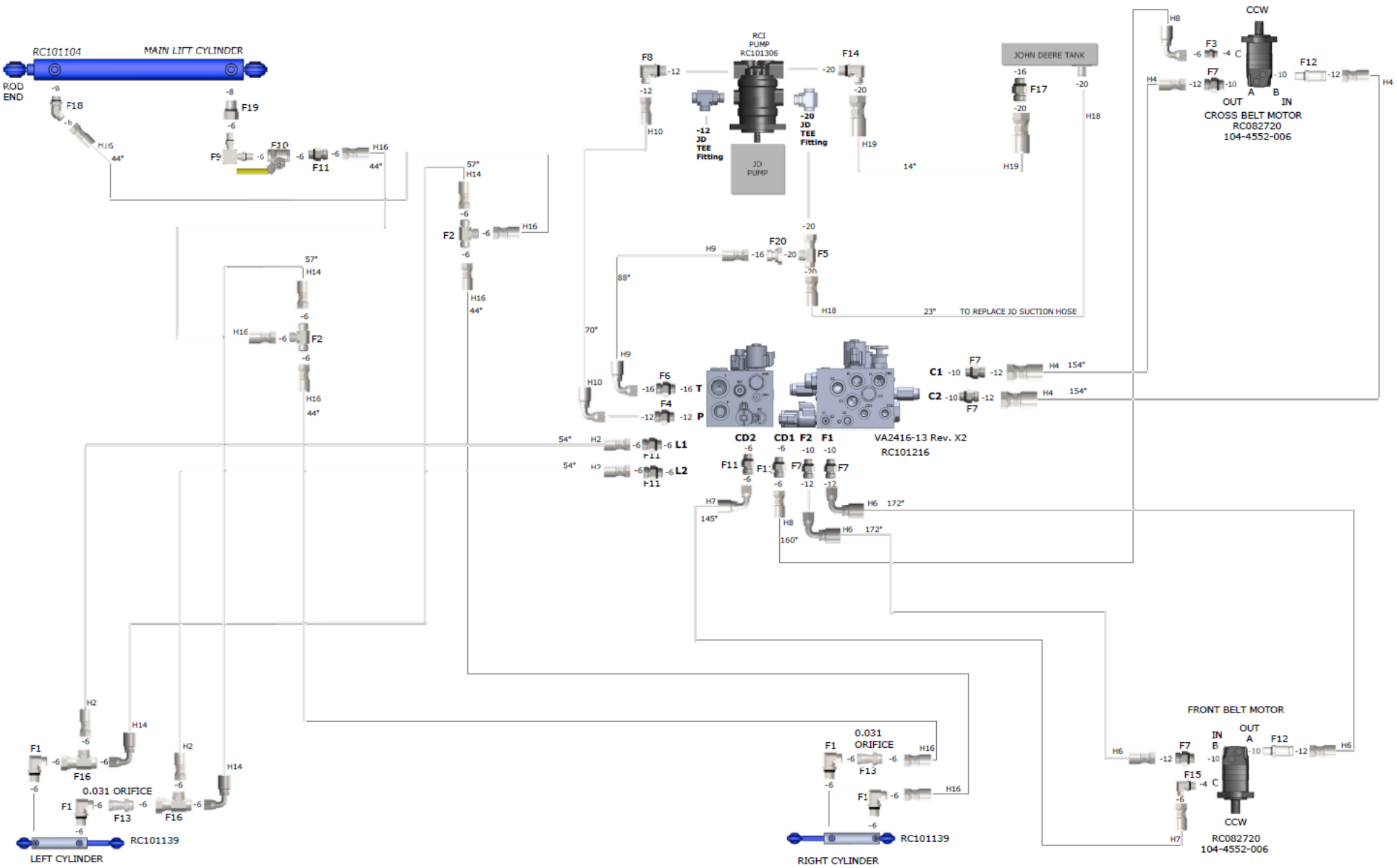
