



2800 DOUBLE FOLD **FIELD CULTIVATOR**

Kongsilde
2800 Series



***Model may not be exactly as shown.**

Kongsilde reserves the right to make changes to product designs and specifications without notice or obligation to rework. See your local Kongsilde 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 Double Fold with 8m working width, a minimum area of 12M x 13M with an overhead clearance (wing fold) of 7M is needed (12M x 13M x 7M)



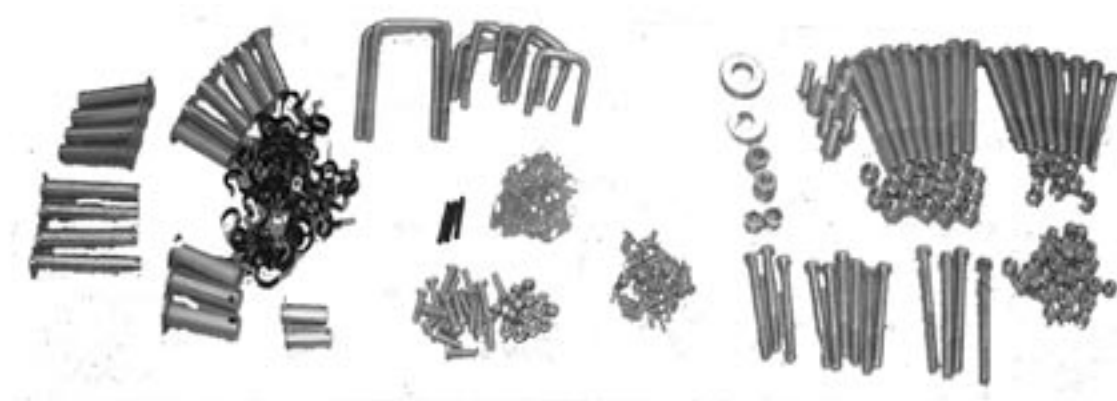
If the unit is to be assembled and folded indoors, additional clearance may be needed in the assembly area.

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.

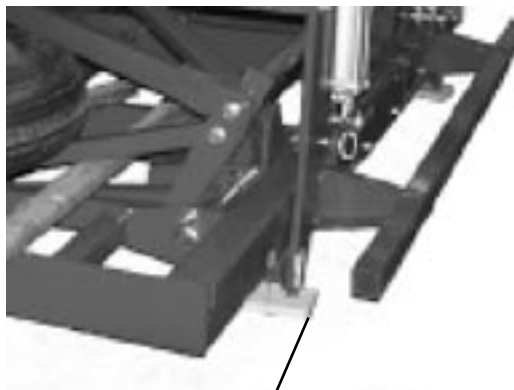
Be sure to check the packing slip to be certain everything is present.

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



Fastners sorted for ease in assembly.

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 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 hazardous. Use proper equipment 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 steel 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.

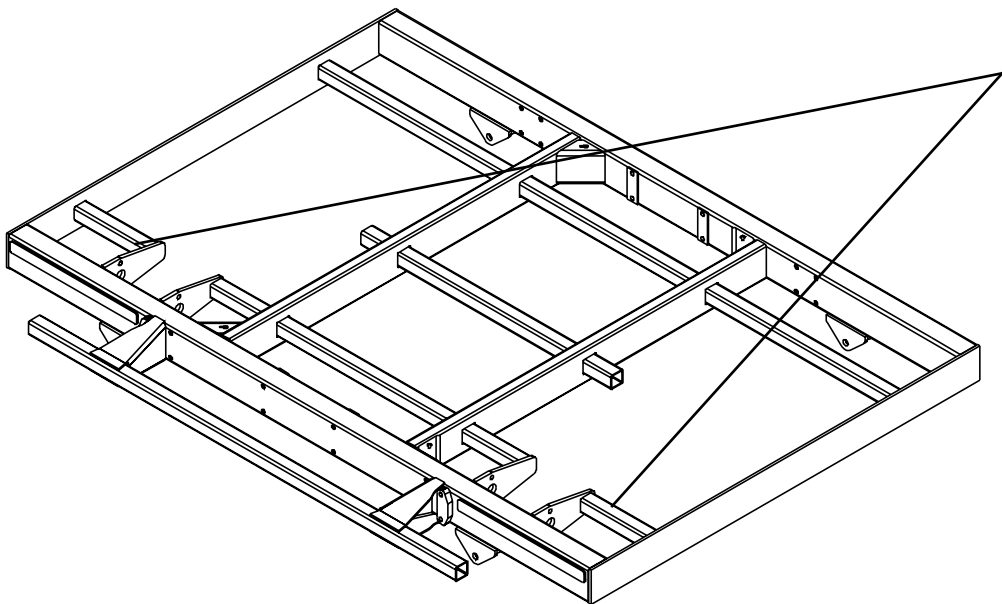
Tines:

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. There is a booklet that came with the machine called "Tine Patterns." This booklet contains a number of different arrangement of tines 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.



An attached tine



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 here in these locations

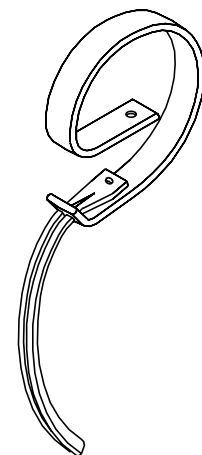
A warning for those attaching tines

For the VT 2800 the tines can be attached in a number of differen patterns.

For the VTH and the Consertine the standard patterns are: 10cm (4") and 15.5cm (6"). These patterns are included in the tine pattern book.

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.

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



The VTH Tine

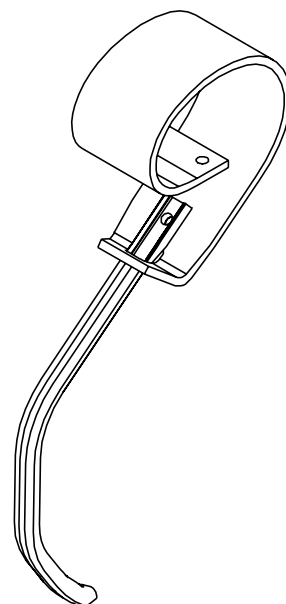
Assembly Information for the VFM Tine:

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.

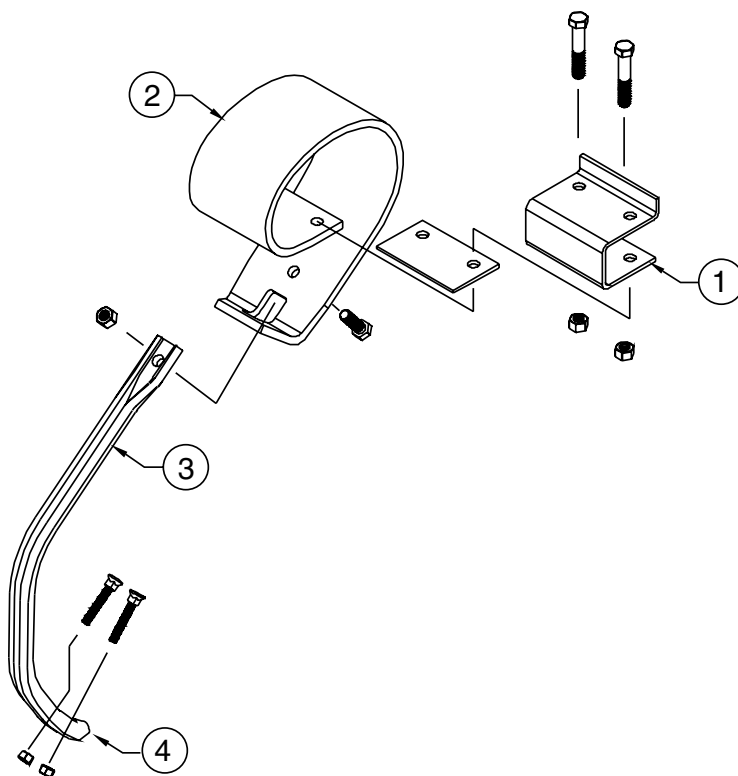
To avoid this problem assemble the tines in the following order. Begin by bolting the clamp (1 in the diagram below) in the position indicated by the tine pattern. Then attach the coil (2) to the clamp using the spacer. Next bolt the stem (3) to the coil. Finally fasten the sweep (4) to the tine. Check 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



