

2800 Res-Till Field Cultivator

Kongskilde
2800



*Model may not be exactly as shown.

Kongskilde reserves the right to make changes to product designs and specifications without notice or obligation to rework.

See your local Kongskilde representative for current product specifications, instructions and options.

ASSEMBLY INSTRUCTIONS

North American Version

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Introduction:

Please take the time to carefully read all the instruction booklets provided with your new Kongskilde product. Once you are finished reading do not throw these guides out. Keep them for later review.

The "Spare Parts List" is referenced to by this guide. We suggest having it on hand during the assembly process.

Accessories may have their own instruction guide. Please read the relevant booklets for instructions on how to perform the installation of accessories. (Harrows, light kit etc.)

Be sure to read and understand the "Owner's Manual" before operating this equipment. It contains information about adjustment settings, operating instructions and safety precautions.

Please fill out and return the Owners Registration and Warranty Form provided in the Owners Manual to activate the warranty.

Preassembly Instructions:

Assembly of Kongskilde products should only be undertaken by authorized Kongskilde Dealers or an approved service provider with the necessary tools, equipment and training for safe assembly of the unit.

Frame components are heavy and somewhat awkward to handle. Proper lifting devices such as overhead cranes, boom lifts or mobile lift trucks should be used at all times when moving or handling the large frame components.

Proper steel assembly stands or support jacks should also be used to support the frame components, preventing them from falling. Recommended assembly tools include:

A full set of standard open or box end wrenches and sockets; assorted sizes of pin punches; a heavy hammer and/or sledge hammer; a pry bar; a large adjustable wrench; and pair of visegrip or similar type pliers.

Optional tools could include an all purpose jack and a good quality air or electric drive impact tool with heavy drive sockets.

The assembly area should be large enough to allow workers and equipment to move around freely during assembly of the unit. For example; to fully assemble a 2800-80 with 8m working width, a minimum area of 10m x 11m with an overhead clearance (wing fold) of 5m is needed (10m x 11m x 5m)



If the unit is to be assembled and folded indoors, additional clearance may be needed in the assembly area.

The ceiling height and the size of the building exit door must also be considered in order to safely fold and move the cultivator outdoor after assembly.

The floor area should be level and clean.

Be sure to check the packing slip to be certain everything is present.

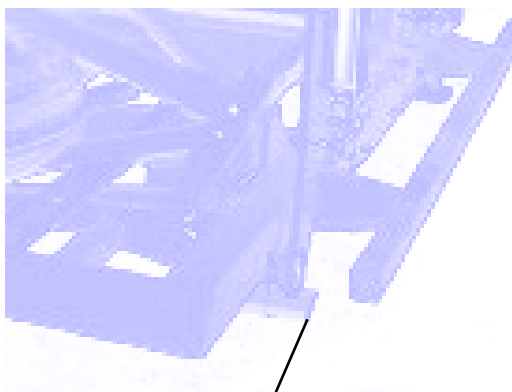
Carefully unpack and lay out all of the fasteners and hardware. Sort and organize the hardware by type and size.

Some of the components of the cultivator are very heavy. Extra care should be exercised when working with these parts. Be sure to properly support all large components, especially the frames. Proper supports



Fastners sorted for ease in assembly.

protect the assembler, the product and the workspace. Improper supports can lead to accidents causing injury or death as well as damaging the product, which can make it difficult to sell. On this page and the next are examples of good supports for a frame.



Support here.

Supporting the frame prevents damage to the product.

Moving heavy parts can be harzardous. Use proper equipement for heavy lifting, and make sure that it is operated by certified technicians. Failure to do so can lead to accidents and injuries.

Utilizing proper supports stabilize the frame and make the assembly safer and easier. In the example below example steal saw horses are used to prevent swaying while the frame is supported by an overhead crane.

Safety should be the first concern of anyone assembling a Kongskilde cultivator. Such an assembly can be a safe project, if the assembler takes the appropriate steps, and applies a bit of common sense.

Tines:

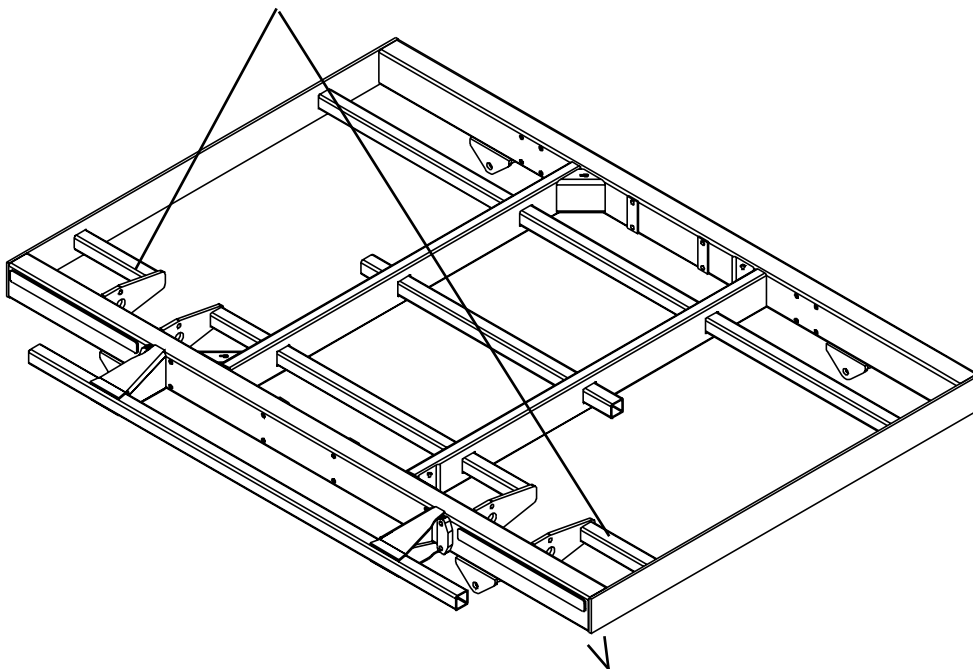
Each tines must be assembled and then attached. Assembly is straight forward simply look up the exploded view of the tine in the "Spare Parts List." This contains all the information needed to assemble the individual tines.

Once the tines are assembled, they must then be attached to the toolbar. The position of the tines are described in guides canned tine patterns.

Note: 10cm or wider sweeps can not be placed on toolbar behind the outer tandem wheels Sweep will interfere with tire. Use only 7 cm goosefoots hare in these locations



An attached tine

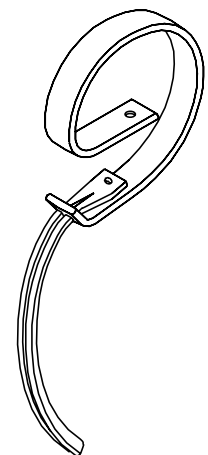


A warning for those attaching tines

A number of different tines patterns are available from Kongskilde, each of which has been design for different soil conditions. Chose an appropriate pattern for the conditions expected and then attach the tines where indicated by the pattern. The actual attachment is shown in the picture in the upper right.

For the Res-Till the tines can be attached in a number of differen patterns.

These tine patterns show measurements from the center line (marked with an M) of the cultivator frame to the center of each tine. Once the tine has been placed, remember to tighten it.



The VTH Tine

Most tines can be assembled seperately and later attached to the frame. The VFM tines is the exception (see next page).

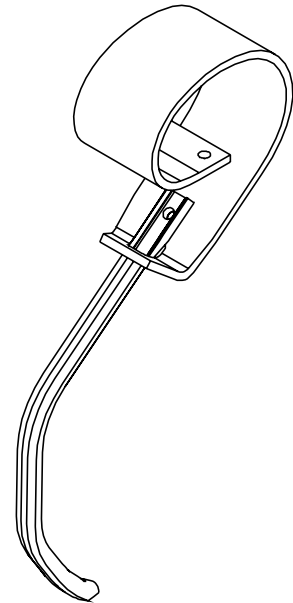
Assembly Information for the VFM Tine:

The VTM tines are larger than most other tines. For this reason this the stem of the tine will interfere with attachment of the tine to the toolbar. Hence, the tine can not be assembled prior to being attached to the toolbar.

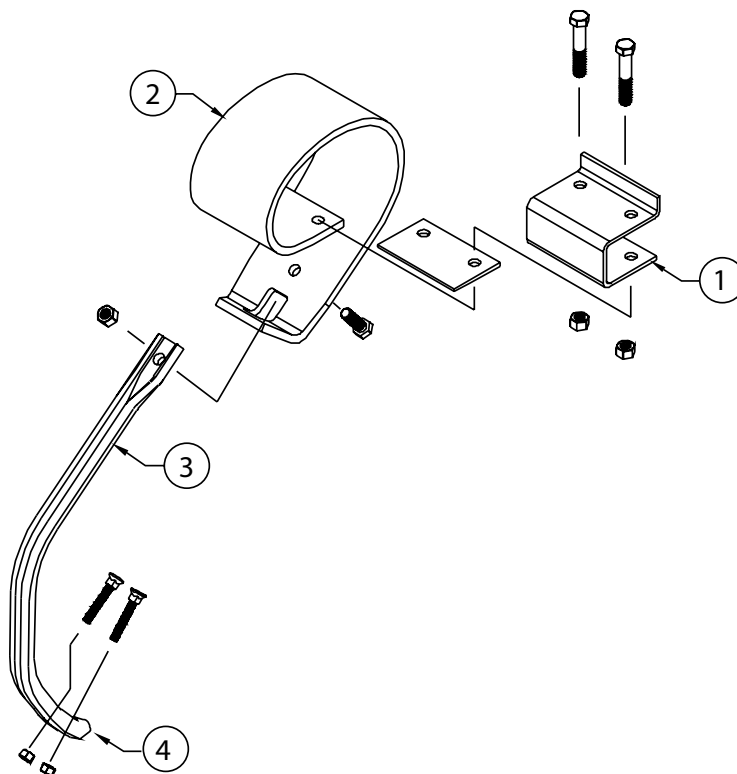
To avoid this problem assemble the tines in the following order. Begin by bolting the clamp (1 in the diagram below) in the position indicated by the tine pattern. Then attach the coil (2) to the clamp using the spacer. Next bolt the stem (3) to the coil. Finally fasten the sweep (4) to the tine. Check the “Spare Parts List” for the types of fastners needed at each step.

Once the assembly is complete check the individual nuts and bolts to make sure they are tight.

The tine pattern for this tine is found in the tine pattern booklet.