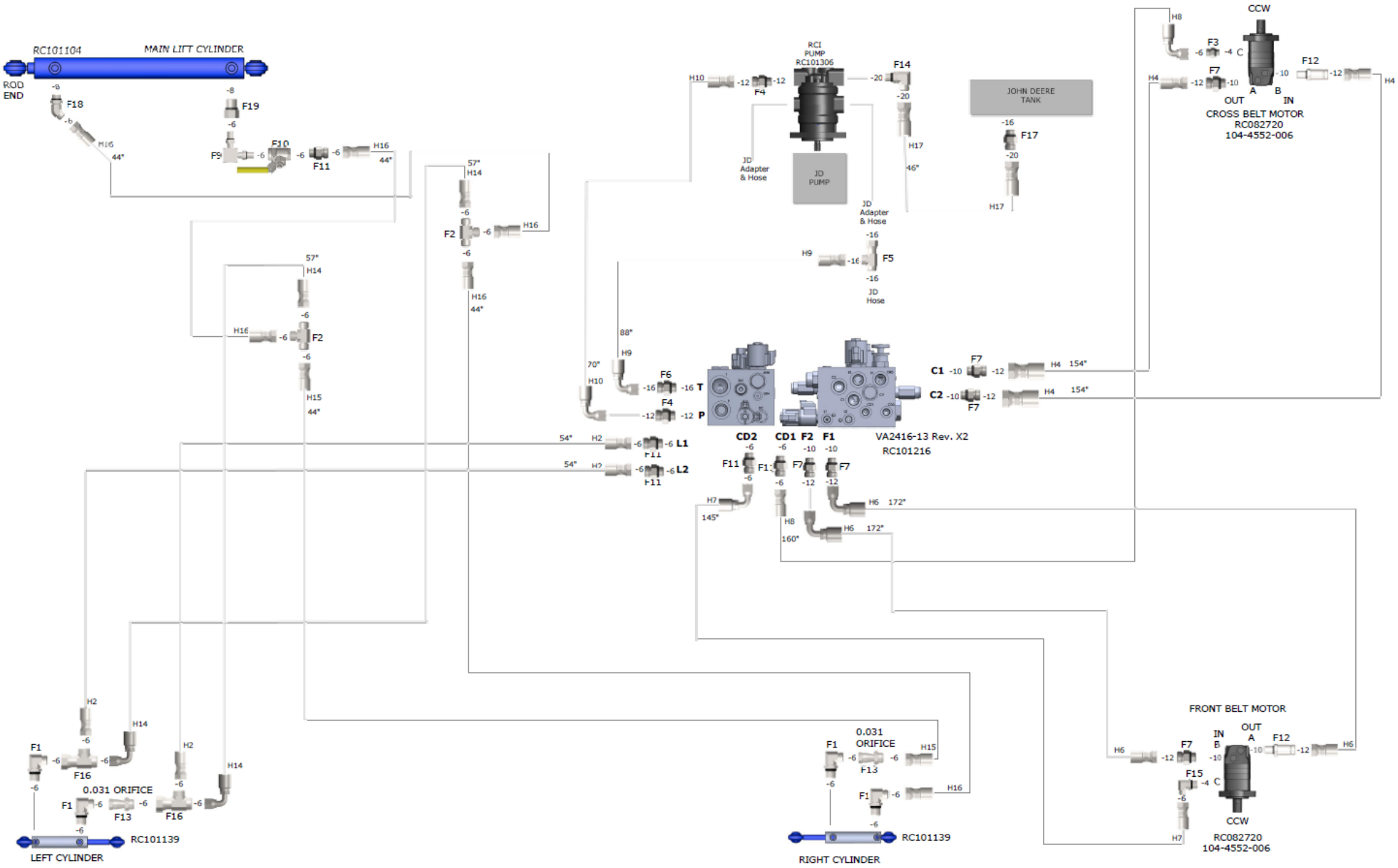
ELECTRICAL COMPONENTS