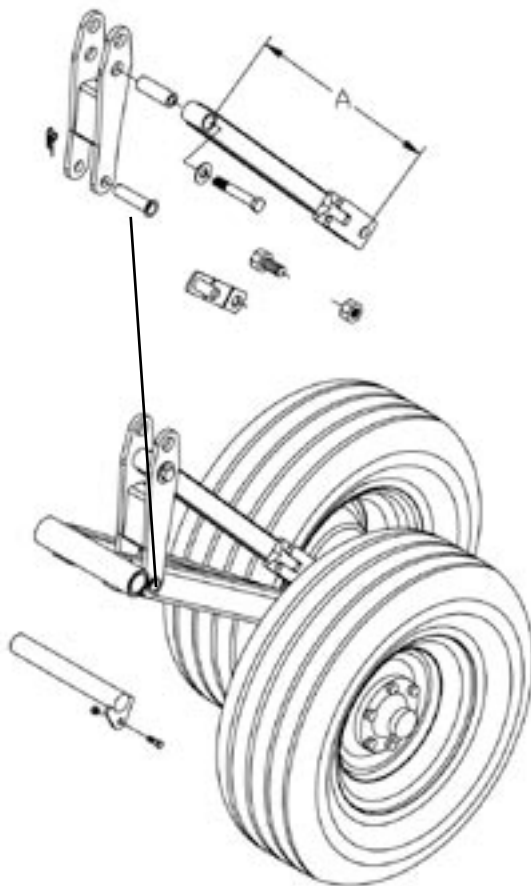
Tine Assembly Diagram

Mounting Wheels on the Center Frame:

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.



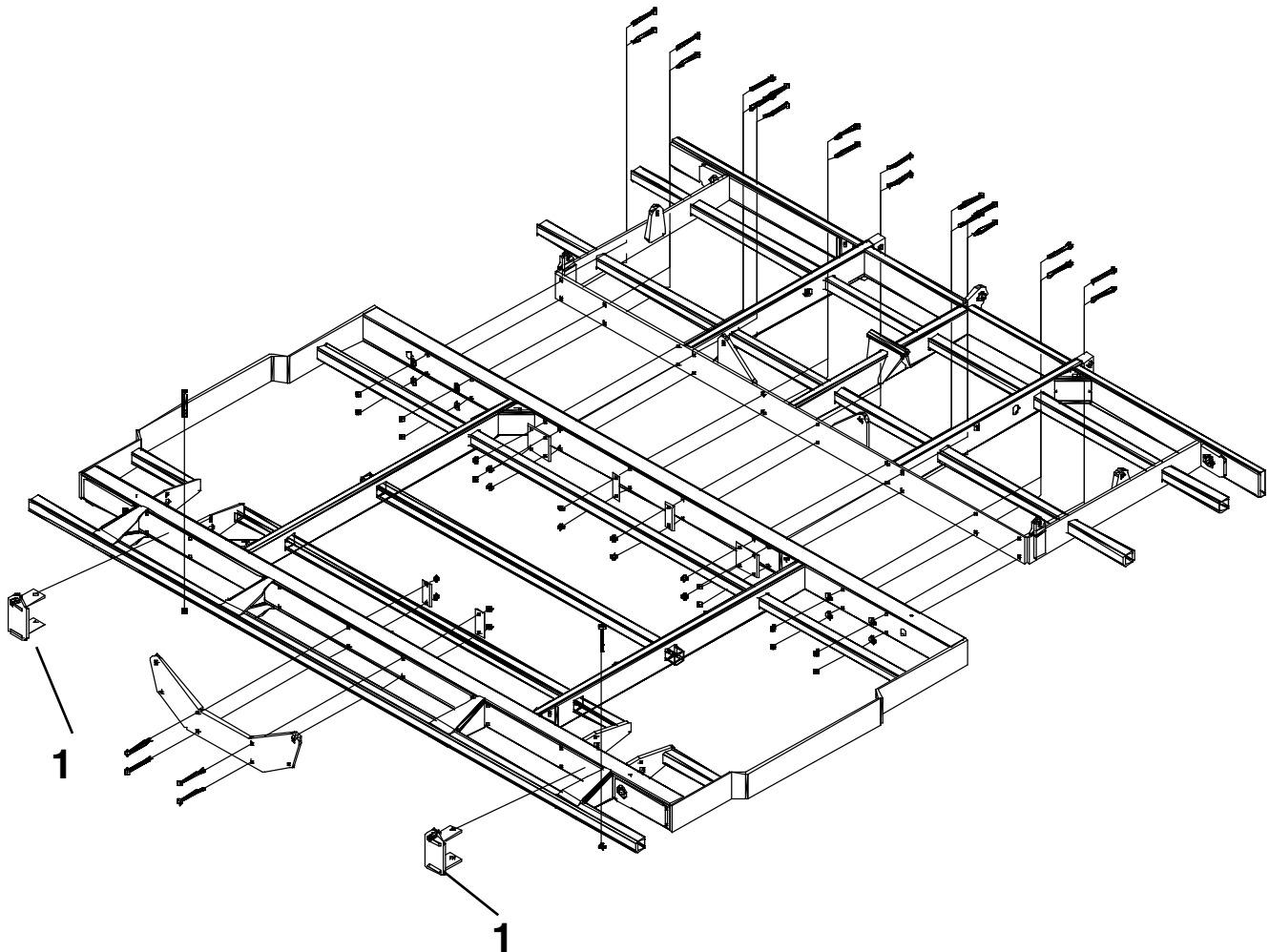
8000lbs. Center frame
wheel assembly.



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.

Assembling the Center Frame:

The diagram below shows how to assemble the center frame.