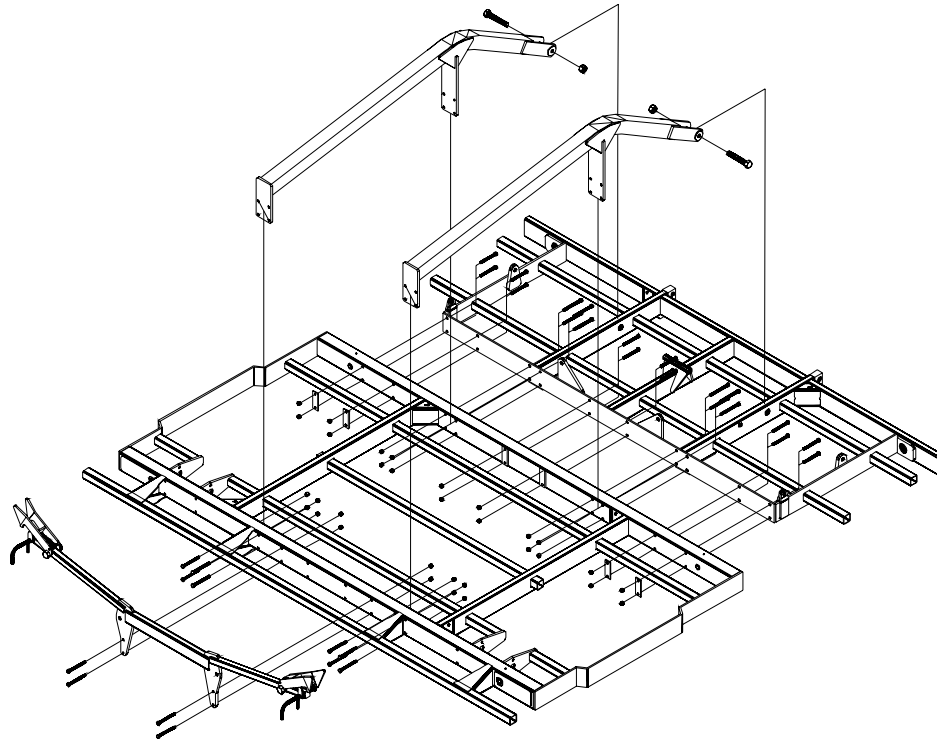
The VFM Tine



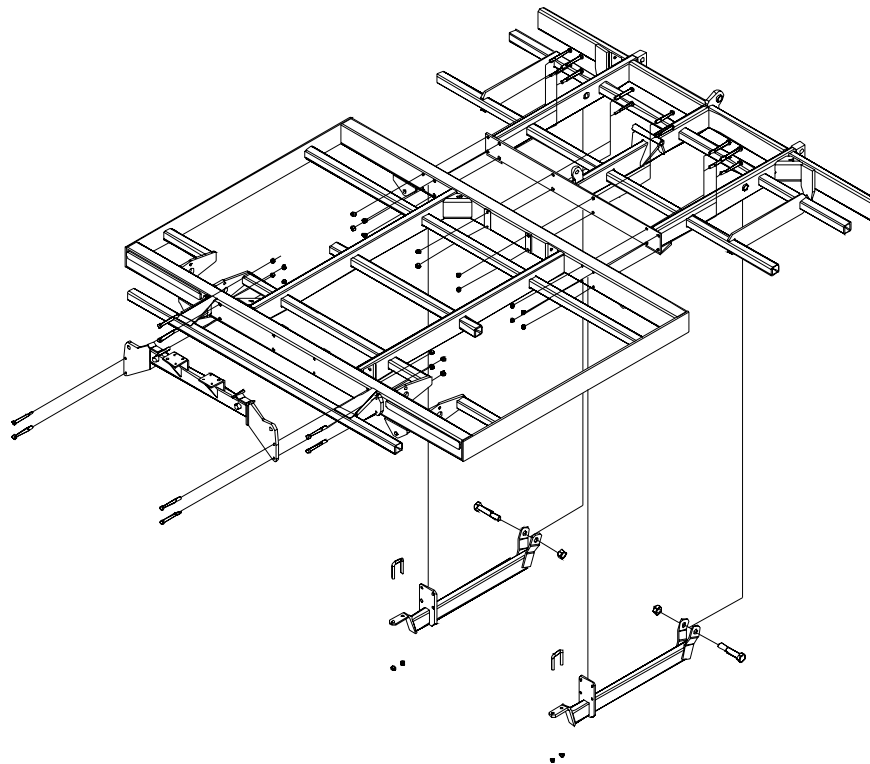
Tine Assembly Diagram

Assembling the Center Frame:

The picture below shows how to assemble the center frame.



The front frame attaches to the rear frame as shown above. Use the bolts listed in the "parts book". Be sure to bolt both top and bottom holes in the front and back. Remember to tighten them well.

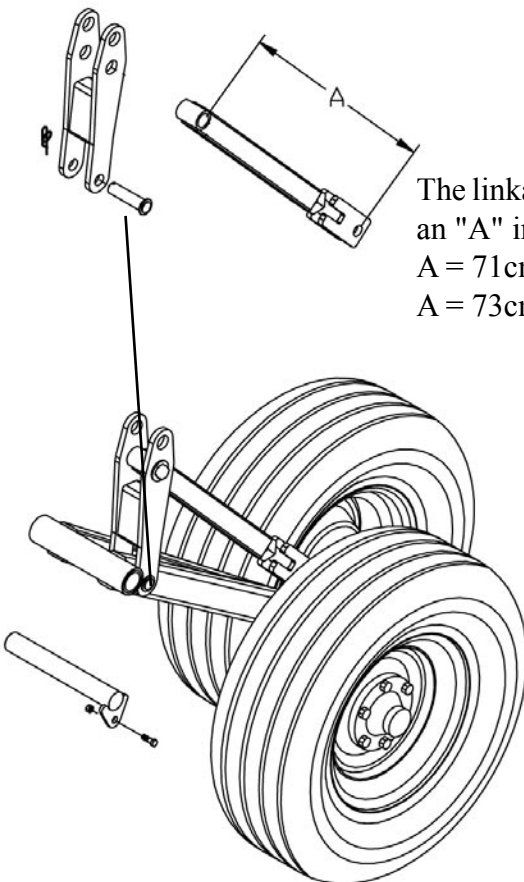


Wheel Installation :

The next step in the assembly is attaching the wheels to the rear part of the center frame. The top picture shows the wheel assembly and the lower picture shows the exploded view of the wheel assembly.



Wheel mounting with one wheel removed to show the assembly.



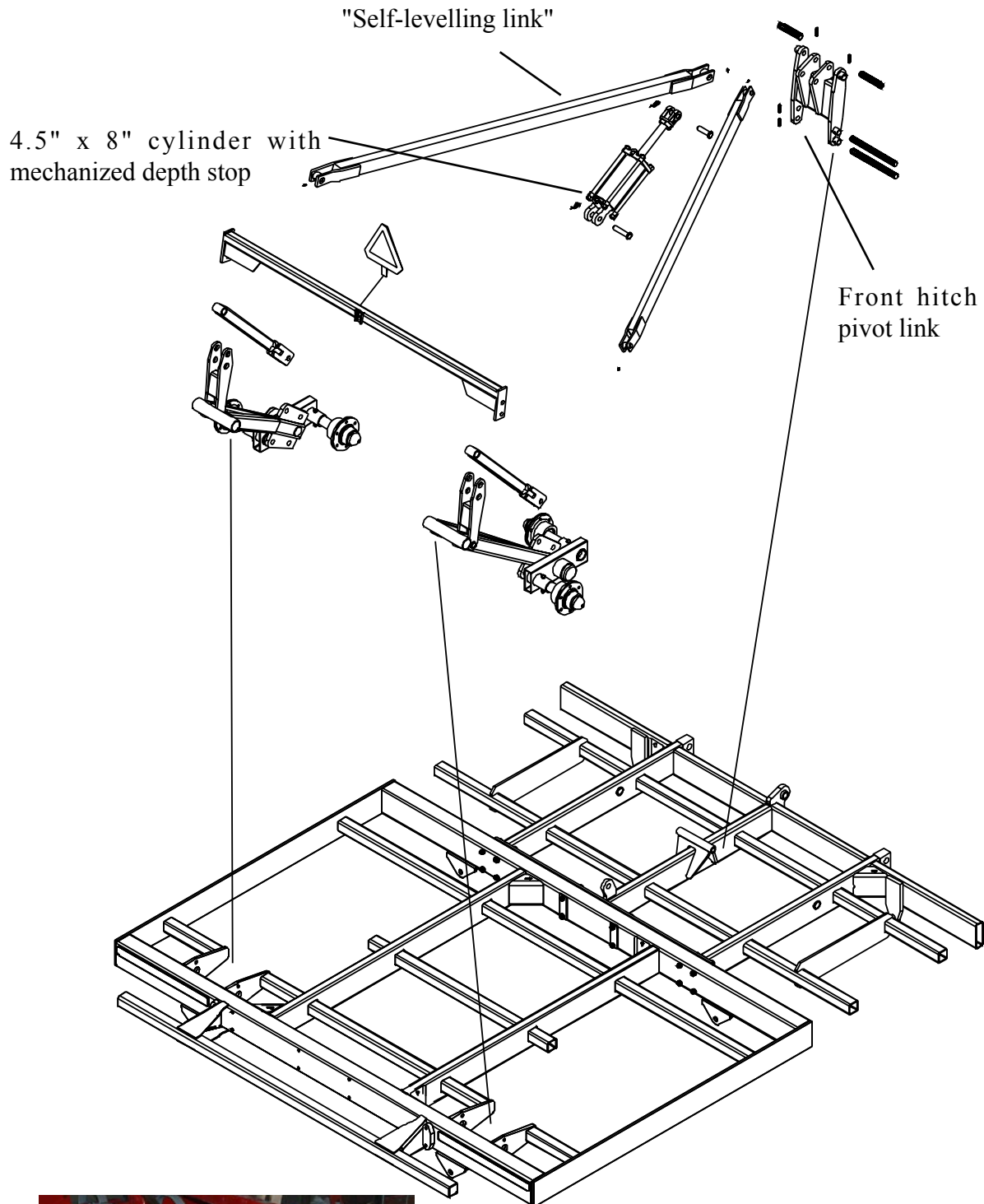
The linkage length from centre to centre, labelled with an "A" in this drawing, should be set at:

A = 71cm for VTM tines.

A = 73cm for VTH tines.

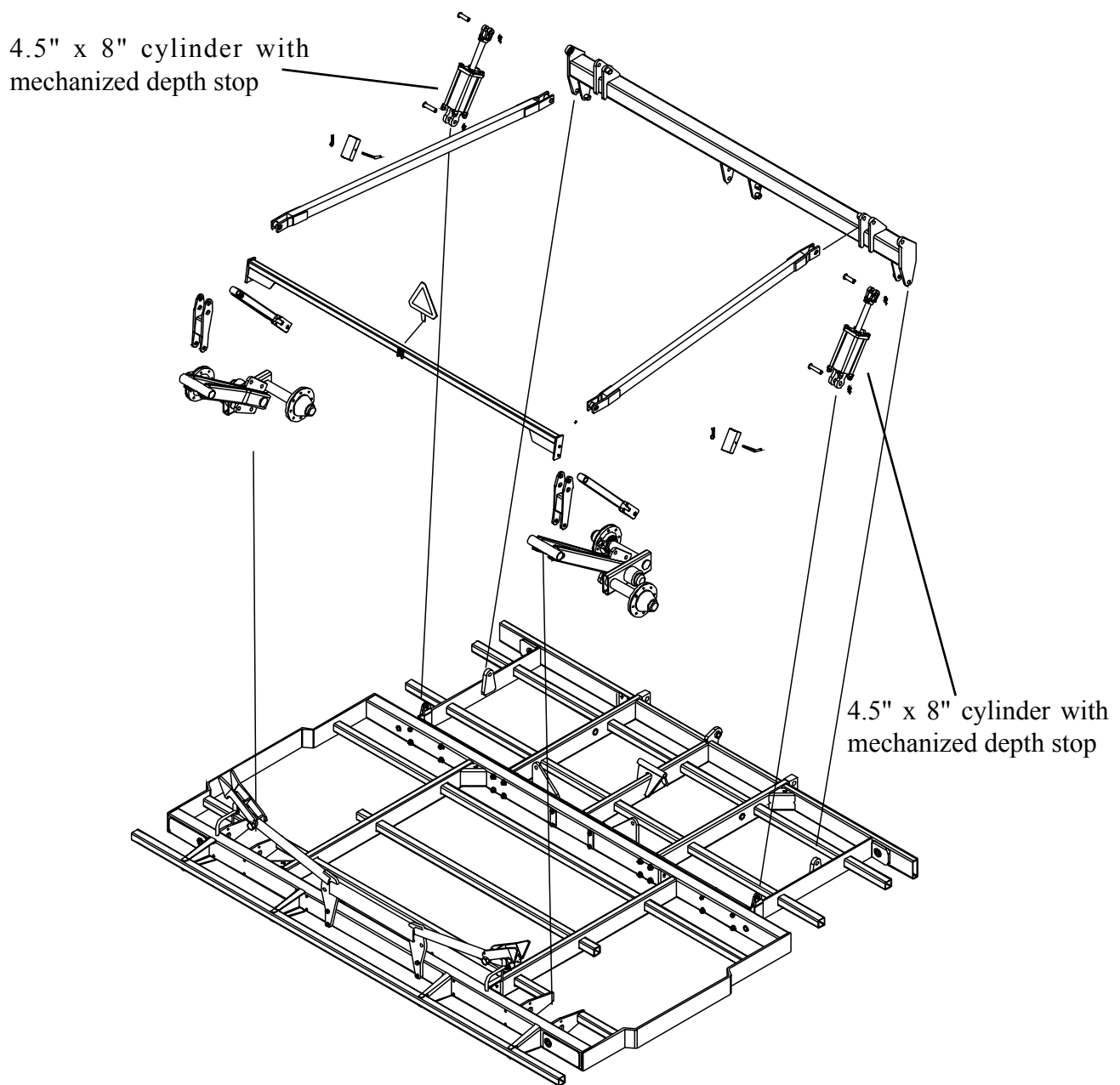
Self Levelling Linkages: Narrow Frame Version

Check the assembly of the self-levelling linkages and make sure all of the clip pins are installed and locked.



Overview of the completed self-levelling linkage system.

Self Levelling Linkages: Wide Frame Version



Check the assembly of the self-levelling linkages and make sure all of the clip pins are installed and locked.