Key	Part Number	Description	QTY	Comments
	RC101307	Harness, Wire	1	
	RC101138	Controller, W200	1	W200 Series
	RC052201	Controller, R450	1	R450 Series

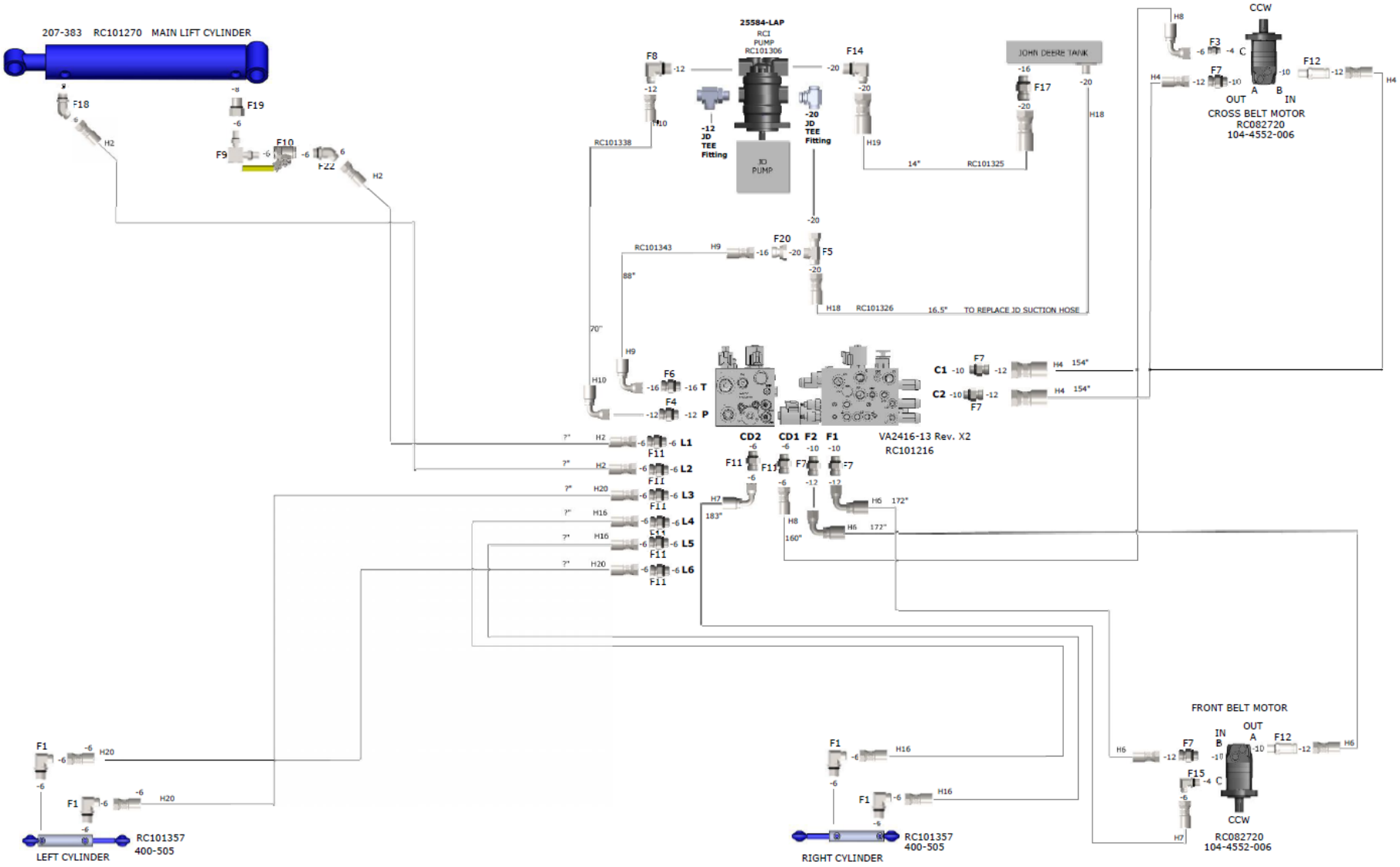
HYDRAULIC SYSTEM COMPONENTS – W200 SERIES – Up to S/N 1060