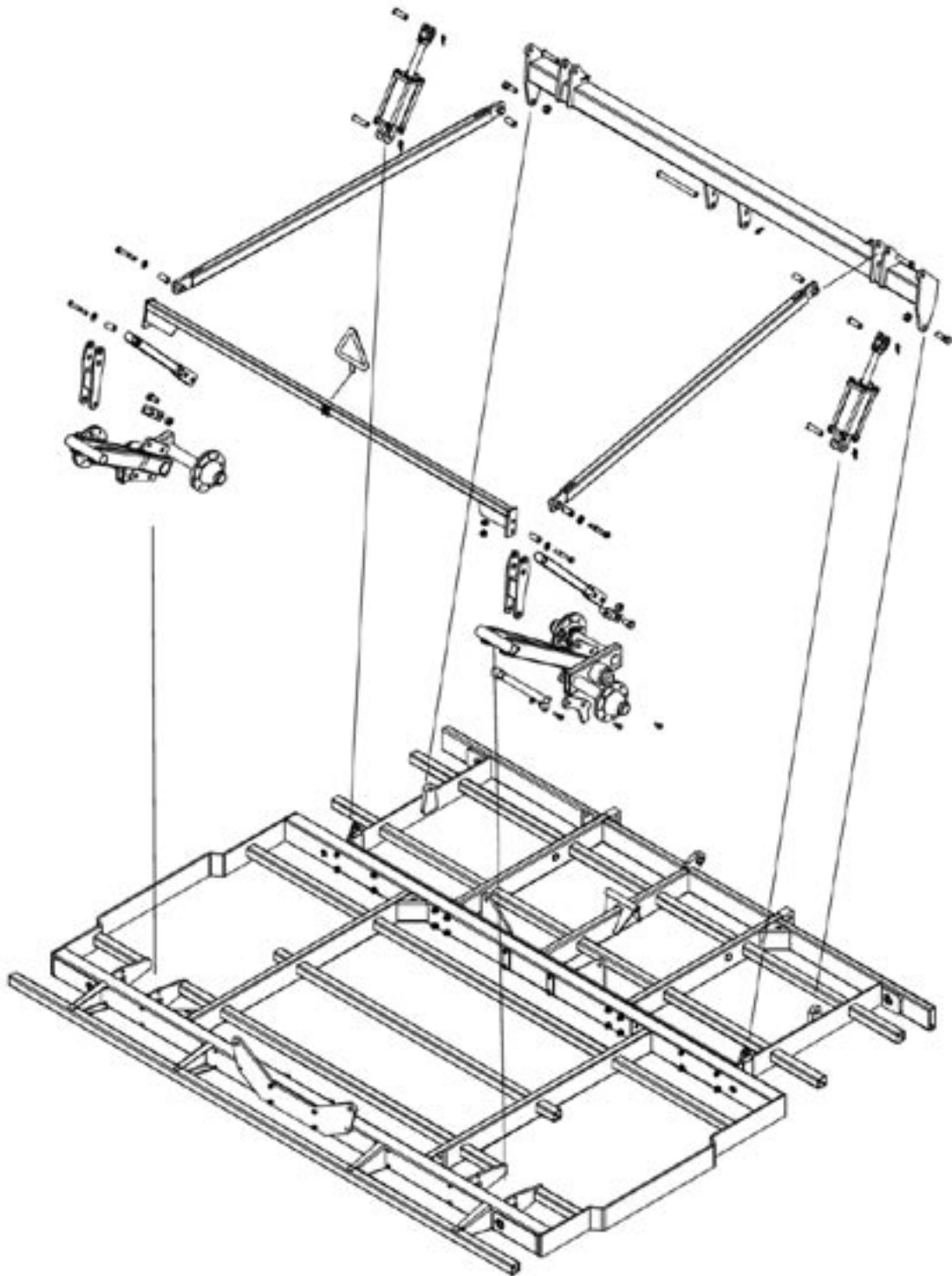


The front frame attaches to the rear frame as shown above. Use the bolts listed in the "parts book". Be sure to bolt both top and bottom holes in the front and back. Remember to tighten them well.

Note 1 (winglock): Fold the cultivator carefully and tap the winglock into the correct position. The tube in the winglock should line up with the holes in the hinge plate. Once this is done, tighten the bolt.

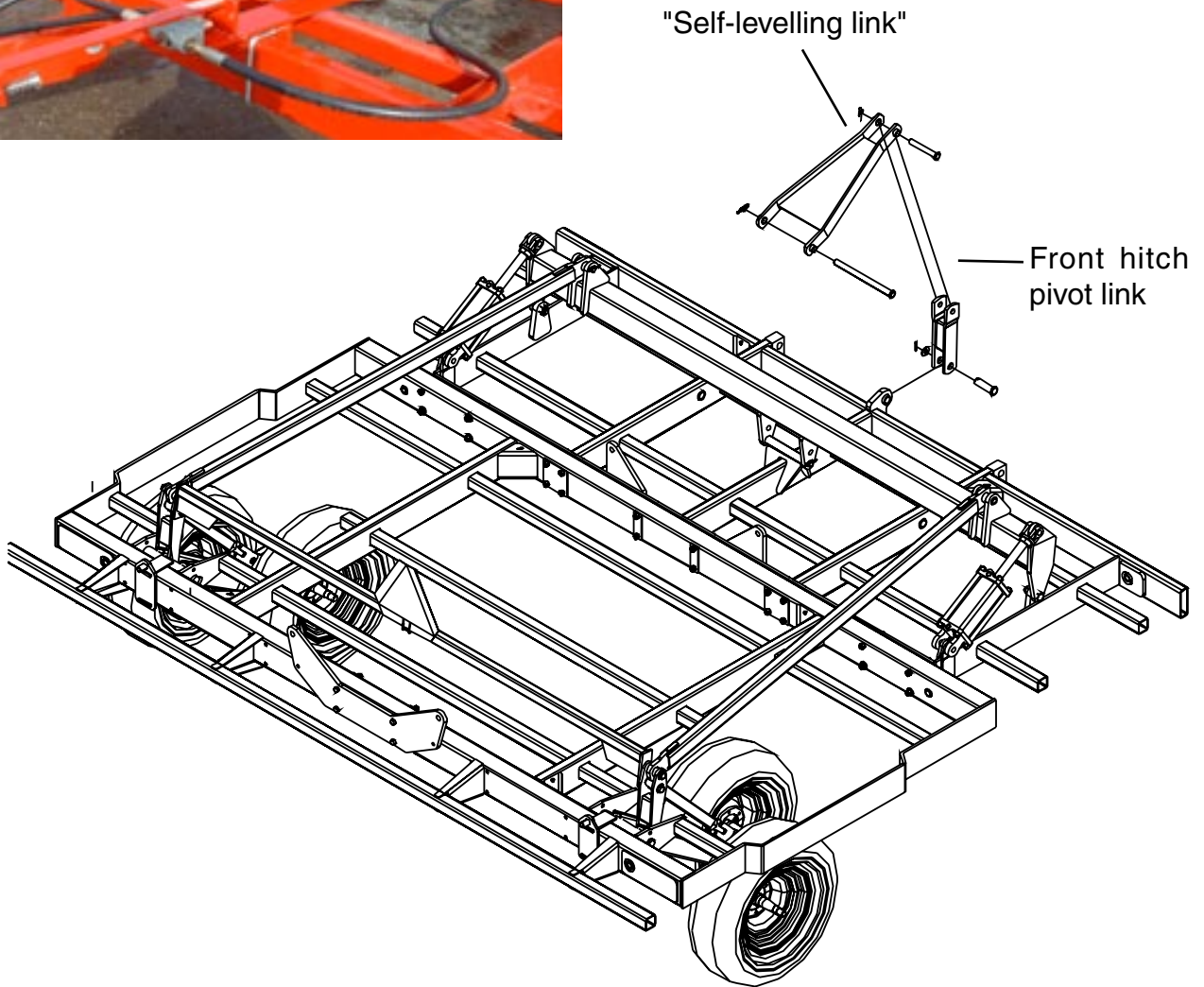
Self Levelling Linkages:

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





Detail view of front linkages on the centre frame.