Unlocked Pin



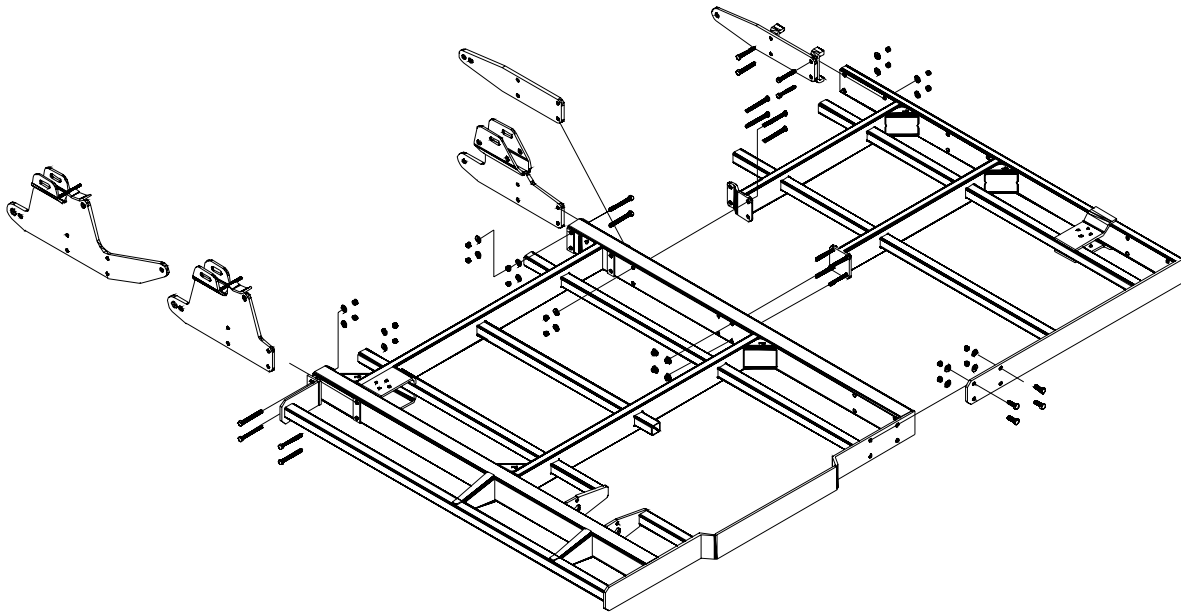
Locked Pin



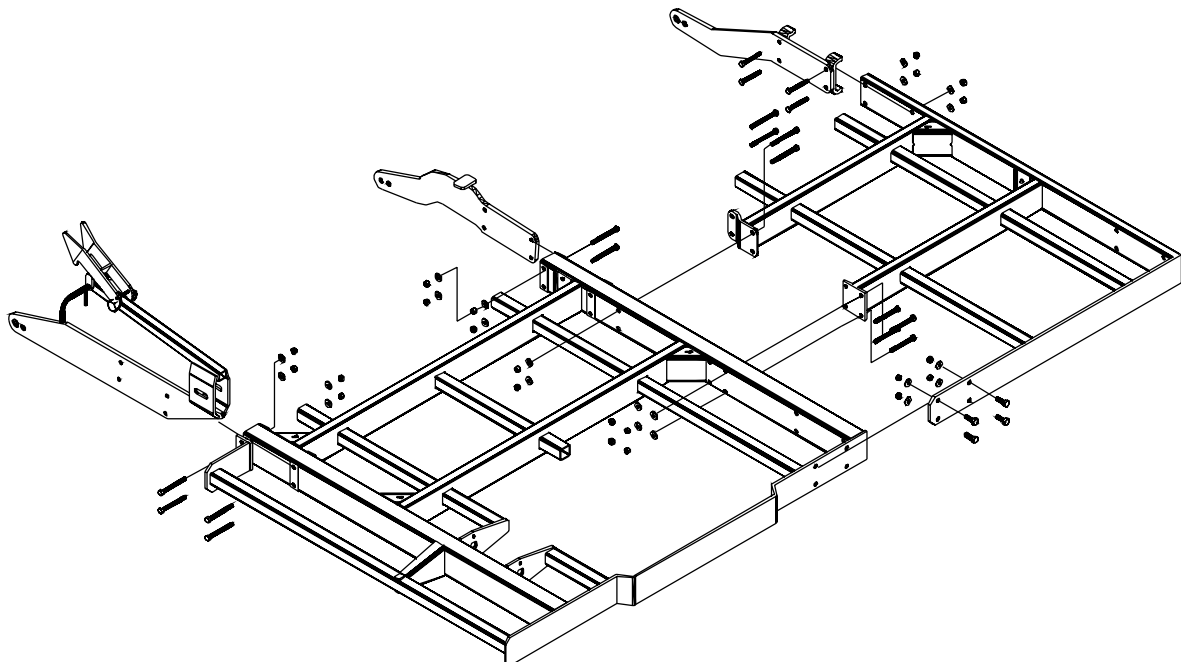
Hinge plate and Wing Assembly:

These two diagrams show how to assemble the wings and how to attach the hinges. The hinges used for the two versions of the center frame are quite different, as you can see.

Wide Center



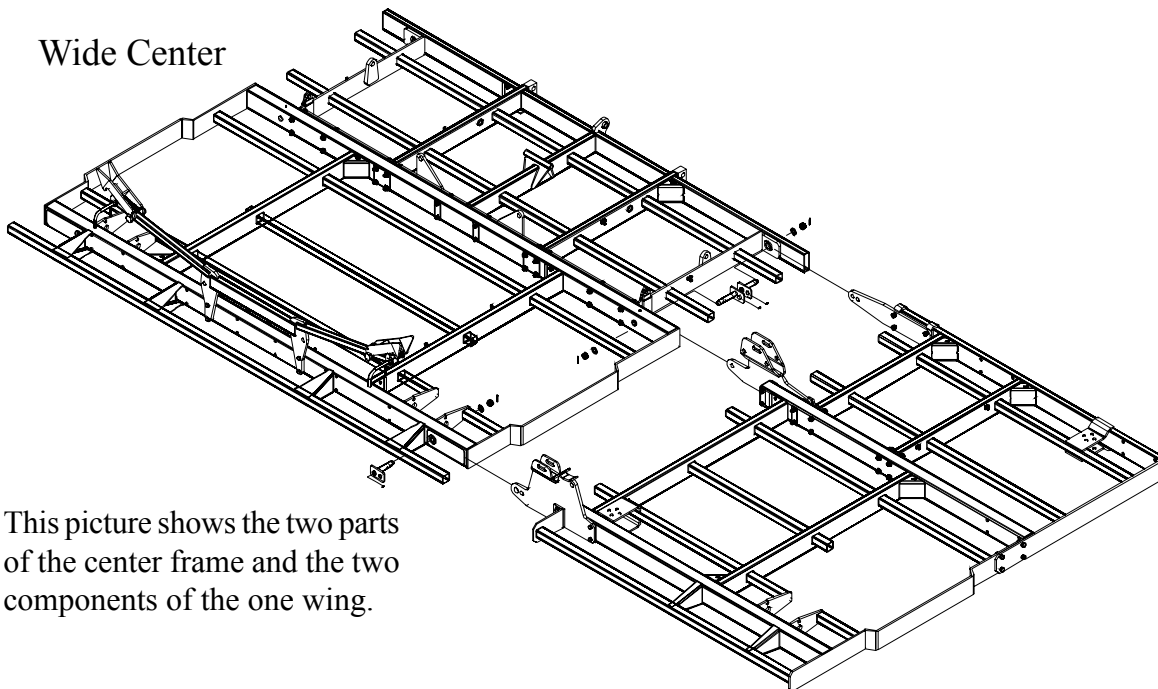
Narrow Center



Wing Installation & Hinge Pins:

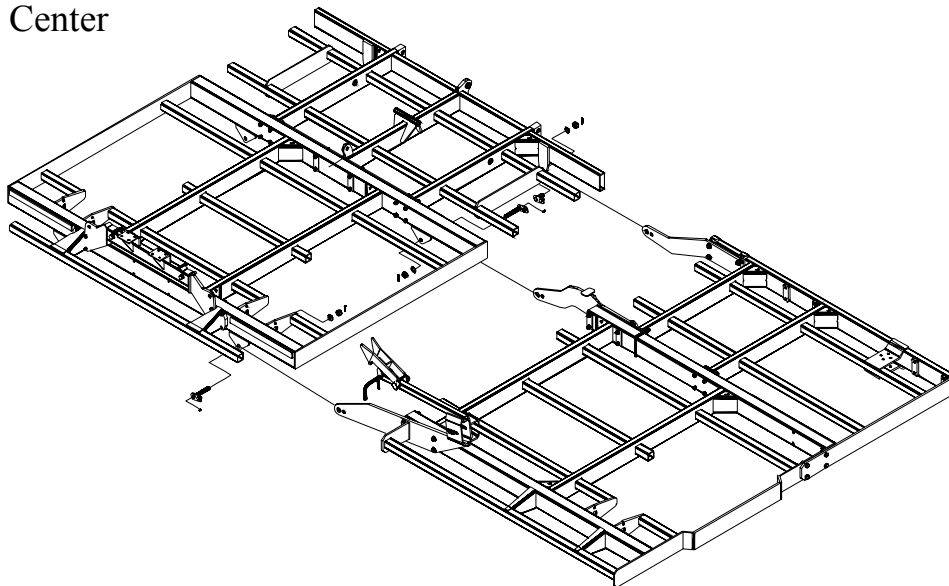
The wing installation requires the moving of the two wing frames into contact with the centre frame. The contact points should be the hinges where the wings fold.

Wide Center



This picture shows the two parts of the center frame and the two components of the one wing.

Narrow Center

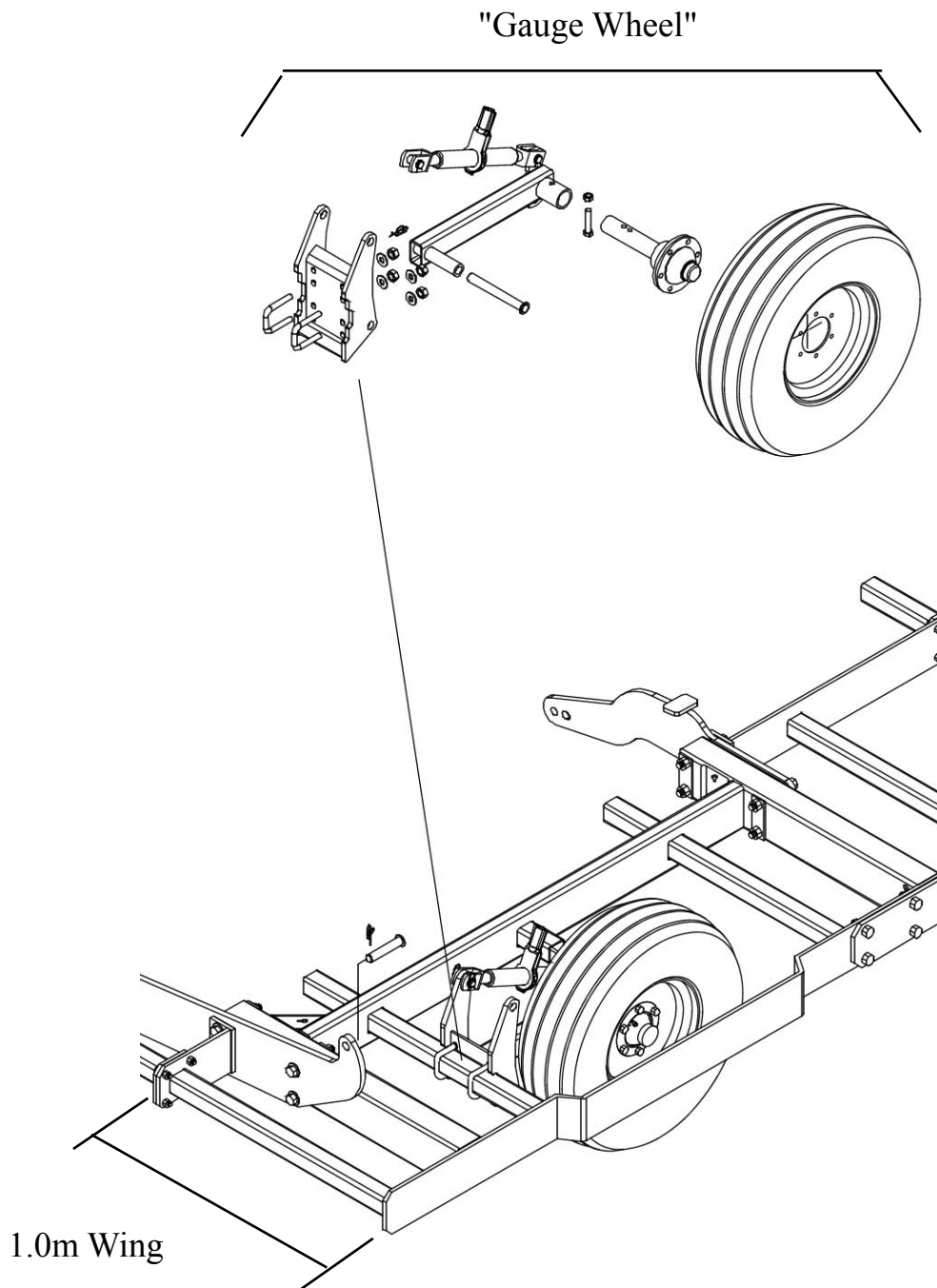


This cultivator has three hinges. Pin the front hinge first, followed by the middle and then the rear. Leave all of the hinge bolts loose until all 3 hinge pins have been installed.