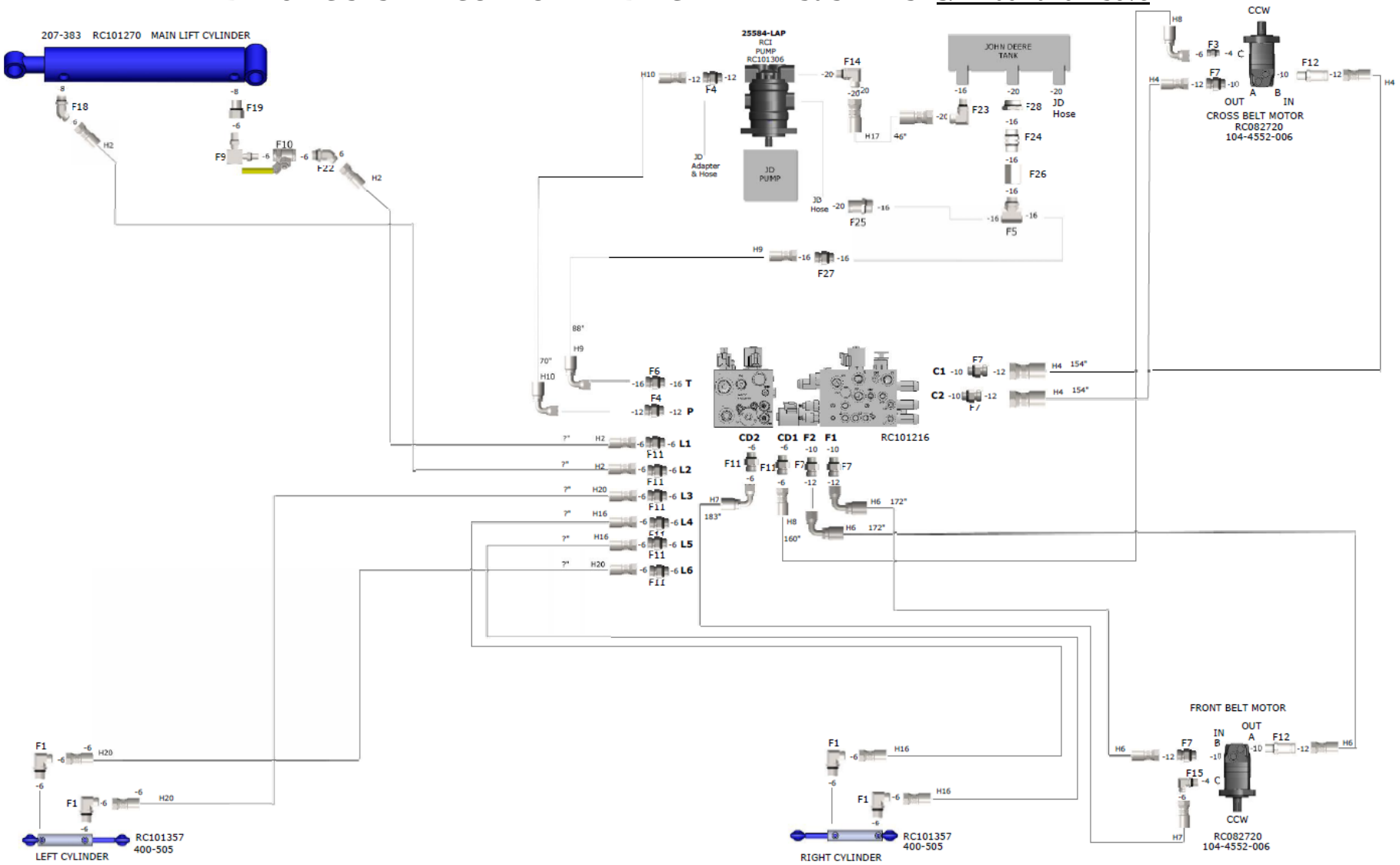
HYDRAULIC SYSTEM COMPONENTS – R450 SERIES – Up to S/N 1060