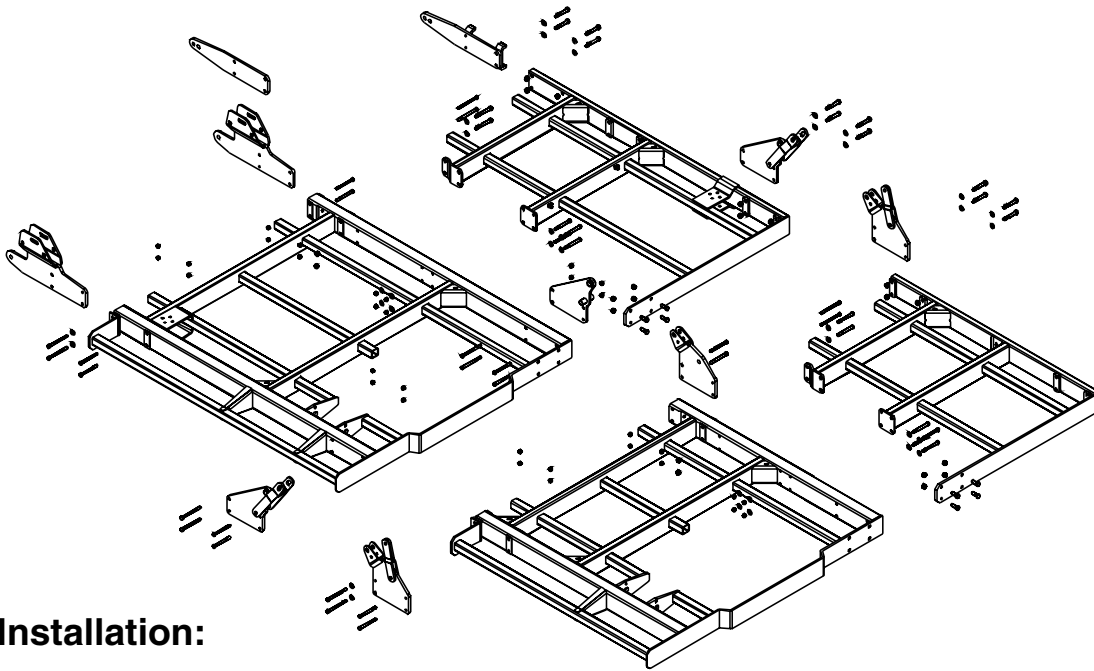


Overview of the completed self-levelling linkage system.



Hinge Assembly:

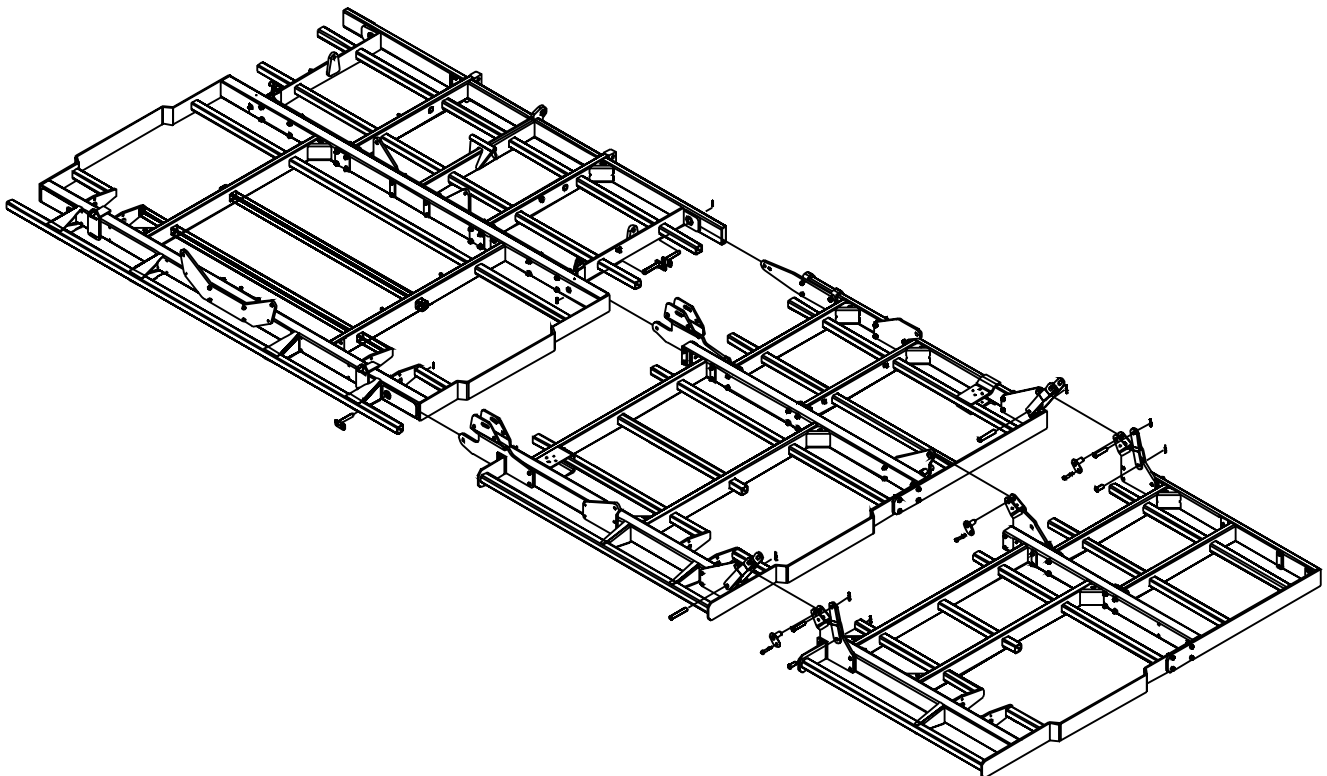
These diagrams show how to assemble wings and how to attach the hinges.



Wing Installation:

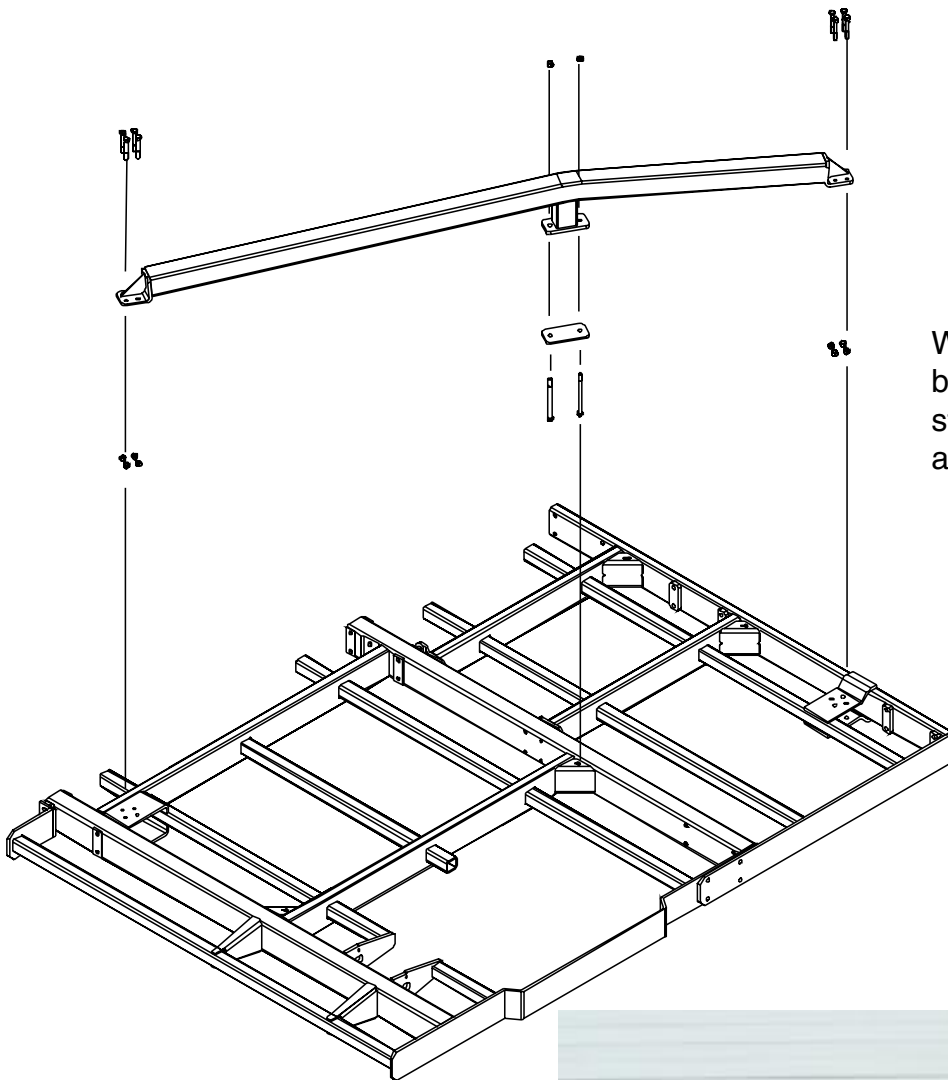
The picture below shows the center frame and the two sections of one of the wings of the cultivator. The double fold cultivator, as you can see from the picture, folds its wings in two locations to enable this large cultivator to present a small aspect when transporting.