Use a 1" washer inside the castle nut and cotter pin on all three hinge pins.

Mechanical Adjust Wheels on 1.0m Wings:
(Only used on the 16' - 5.0m Res-Till)

The 1.0m wing uses the mechanical adjust wheels as the main gauge wheels. These wheel attaches work the same on each wing because they are symmetric. The wheels are attaced as shown below.

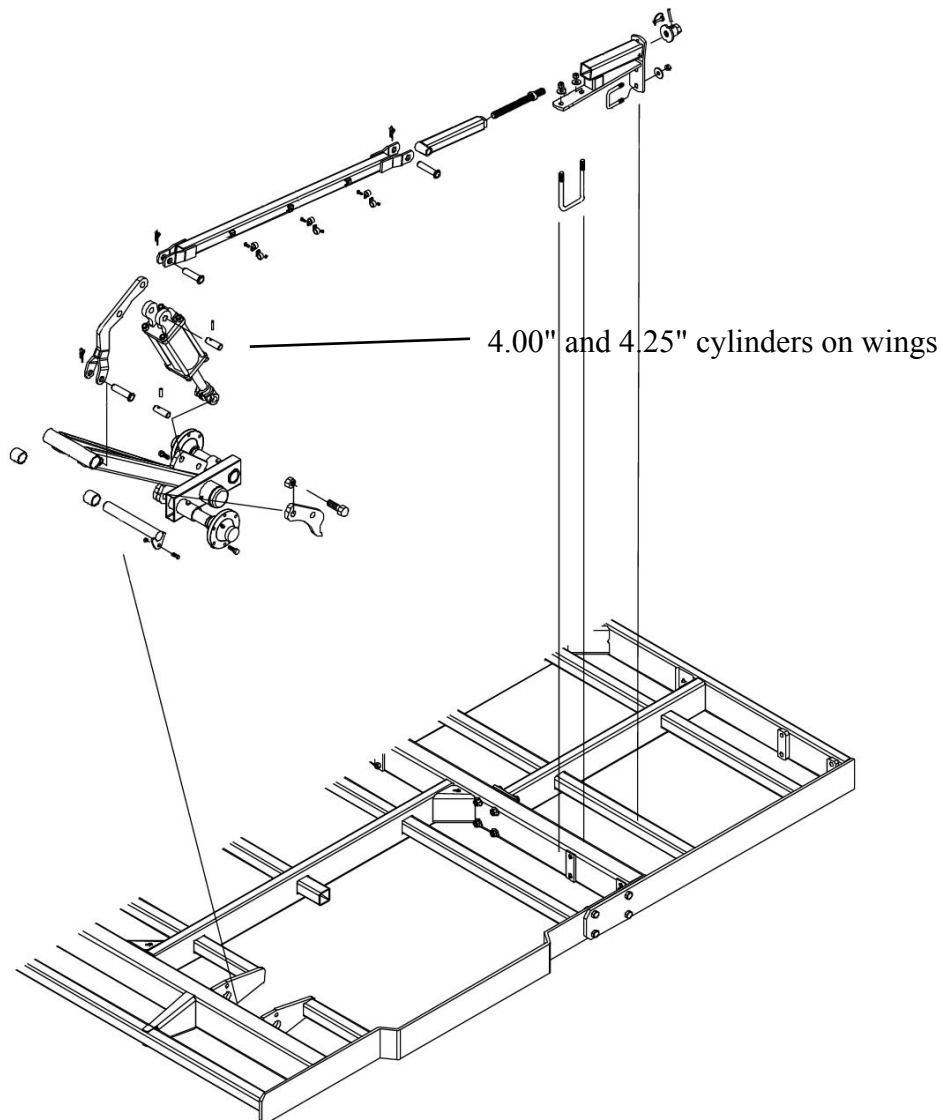


Wing Cylinder Assembly:

Start by mounting the wheel-lift cylinder in the location shown on the following page, with the pins described in the "Spare Parts List".

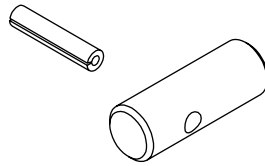
The wing-lift cylinders should be attached as shown below. The ports on both wing cylinders should face to the outside of the machine. There are three wing-lift Cylinders sized 4.5", 4.25", 4". The 4.5" cylinder is to be placed on the center, the 4.25" one goes on the left wing and the 4.0" one goes on the right wing.

Important: The hydraulics should not be attached at this time.

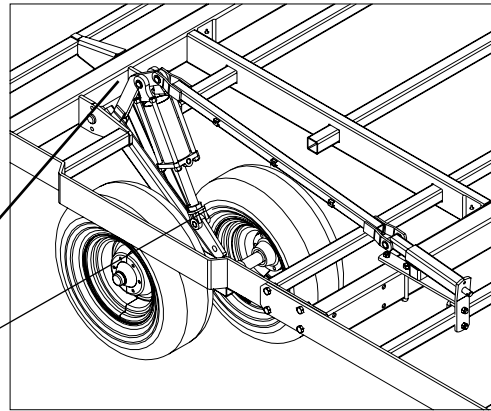
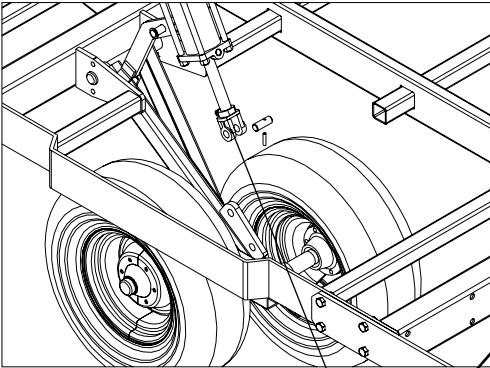


Wing Cylinder Pins

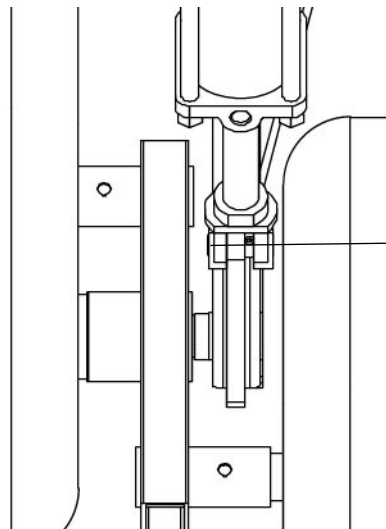
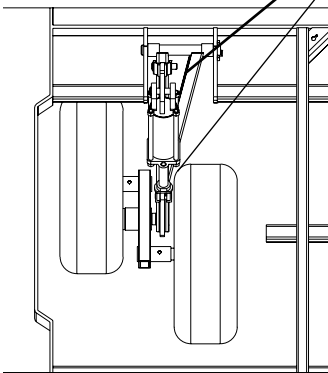
Install the wing cylinder pin such that it keeps the cylinder away from the frame as shown.



Wing Cylinder Pin
shown with roll pin



Place wing cylinder pin in these locations



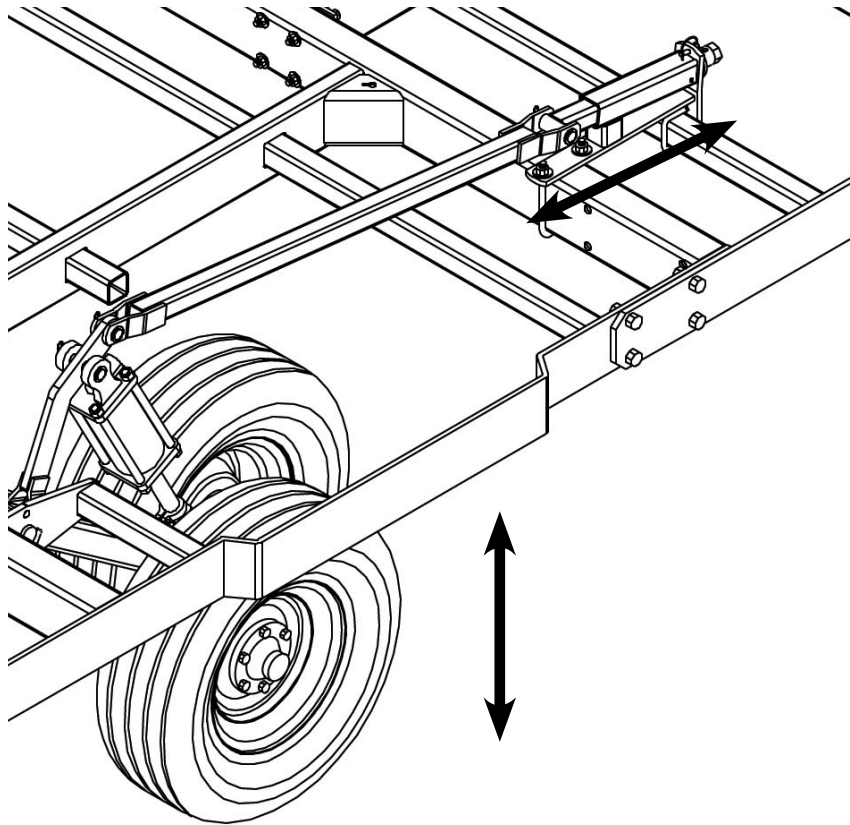
The roll pin fits inside
the clevis keeping the
clevis away from the
walking tandem arm.

Enlargement of picture to left

Adjustment Point Attachment:

Attach the adjustment arm as shown below.

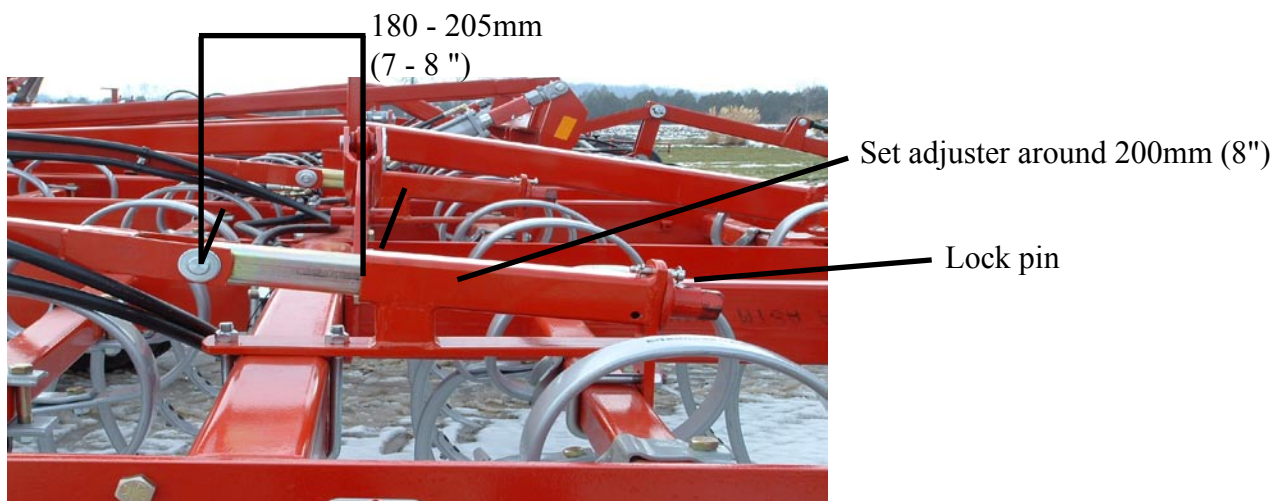
Extending the adjustment arm raises the wheels and lowers the body. For more information on adjustments refer to the "Owners Manual".



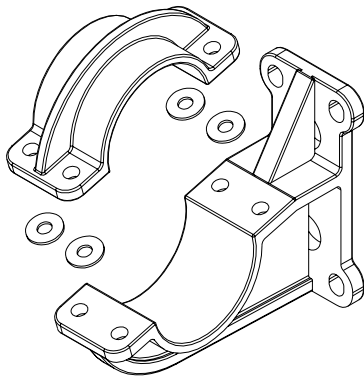
Adjustment Slider:

Make sure the wing adjustment slider is cranked out to 7 - 8" *before* raising the machine with the cylinder. If not, a tine could hook itself over the wheel axel, requiring you to remove the tine to unhook it.