HYDRAULIC SYSTEM COMPONENT DIAGRAM – W200 SERIES –S/N 1061 and Above



HYDRAULIC SYSTEM COMPONENT DIAGRAM – R450 SERIES –S/N 1061 and Above



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HYDRAULIC SYSTEM COMPONENTS

Key	Part Number	Part Name	Qty	Comments
H2	RC101329	Hose, Hydraulic	2	
H7	RC101330	Hose, Hydraulic	1	
H8	RC101331	Hose, Hydraulic	1	
H14	RC101335	Hose, Hydraulic	2	
H16	RC101337	Hose, Hydraulic	4	
H10	RC101338	Hose, Hydraulic	1	
H4	RC101340	Hose, Hydraulic	2	
H6	RC101342	Hose, Hydraulic	2	
H9	RC101343	Hose, Hydraulic	1	
F1	RC700118	Fitting, Adapter	4	
F2	RC700051	Fitting, Adapter	2	
F3	RC700076	Fitting, Adapter	1	
F4	RC700094	Fitting, Adapter	1	
F6	RC700098	Fitting, Adapter	1	
F7	RC700093	Fitting, Adapter	6	
F9	RC700395	Fitting, Adapter	1	
F10	RC700389	Fitting, Adapter	1	
F11	RC700077	Fitting, Adapter	5	
F12	RC700111	Fitting, Adapter	2	
F13	RC700849	Fitting, Adapter	2	
F14	RC700140	Fitting, Adapter	1	
F15	RC700117	Fitting, Adapter	1	
F16	RC700156	Fitting, Adapter	2	
F17	RC700100	Fitting, Adapter	1	
F18	RC700881	Fitting, Adapter	1	
F19	RC700633	Fitting, Adapter	1	

W200 completion bundle

Key	Part Number	Part Name	Qty	Comments
H19	RC101325	Hose, Hydraulic	1	Special to W235
H18	RC101326	Hose, Hydraulic	1	Special to W235
F5	RC700161	Fitting, Adapter	1	Special to W235
F8	RC700133	Fitting, Adapter	1	Special to W235
F20	RC700242	Fitting, Adapter	1	Special to W235

R450 completion bundle

Key	Part Number	Part Name	Qty	Comments
H17	RC101327	Hose, Hydraulic	1	Special to R450
F4	RC700094	Fitting, Adapter	1	
F5	RC700160	Fitting, Adapter	1	Special to R450