The wings are attached at the hinge points. The second image below shows where the hinges are and how to bring the frames together.



Cross Brace Installation:

The cross brace is present on the inside wing section for 40' (12M), 43' (13M), 46' (14M) and 50' (15M) machines. The cross brace provides greater rigidity on larger wings.



When Positioning the cross brace on the inside wing hand start the nuts on the all bolts and tighten in a even manner

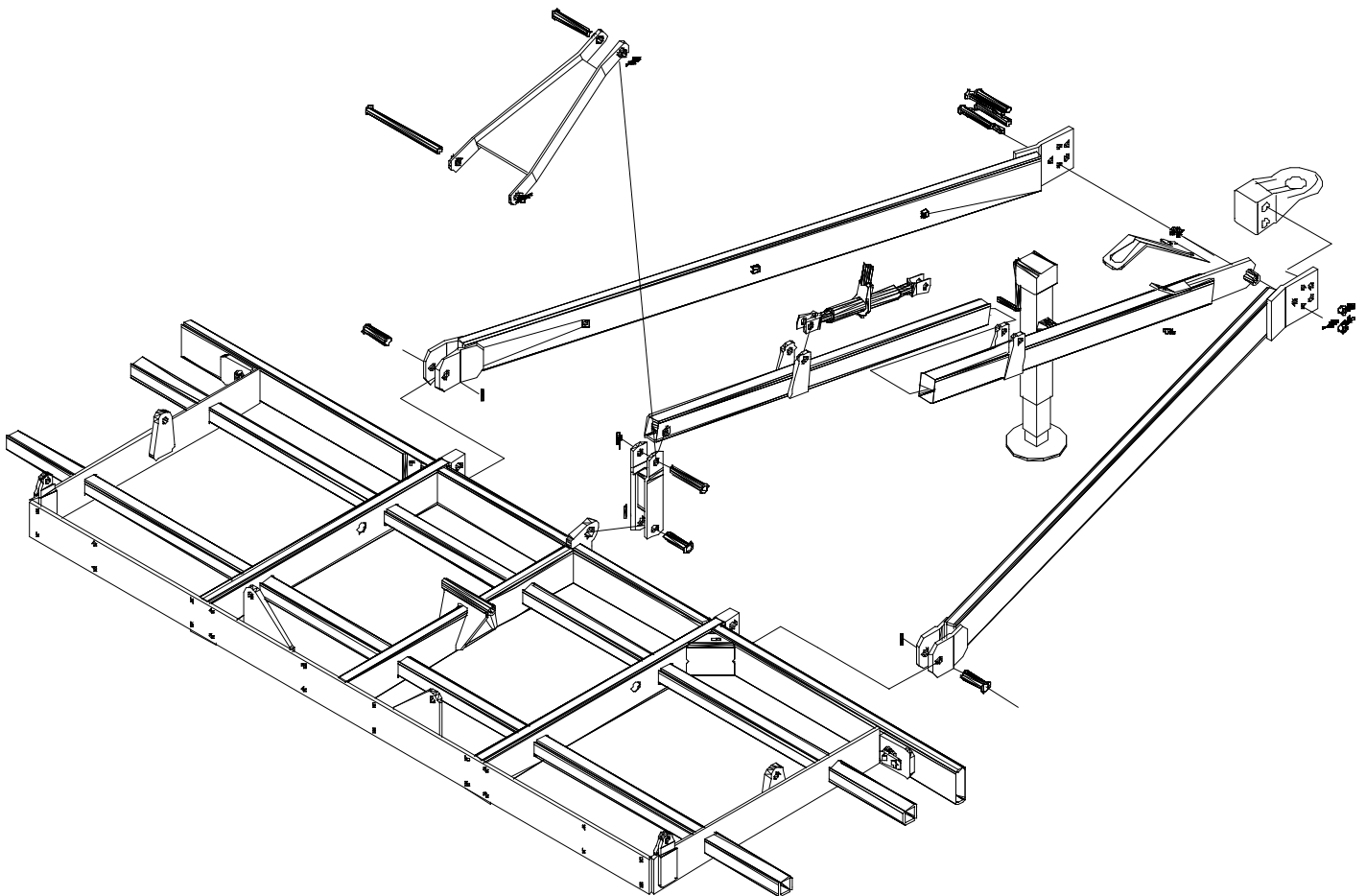


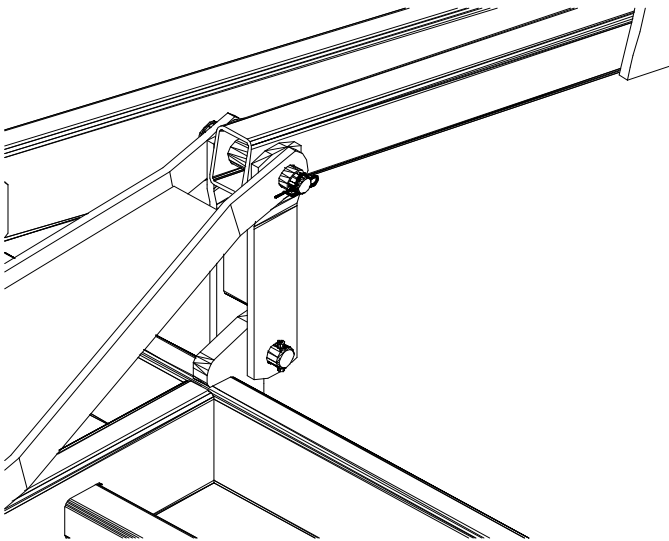
Hitch Assembly:

The Hitch must be installed **before any hydraulics are operated**.

Assemble the hitch based on the pictures below, starting at number 1. Continue in numerical order until the hitch is complete

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



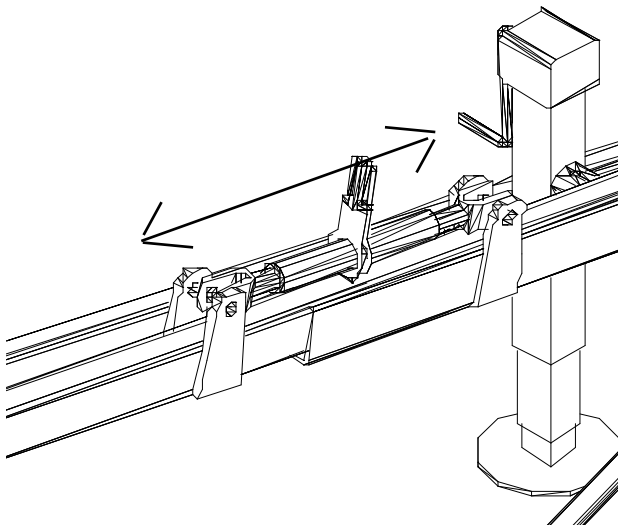


Examples of what the hitch attachment points should look like.



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

Depending on Machine Balance.