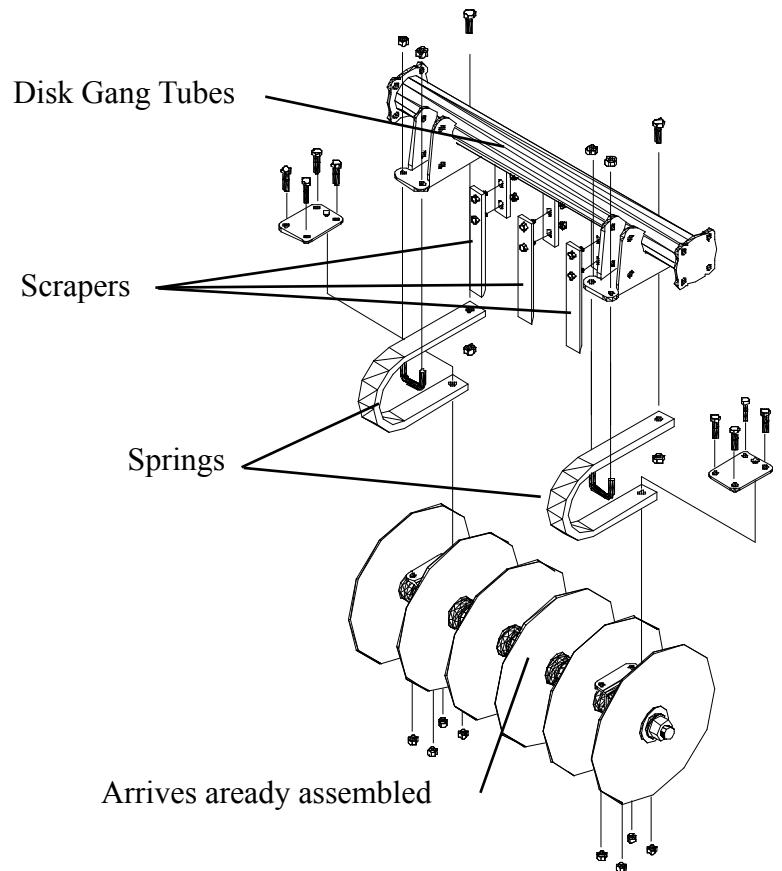
This is due to the fact that the Res-Till has a slightly different wing linkage than the vibro-till, giving the wings more lift when turning in the field.



Res-Till Disk Gang Assembly



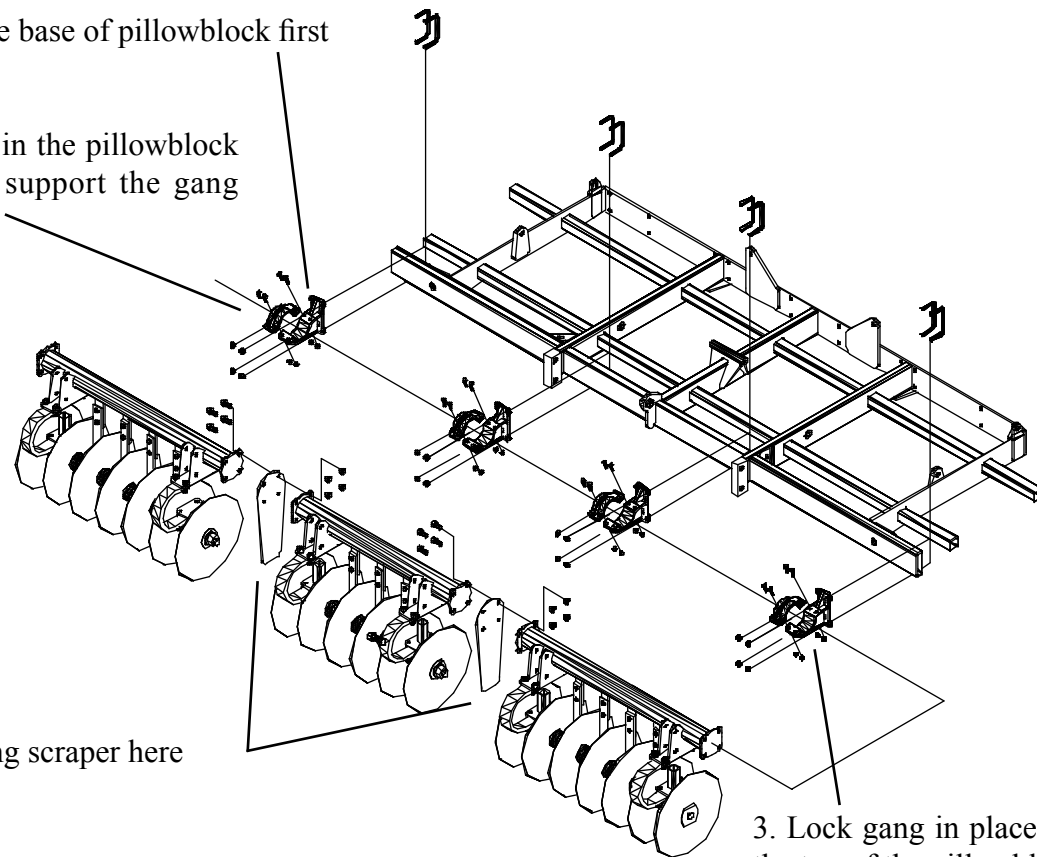
Place 4 1/2" washers between the top and bottom of the 'pillow block' castings.



1. Mount the base of pillowblock first

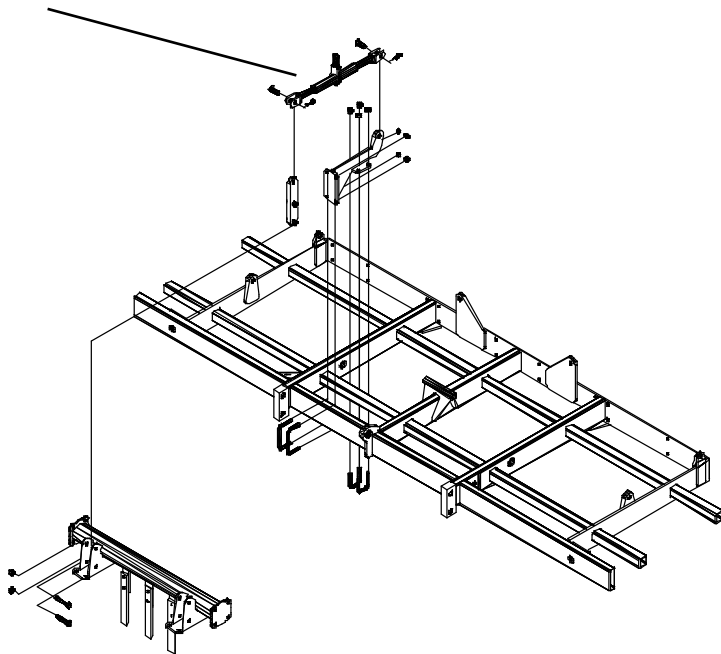
2. Set gang unit in the pillowblock base. This will support the gang unit.

Place the intergang scraper here



3. Lock gang in place by attaching the top of the pillowblock

This is the disk gang pitch adjuster.



This is the disk gang pitch adjuster when assembled.



This shows the connecting point between two individual disk gangs. Please take note of the intergang scraper.

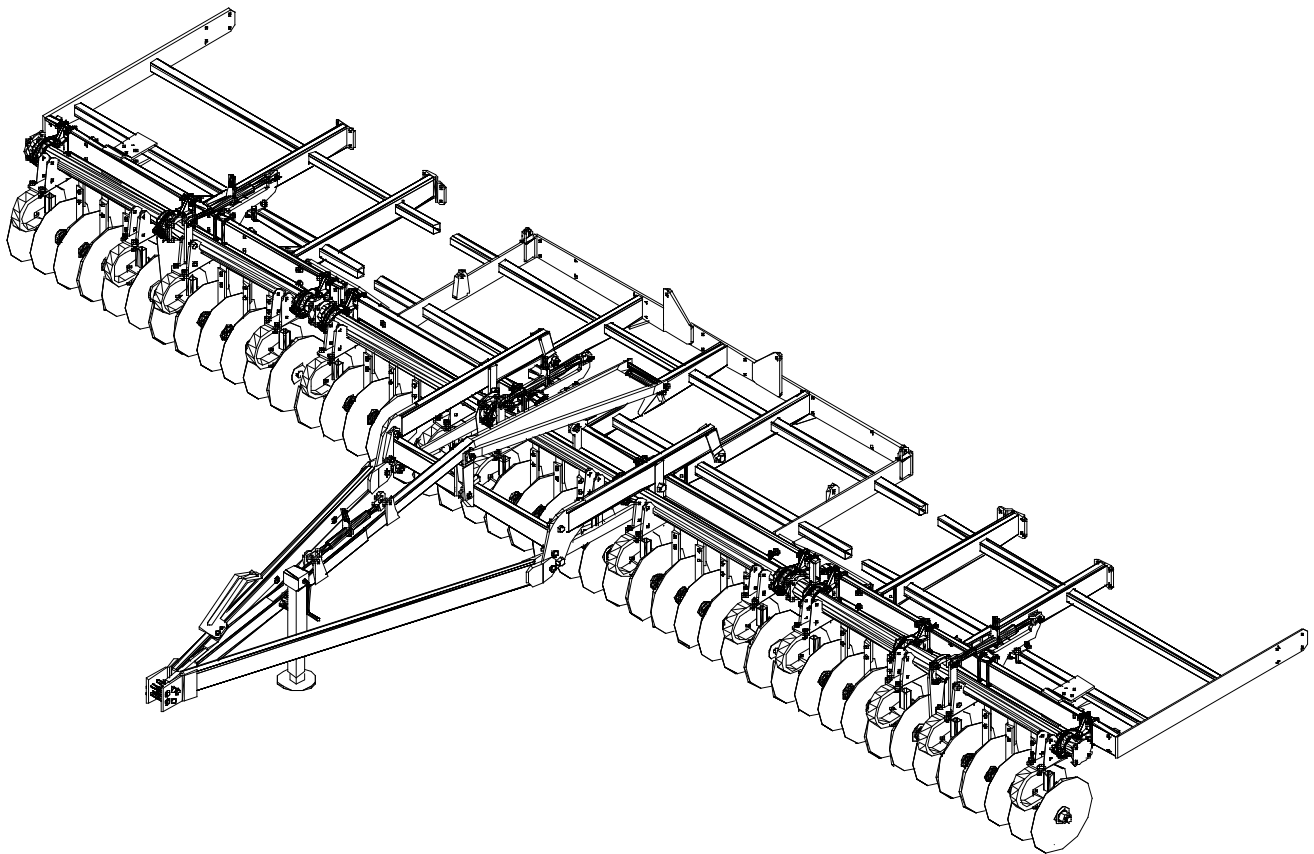


Mount the pillow blocks to the disk gang tube close to the spring plate on the wings to prevent side movement.

When the flange bolts are tightened down, the disc gang tubes bow slightly. Leave the flange bolts loose until the pillow blocks have been tightened down.



This picture shows an end view of a completed disk gang assembly. Also visible is the gang pitch adjuster turnbuckle (1) and a intergang scraper (2).



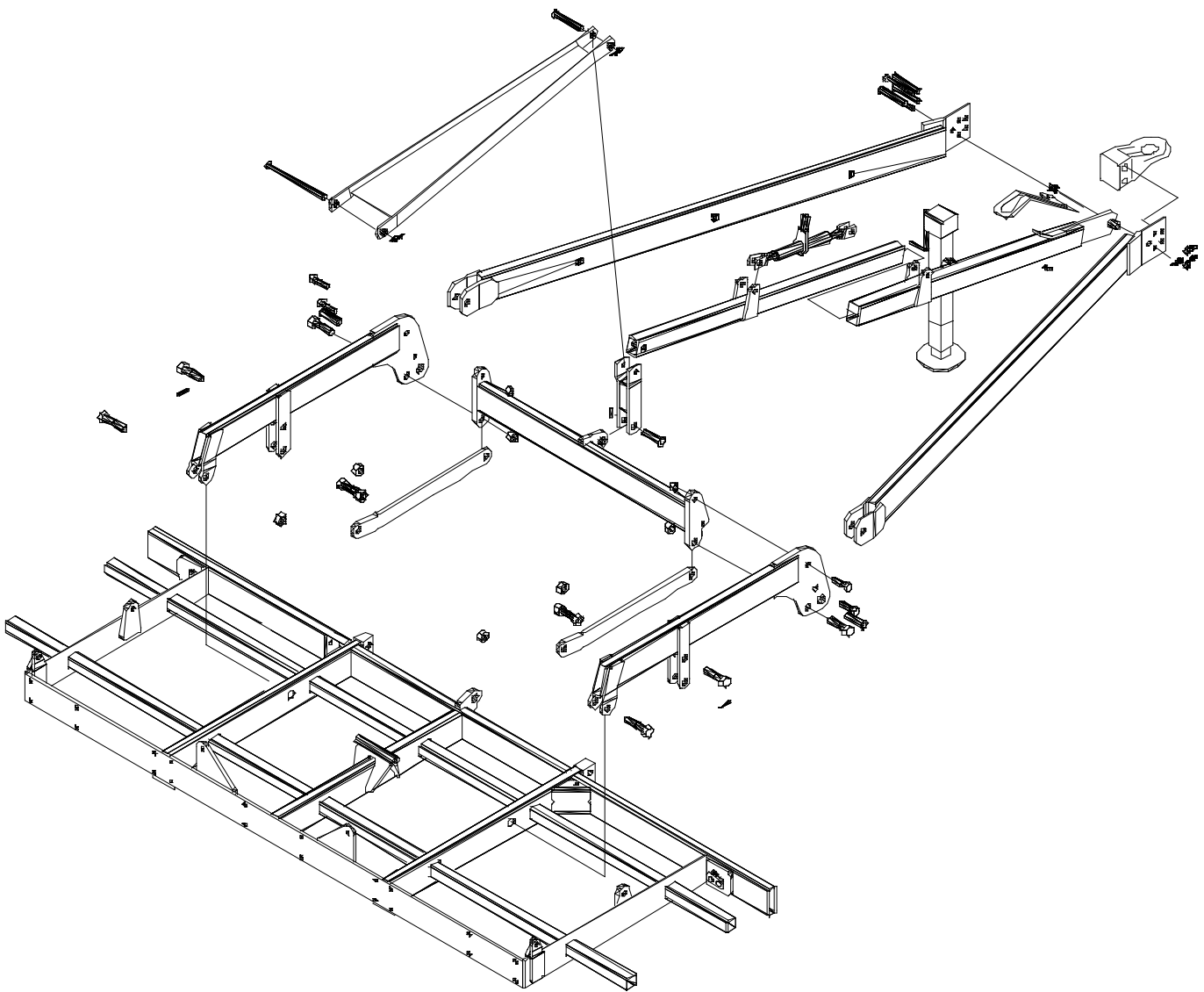
This is a full view of a completed disk gang assembly. The model shown is a wide center 9 metre (30 ft) Res-Till.