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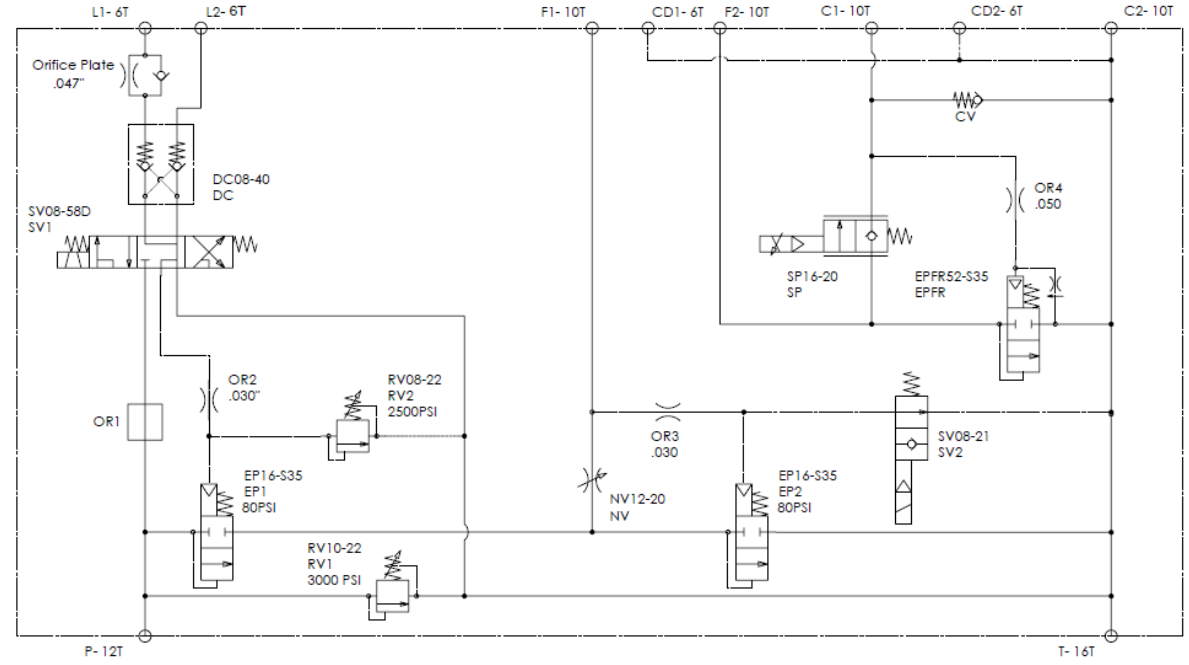
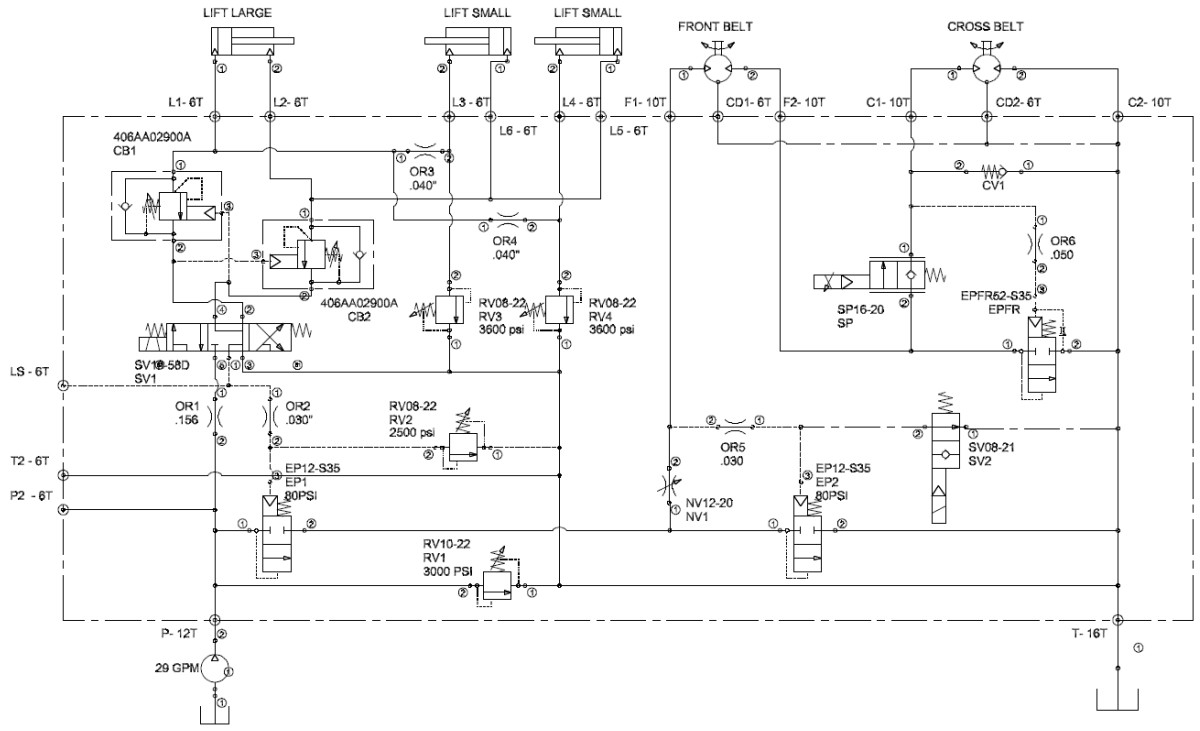
Manifold Components – <u>Up to S/N 1060</u>