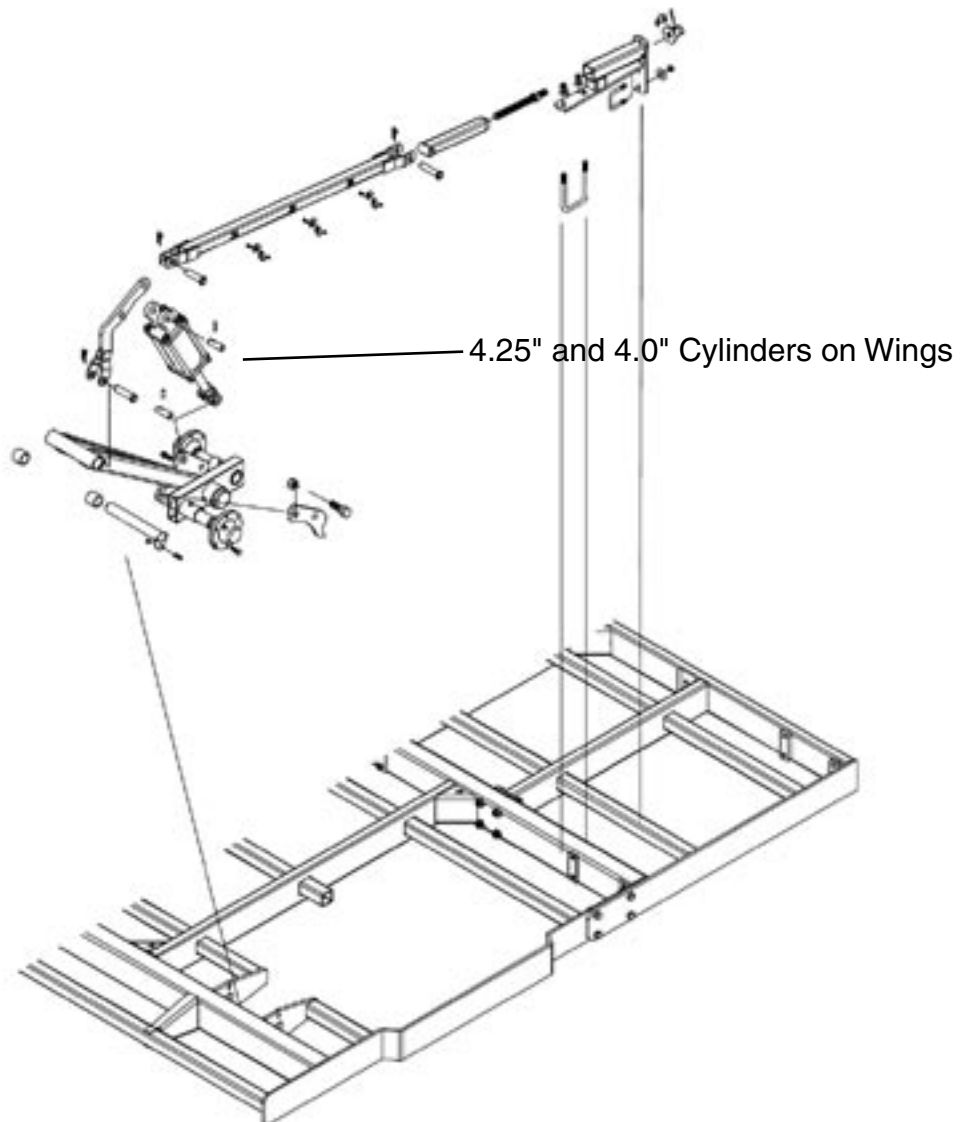
The turnbuckle allows you to adjust the pitch of the cultivator. Lengthing the buckle raises the front, conversely shortening the buckle drops the front of the cultivator.

Cylinders:

Start by mount 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 all 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 frame, the 4.25" one goes on the inside wing and the 4.0" one goes on the outside wing.

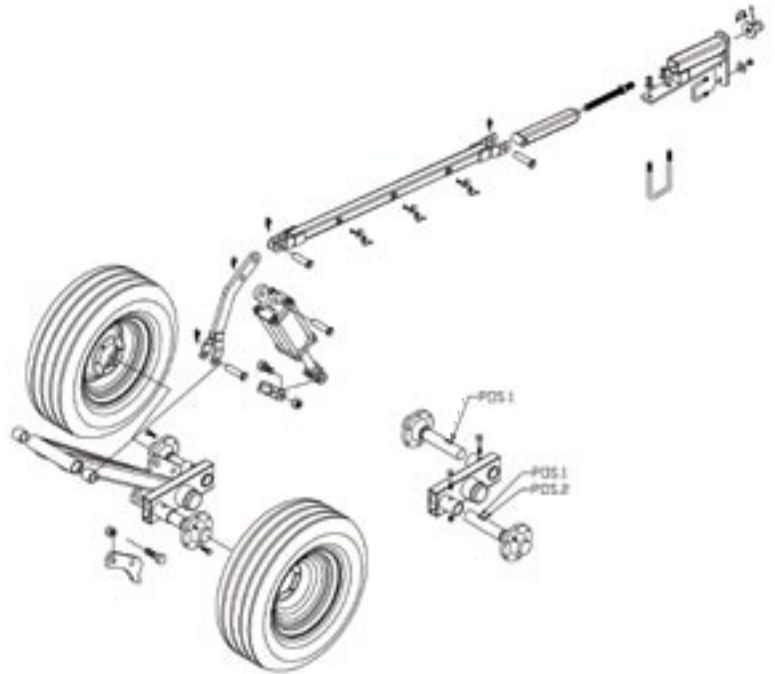
Important: The hydraulics are not attached at this time.



The Wheel-Lift Hydraulic Assembly.

There are two positions on the wheel assembly axle. Be sure to use the correct position for the wheel's location, to prevent damage to the wheels.

Use position 1 for the front and rear wheels on the wings.



See details on next page.



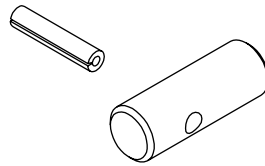
An example of an assembled wheel-lift hydraulics.

Another view of the wheel-lift hydraulics.

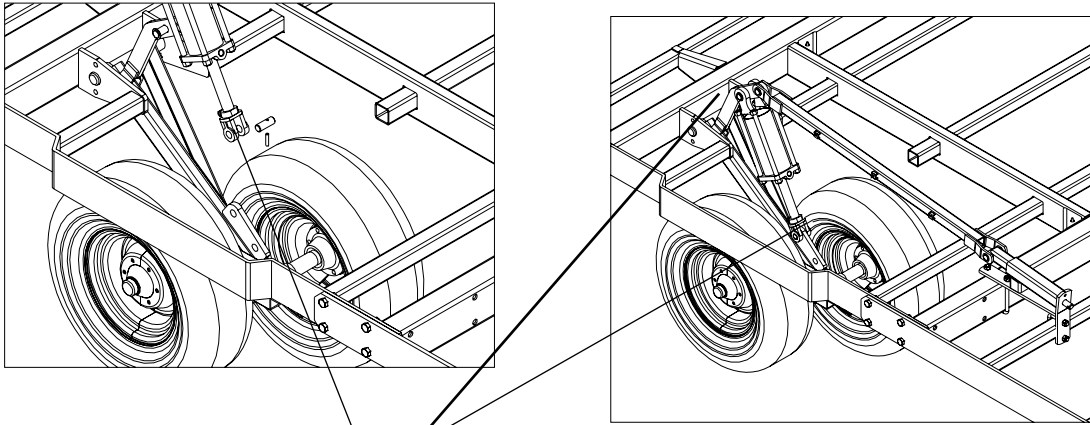


Wing Cylinder Pins

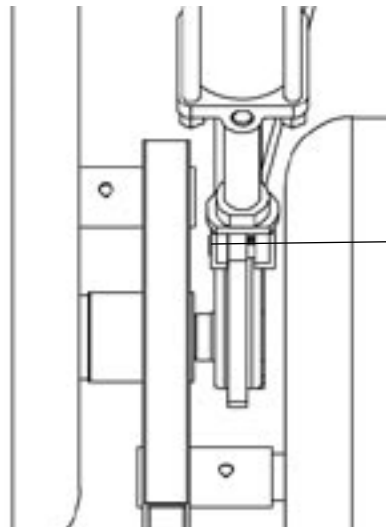
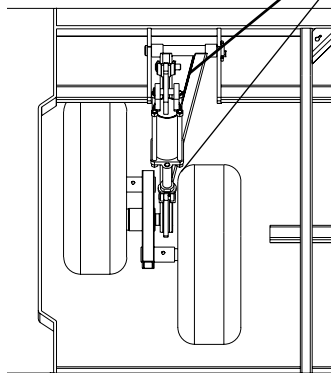
Install the wing cylinder pin such that it keeps the cylinder away from the frame as shown.