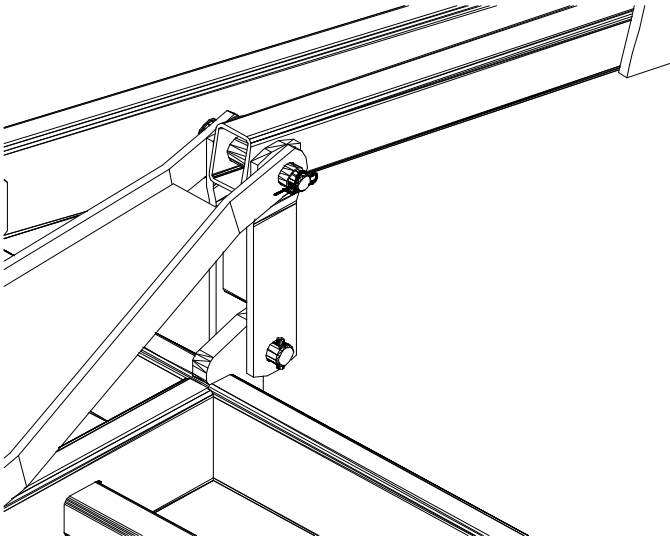
Hitch Assembly:

The Hitch must be installed before any hydraulics are operated.

Assemble the hitch using the components shown in the diagram below and the pictures on the following page.

Compare this diagram to those of the hitch assembly in the "Spare Parts List" if further clarification is desired.



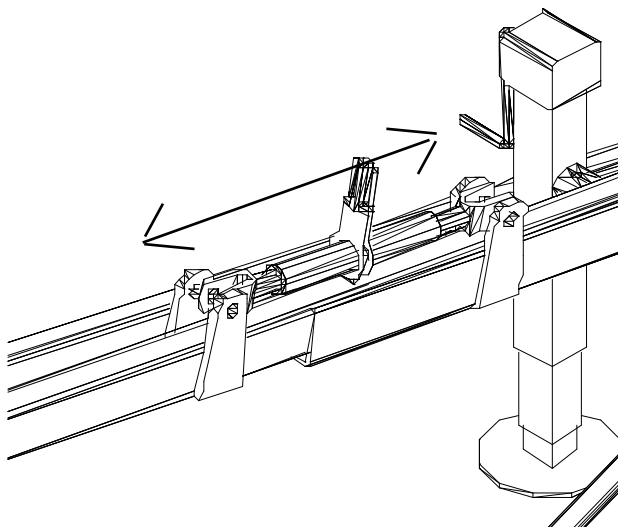


Examples of what the hitch attachment points should look like.



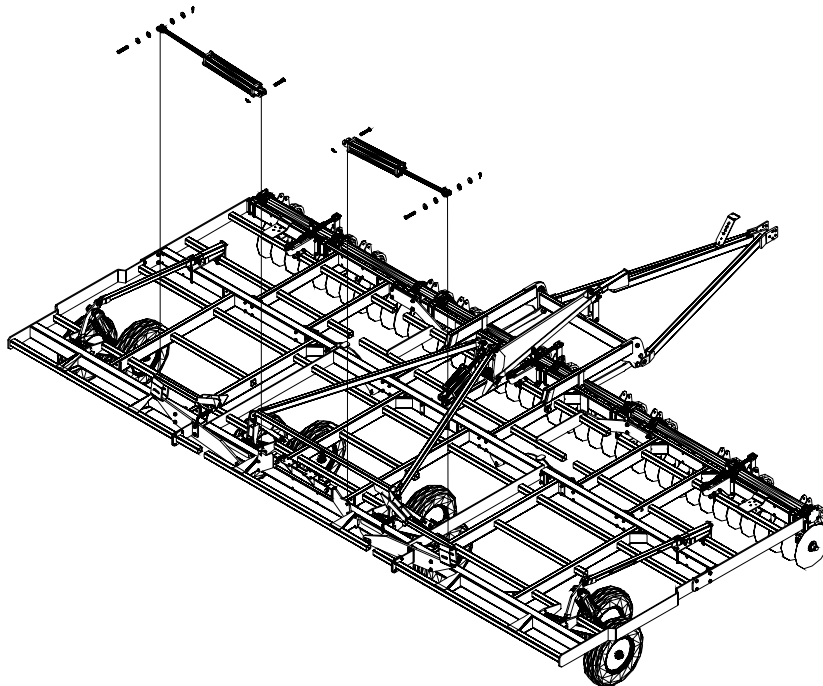
The tongue should be able to swing if the assembly is done properly.

Depending on Machine Balance.

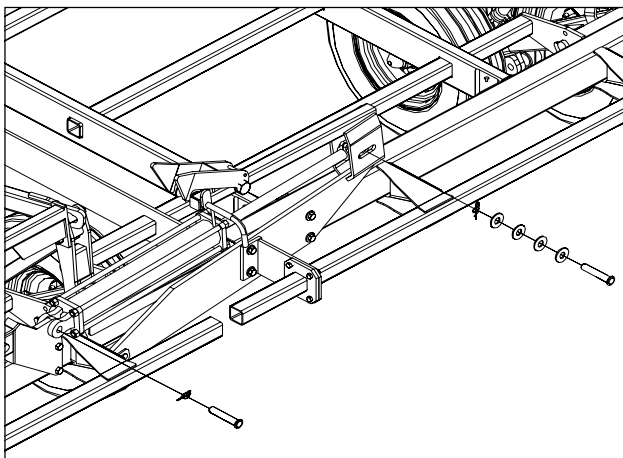


The turnbuckle allows you to adjust the pitch of the cultivator. Lengthening the buckle raises the front, conversely shortening the buckle drops the front of the cultivator.

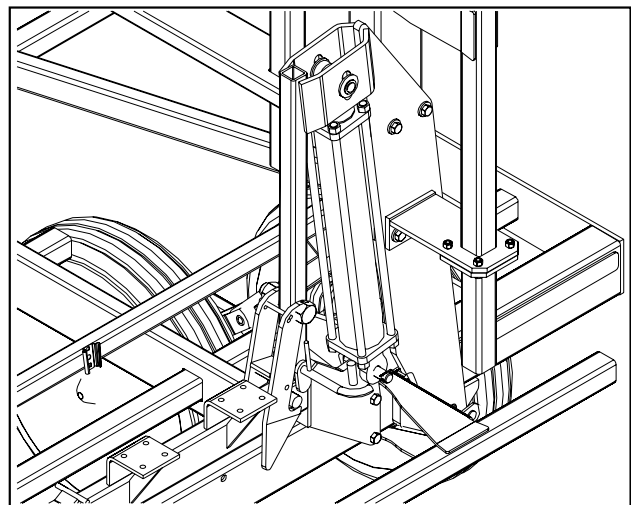
Fold Cylinders Installed: Narrow Center



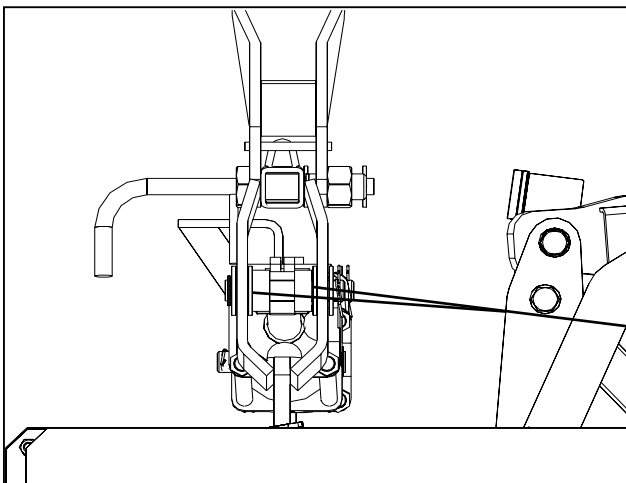
Make sure the fold Cylinder pins are correctly inserted before using the machine.



Cylinders in unfolded position.

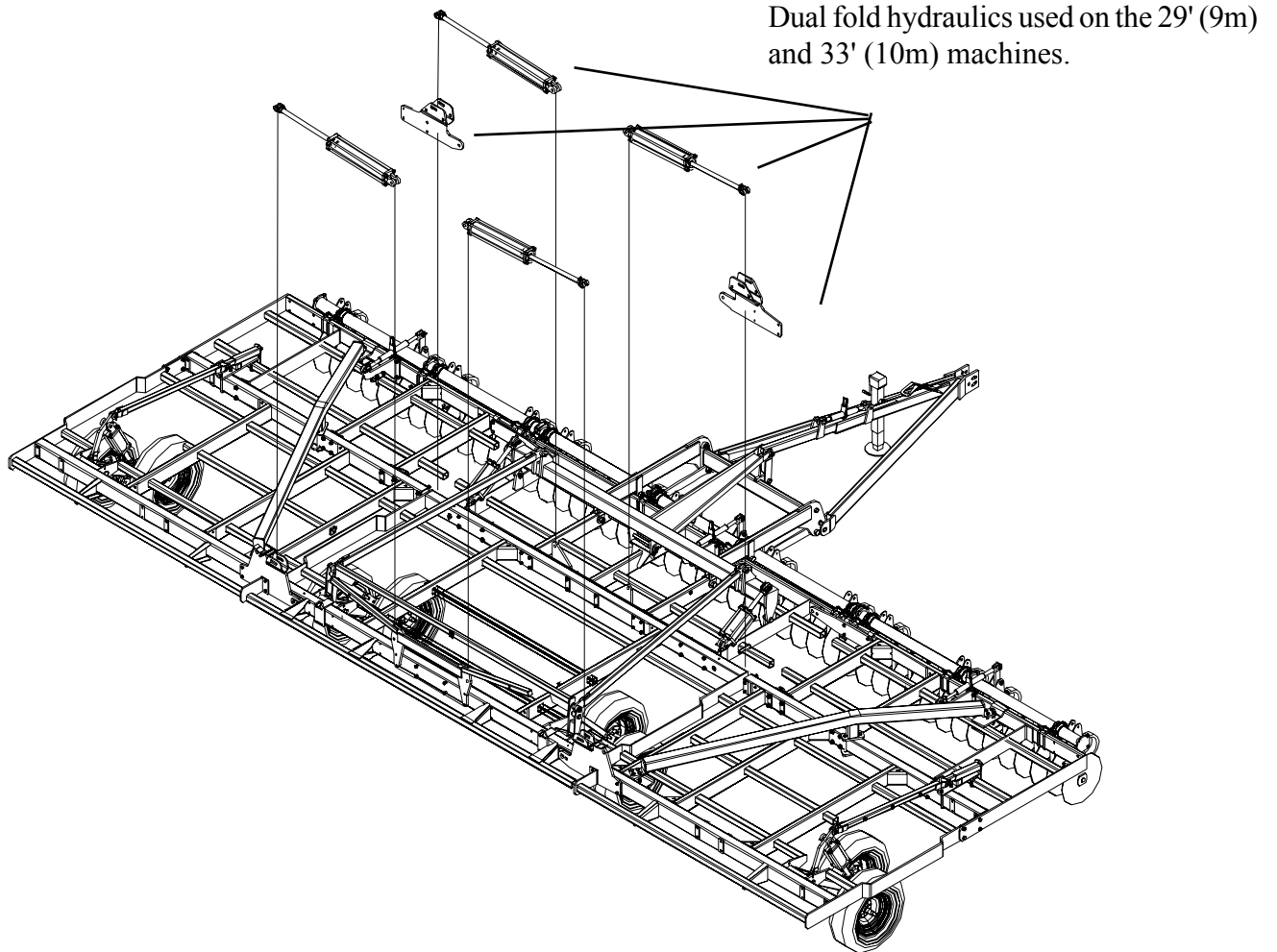


Cylinders in folded position.