Manifold Components – <u>S/N 1061 and Above</u>



Manifold Components

Key	Part Number	Description	Marking	Comments	Qty
1	RC101216	Manifold	VA2534-14 Rev X5	replaces VA2266-13 rev x1 (old style)	1
2	RC101376	Seal, Cross Belt Cartridge	5267T498		AR
3	RC101377	Seal, Nose	SK08-2U-0		AR
4	RC101378	Block, Valve		Not Serviced	N/A
5	RC101379	Spool, Logic Element Pilot	EP16-S35-0-N-70		AR
6	RC101380	Poppet, Proportional	SP16-20-0-N-00		AR
7	RC101381	Valve, Solenoid	SV08-21-0-N-00	B	AR
8	RC101382	Valve, Needle	NV12-20B-0-N	C	AR
9	RC101383	Coil	4303712		AR
10	RC101384	Relief, Diff Area Poppet	RV08-22H-0-N-35/25.00	B	AR
11	RC101385	Relief, Diff Area Poppet	RV10-22H-0-N-35/30.00	A; at RV1	AR
12	RC101386	Regulator, Flow	EPFR52-S35-0-N-80	G	AR
13	RC101387	Spool, Solenoid	SV08-58D-0-N-00		AR
14	RC101388	Valve, Check	DC08-40-0-N-25	K; at DC1 and DC2, old style	AR
15	RC101389	Valve, Check	CV10-20-0-N-05	A; at CV	AR
16	RC101390	Coil	4303612		AR
17	RC101391	Coil	4304012	at SV1 and SV2, old style	AR
18	RC101392	Spacer	4534720	at SV1 and SV2, old style	AR
19	RC101393	Plate, Orifice	0.0465		AR
20	RC101516	Coil	4304112	at SV3, old style	AR
21	RC101517	Disk, Check Valve	16166-231	at L2 and S2, old style	AR
22	RC101518	Spool, Solenoid	SV12-21-0-N-00	N; at SV3, old style	AR
23	RC101519	Coil	4303212	at SV1 and SV2, old style	AR
24	RC101520	Control, Proportional Flow	PV76-30A-0-N-00	M; at PV, old style	AR
25	RC101521	Spool, Logic Element Pilot	EP10-S35-0-N-40	L; at EP, old style	AR
26	RC101522	Regulator, Pressure Comp	FR12-30F-0-N-1.0	F; at FR, old style	AR
27	RC101523	Valve, Solenoid	SV08-47A-0-N-00	K; at SV1 and SV2, old style	AR
28	RC101524	Relief, Diff Area Poppet	RV08-20H-0-N-18/20.00	J; at RV2 - old style	AR
29	RC101525	Relief, Diff Area Poppet	RV08-22H-0-N-26/25.00	B; at RV2	AR
30	RC101526	Relief, Diff Area Poppet	RV08-22H-0-N-26/36.00	B; at RV3 and RV4	AR
31	RC101527	Poppet, Proportional	SP16-20-0-V-00	D; in SP	AR
32	RC101528	Spool, Logic Element Pilot	EP12-S35-0-N-80	F; in EP1 and EP2	AR
33	RC101529	Valve, Solenoid	SV10-58D-0-N-00	E; in SV1	AR
34	RC101530	Coil	4303712	on SV1	AR
35	RC101531	Spacer	4539700	on SV1	AR
36	RC101532	Valve, Counterbalance	406AA02900A	H; in port CB1 and CB2	AR
37	RC101533	Disk, Check Valve	CVD10	in port SV1	AR
38	RC101534	Kit, Seal Repair	SK10-2N-T	For items marked A	AR
39	RC101535	Kit, Seal Repair	SK08-2N-T	For items marked B	AR