Wing Cylinder Pin
shown with roll pin



Place wing cylinder pin in these locations



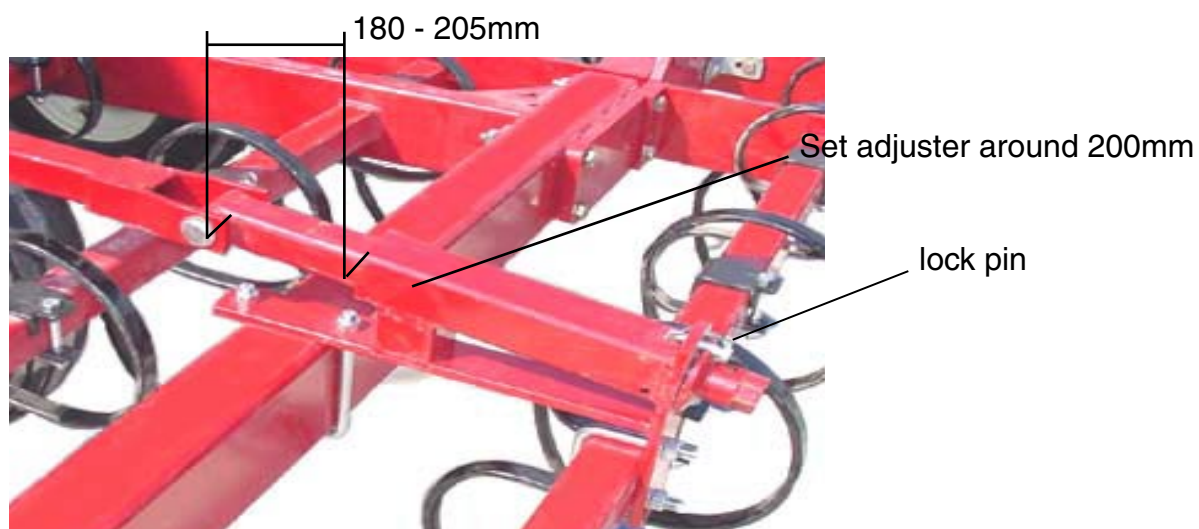
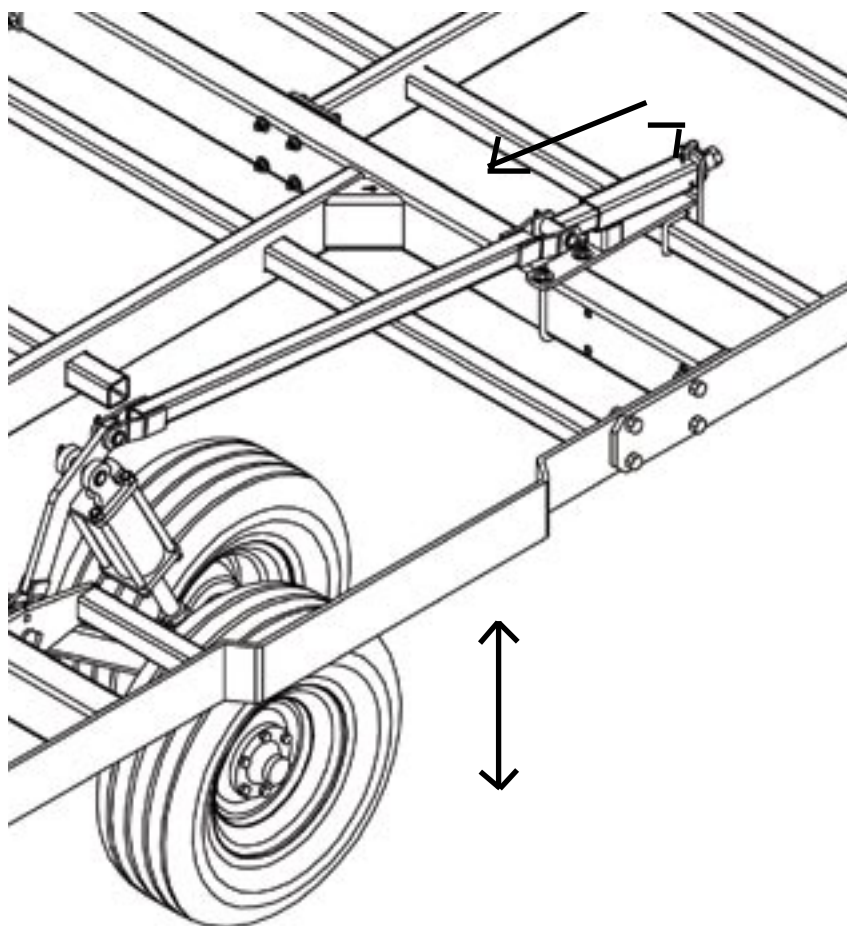
The roll pin fits inside
the clevis keeping the
clevis away from the
walking tandem arm.

Enlargement of picture to left

Adjustment Point Attachment:

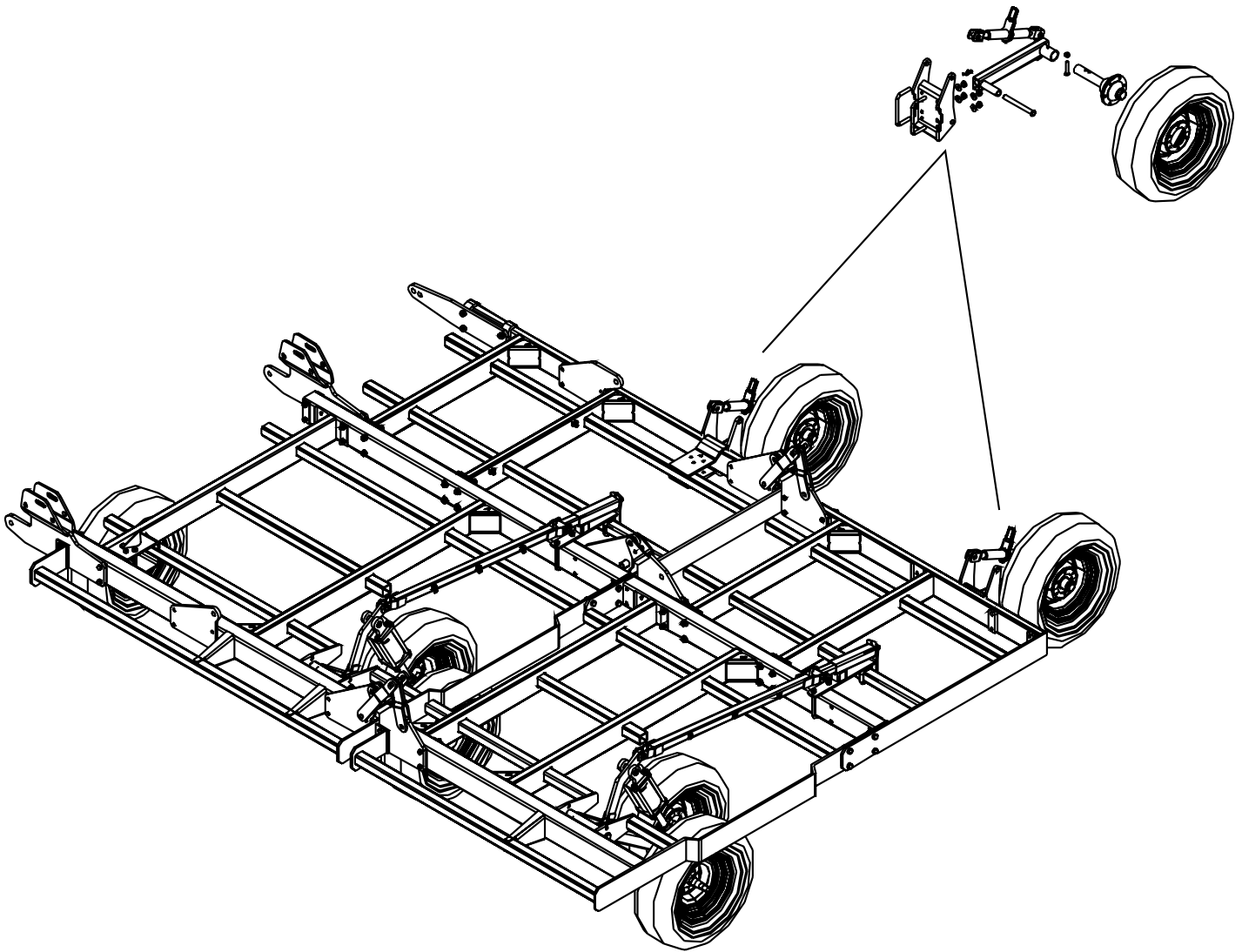
Attach the adjustment arm as shown below.