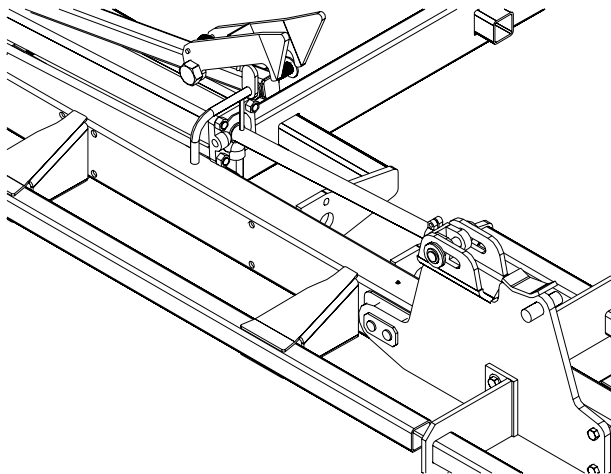


Side view of rod end: Be sure to place four (4) 1" (25 mm) washers at rod end of cylinder. The inside two (2) keep the clevis centered.

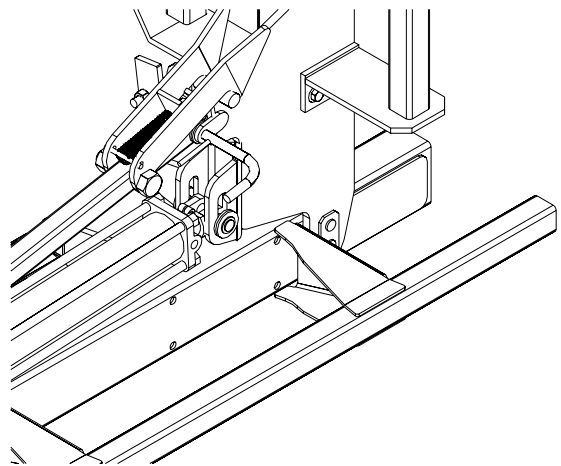
Fold Cylinders Installed: Wide Center



Make sure the fold lock pins are correctly inserted before using the machine.



Cylinder in unfolded position.



Cylinders in folded position.

Hydraulic Assembly Information:

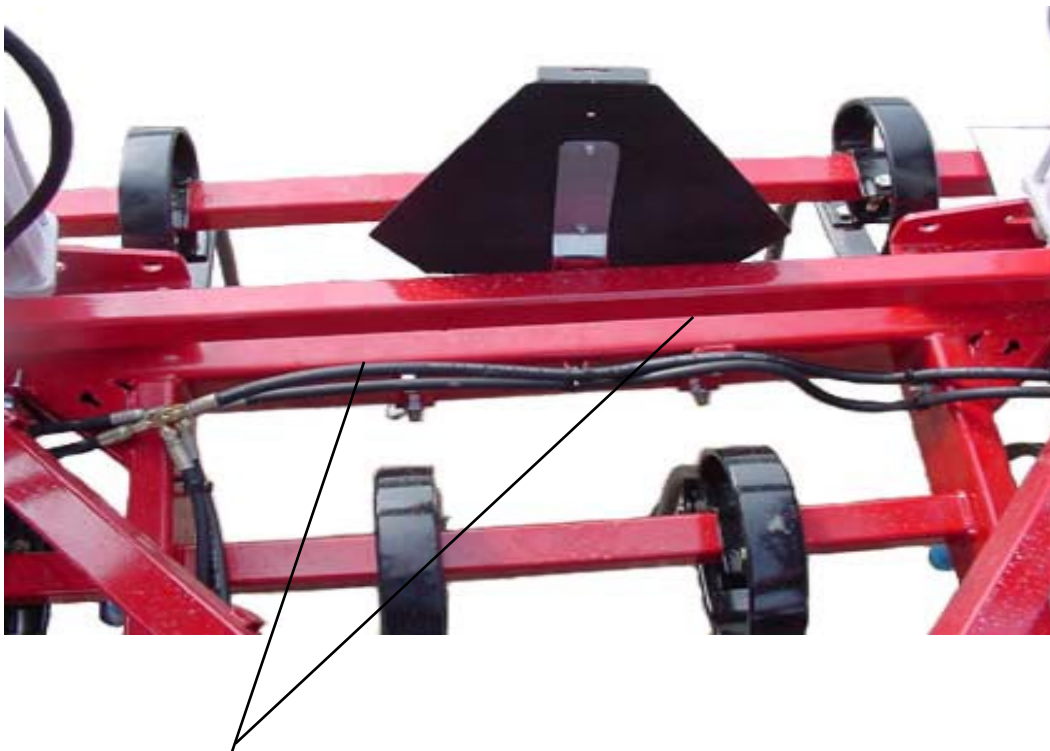
For proper installation of the hose lines and fittings refer to the hose layout diagram provided in this booklet. The hydraulic hose lines and fittings are provided in the hose kit. Secure the hoses to the frames with the hose clamps, carriage bolts and locknuts provided.

IMPORTANT NOTE:

DO NOT PLACE HOSE LINES ALONG FRAME IN FRONT OF TOP FRAME MOUNTING PLATES AS SHOWN BELOW. Hose lines can become pinched by the front wing fold stop plate when folding the machine if the hoses are laying on top of the frame tube.

Also improperly attached hoses can compromise the hydraulic system. This could damage the equipment and should be avoided. Check the hydraulic attachments before using the machine.

The cylinders used are designed to rephase. Raising and lower the machine to its maximum extent with make all of the cylinders act in phase.



THIS IS RIGHT! KEEP HOSE LINES RUNNING ACROSS THE CULTIVATOR BEHIND THE FRAME TUBE AND NEATLY CLAMPED TO THE FRAMES WITH THE HOSE CLAMPS OR PLASTIC TIE STRAPS PROVIDED.

Further notes on Hydraulics Installation

The wing fold cylinders must be charged with oil before attempting to fold the cultivator. Disconnect the cylinder rod clevis from the fold bracket and place a block under the cylinders as shown.

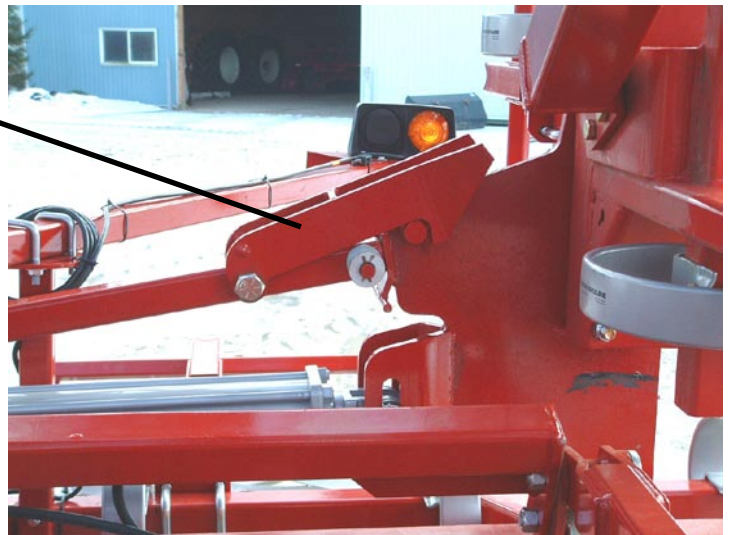
Connect the hoses to the tractor or portable hydraulic unit and stroke the wing fold cylinders in and out several times holding the lever at the end of the stroke to remove the air from the system and ensure the cylinders and hoses are full of oil. Remove the block and reconnect the cylinder to the fold bracket with the cylinder pin, washer and clip pin.



Always insert the transport lock on the master cylinder when ever the cultivator is placed in the raised position for transport, maintenance or storage.

Secure with the lock pin and clip provided.

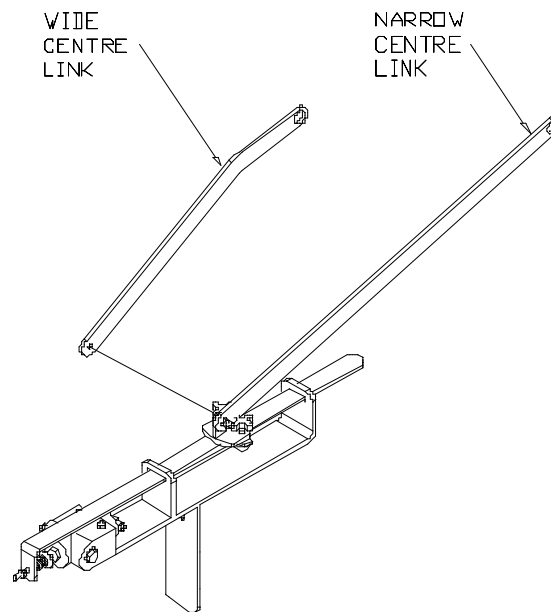
Always make sure the wing fold lock latches are in the correct position when wings are raised in the folded position. Be sure to unlatch the lock latch before unfolding the cultivator.



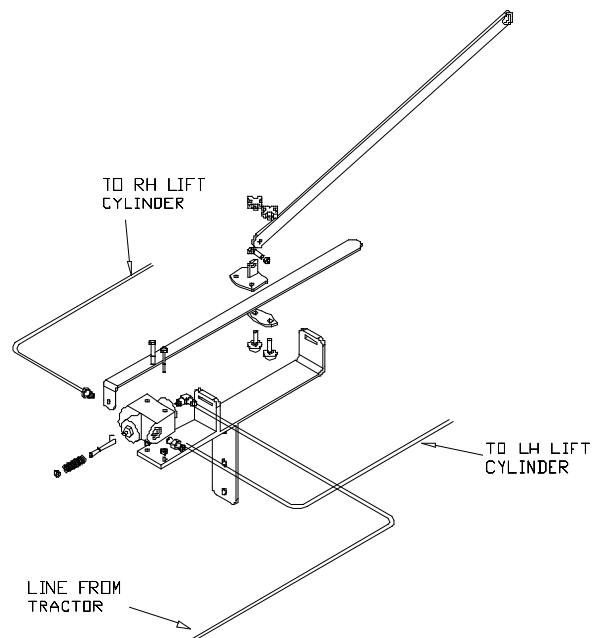
Depth Control Valve Close-Up:

There are two versions of the depth control valve assembly, one for the wide center and one for the narrow center.