Manifold Components – continued

Key	Part Number	Description	Marking	Comments	Qty
40	RC101536	Kit, Seal Repair	SK12-2X-M	For items marked C	AR
41	RC101537	Kit, Seal Repair	SK16-2V-T	For items marked D	AR
42	RC101538	Kit, Seal Repair	SK10-5N-MMMM	For items marked E	AR
43	RC101539	Kit, Seal Repair	SK12-3N-MM	For items marked F	AR
44	RC101540	Kit, Seal Repair	SK12-S3N-MM	For items marked G	AR
45	RC101541	Kit, Seal Repair	02-173019	For items marked H	AR
46	RC101542	Kit, Seal Repair	SK08-2N-B	For items marked J	AR
47	RC101369	Kit, Seal Repair	SK08-4N-MMM	For items marked K	AR
48	RC101543	Kit, Seal Repair	SK10-3N-MM	For items marked L	AR
49	RC101544	Kit, Seal Repair	SK16-3N-MM	For items marked M	AR
50	RC101545	Kit, Seal Repair	SK12-2N-T	For items marked N	AR

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Pre-delivery Checklist

After the unit has been assembled and lubricated and prior to delivery to customer, the merger needs to be inspected thoroughly to ensure it is in proper working order. The following checklist must be reviewed and each item found to be satisfactorily completed.

- Merger attachment has been setup according to the instructions included in this manual.
- All grease fittings have been lubricated.
- All guards, shields and safety decals are in place, securely fastened, and operate correctly.
- All nuts and bolts have been tightened and inspected.
- Adjustments have been made as described in the Adjustments section of this manual
- Crop guides at belt installed properly.
- All moving parts operate freely.
- Belt tension set properly.
- All applicable warranty information recorded.

I acknowledge that the pre-delivery service was performed and the unit is ready for delivery to the customer.

_____	_____	_____
Dealership's Name	Representative	Date
_____	_____	_____
Model Number	Serial Number	Date Sold

Owner's Name and Address

Name_____

Address_____

City, State, Zip _____

Original: Enclose in manual and give to customer at time of delivery.

Copy: Dealership
Copy: RCI Engineering LLC

RCI Engineering LLC
Fax: 920-387-9804
Email: info@rciengineering.com
Mail: 970 Metalcraft Drive, Mayville, WI 53050

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Delivery Checklist

The following items must be performed when delivering the attachment to the customer. Check off each item as it is performed.

- Provide the customer with the Operator's Manual and instruct them to read prior to operating the unit.
- Review and explain all safety information and operating adjustments.
- Provide all parts removed during installation to the customer.
- Provide spare cross belt to the customer.
- Review and explain maintenance and lubrication schedule that is required to ensure proper operation and long life.
- Show how to properly adjust the belt tension as instructed in the “Adjustments” section.
- Make it be known that if the customer can visit or call the dealership to discuss any questions or problems they may encounter.
- Complete the Owner’s Registration with the customer, ensure it is completely filled out, and return it to RCI Engineering.

_____
Date Delivered

_____
Signature

Original: Enclose in manual and give to customer at time of delivery.

Copy: Dealership
Copy: RCI Engineering LLC

RCI Engineering LLC
Fax: 920-387-9804
Email: info@rciengineering.com
Mail: 970 Metalcraft Drive, Mayville, WI 53050

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Owner Registration

Please fill out the following and return to RCI Engineering LLC.

_____	_____	_____
Dealership Name	Representative	Date
___316M_____	_____	_____
Model Number	Serial Number	**Date Sold**
_____	_____	_____
Customer Name	Customer Street Address	Customer City, State, Zip
_____	_____	_____
Customer Email	Customer Phone	Customer Fax

Original: Enclose in manual and give to customer at time of delivery.
Copy: Dealership
Copy: RCI Engineering LLC

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