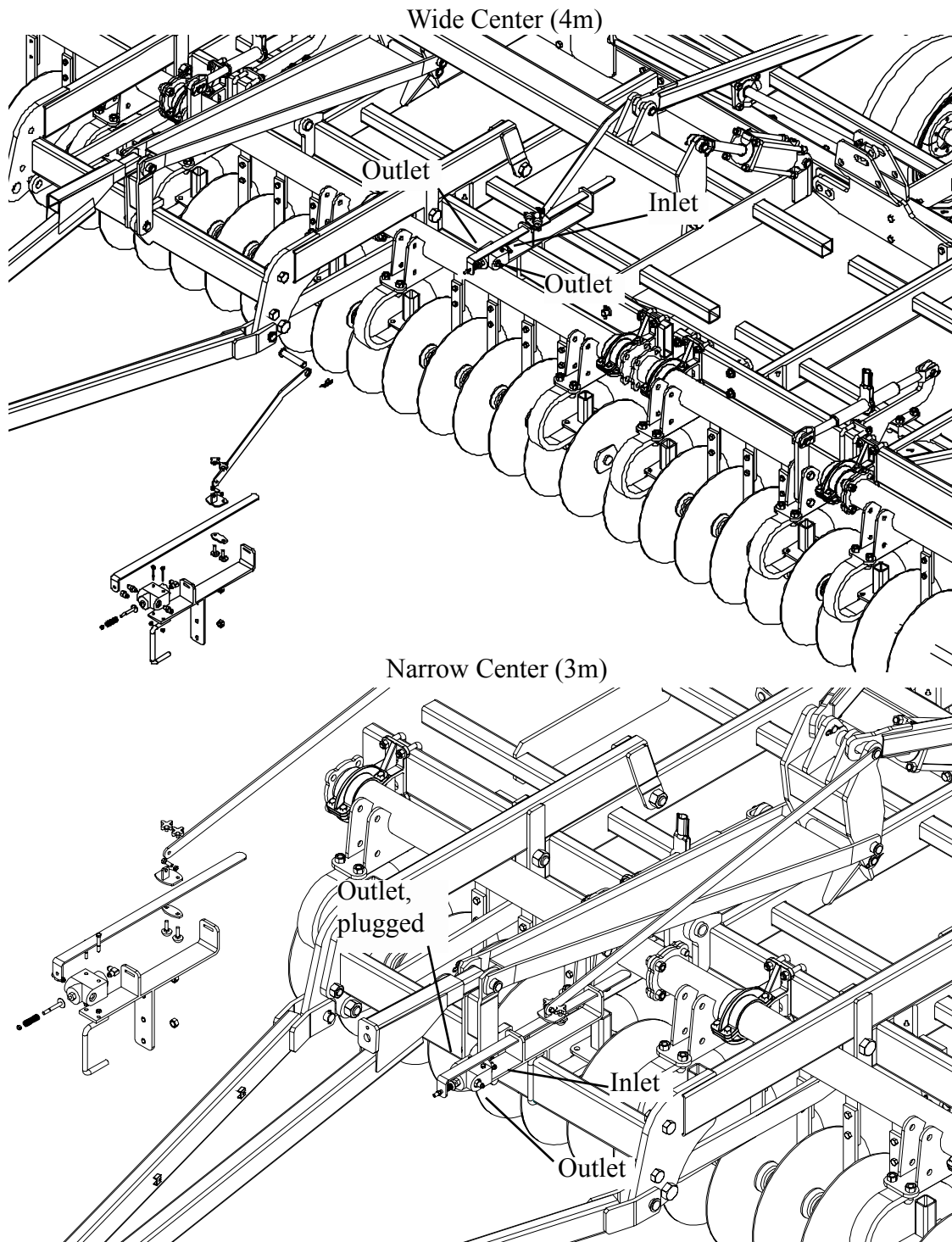
Assembled View



Exploded View



Depth Control Valve Installation



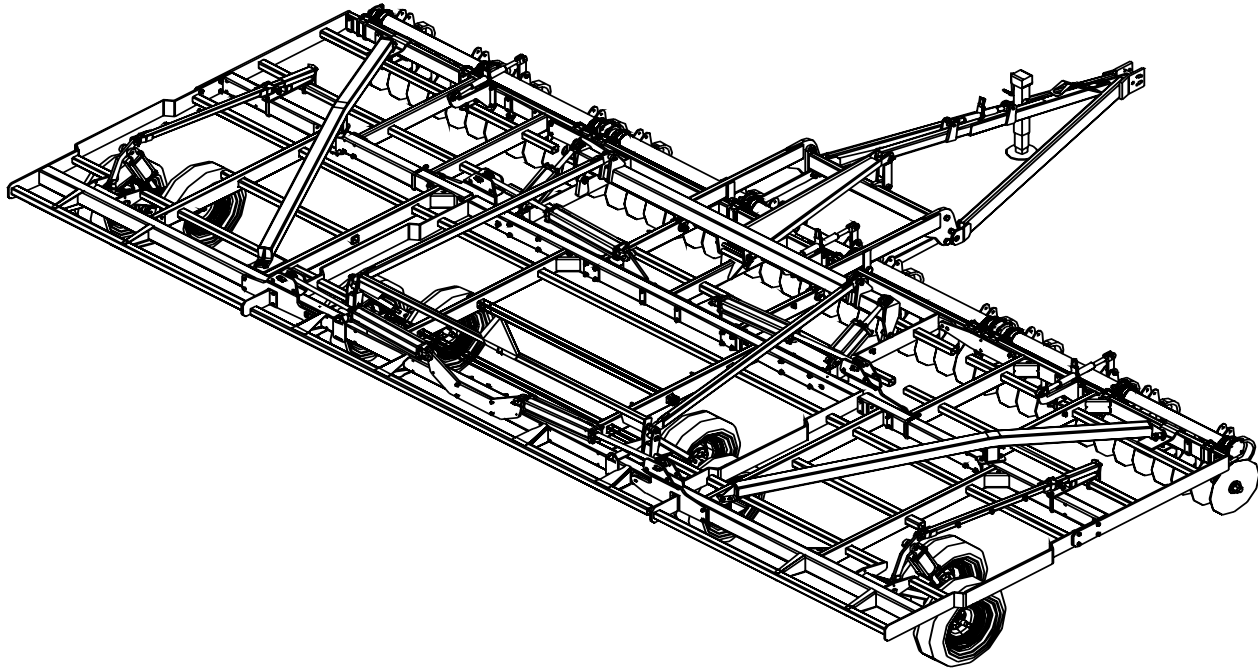
The depth control valve is routed between the tractor and the base of the master cylinder(s). The valve is marked with “in” and “out” at the inlet and outlet ports. There is one master cylinder on the narrow (3m) base machine, so one outlet port is to be plugged. On the wide (4m) base machine, the valve also acts as a tee, splitting the tractor hose off to the two master cylinders.

On Completing the Assembly:

When the cultivator frame is fully assembled check all that nuts and bolts are secure.

Check the hose layout and hydraulic connections according to the hydraulic diagram.

Be sure to read the Owners Manual before attempting to fold or operate the cultivator. The Owners Manual provides important instructions and safety precautions that must be followed before attempting to hook up and move the cultivator after assembly.



If you have purchased optional levelling attachments such as the combi harrows shown on the cultivator below, refer to the manual provided with the Harrow Assembly for proper installation and adjustment of the attachments.



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See your local Kongskilde representative for current product specifications, instructions and options.

Installing Safety Decals and Product Identification:

1) Install the Kongskilde Logo decals and model name decals (VIBRO-till 2800) on both sides of the draw tongue and wing frames as shown.

KONGSKILDE & Vibro-Till
2800 on both sides of hitch



KONGSKILDE & Vibro-Till
2800 on both side of wing
frames



2) Install a Kongskilde Decal on both sides of the centre frame side bar as shown below.



3) Install Yellow Safety Reflectors #600475131 on both front corners and sides of the 2800 centre section.



YELLOW REFLECTORS
on both front corners and side
bars of front frame.



YELLOW REFLECTOR
front view



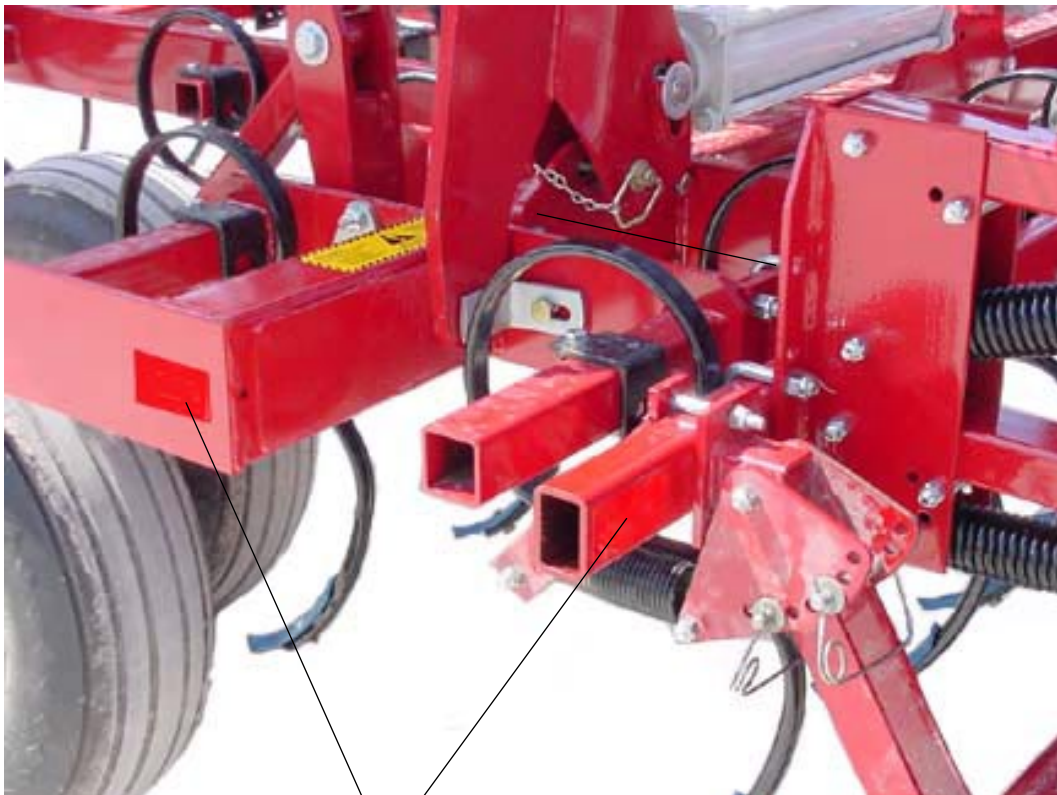
YELLOW REFLECTORS
side view

4) Install Red Safety Reflectors #600475132 on both rear fold brackets and sides of the 2800 centre section.

RED REFLECTORS on Rear
Hinges and side bar

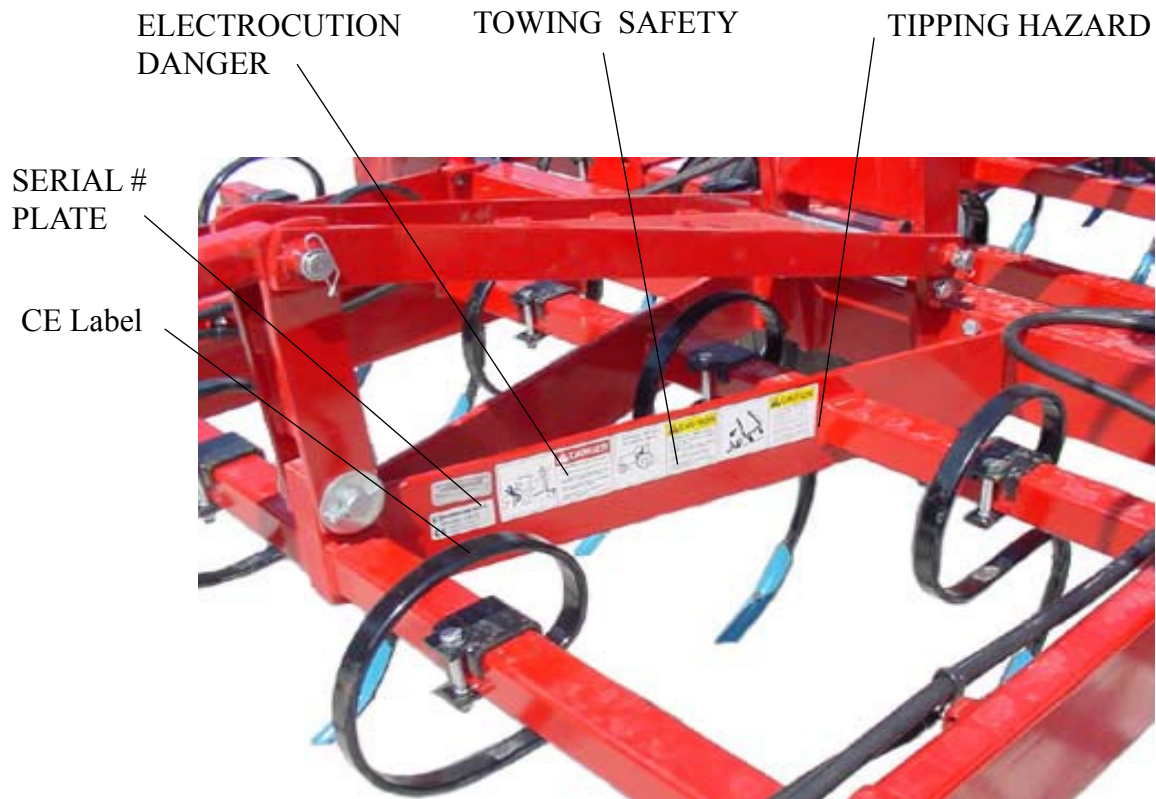


If the rear reflector position could be blocked from view by harrow mounting brackets then the reflector can be placed in an alternate position on the rear corner of the toolbar to provide better visibility.



RED REFLECTORS on
Rear Toolbar Tube and Side Bar

5) The 3 safety decals #600475170, 600475169 & 600475160 are located on the front frame side bar beside the serial number plate and the CE label as shown.



6) Install the Wing Fold Lock Warning decals # 600475176 on the top of the centre section frame tubes near the wing fold lock plates so it can be viewed with the wings in the folded or unfolded position as shown below.



7) Install the WING FOLD SAFETY DECALS #600475039 on the front and rear main frame tubes on the 2800 wing frames. The decals should be centred on the tube at about eye level so they can be read clearly when the wings are folded as shown below.

WING SAFETY on
front wing frame tube



WING SAFETY on
rear wing frame tube



[illegible]