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



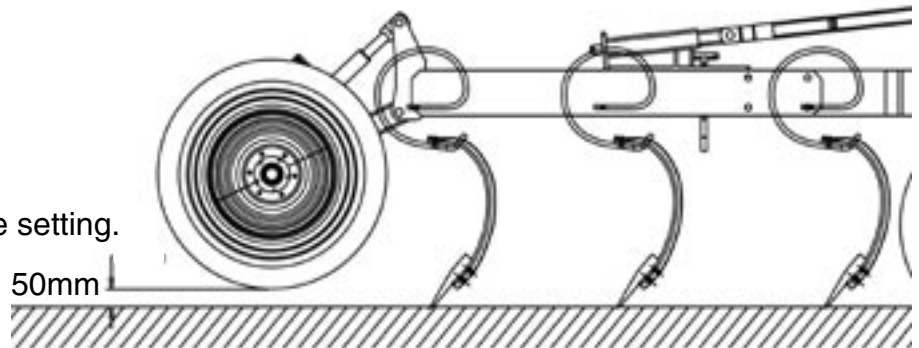
Mechanical Adjust Wheel as Front Gauge Wheel:

A mechanical adjust wheel can be attached to the wings. The part is symmetrical, and can therefore be attached to either wing. the method of attachment is shown below.



Approximate setting.

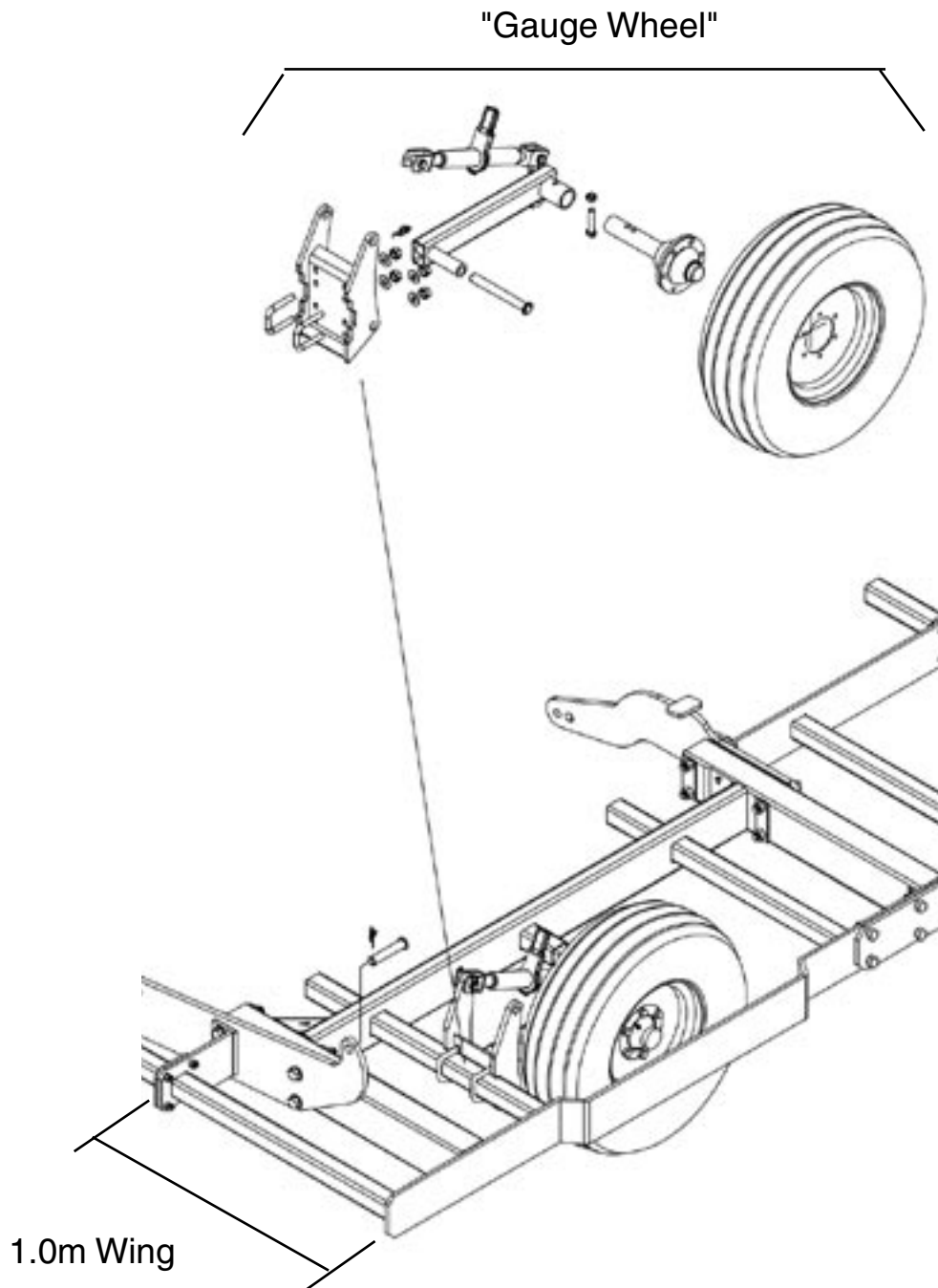
50mm



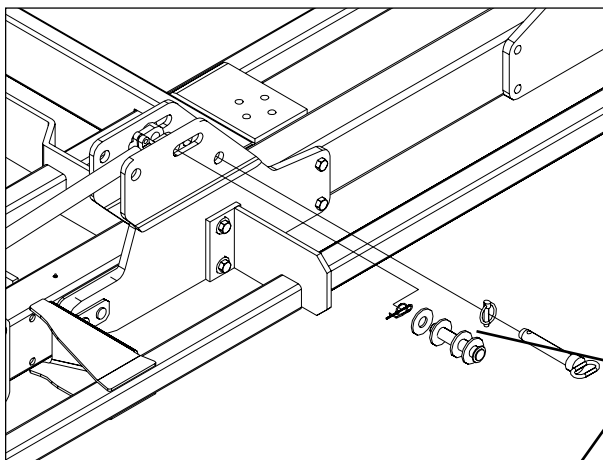
Mechanical Adjust Wheels on 1.0m Wings:

(Only used on the 1.0m Wing: 10m - 33 ft Double Fold)

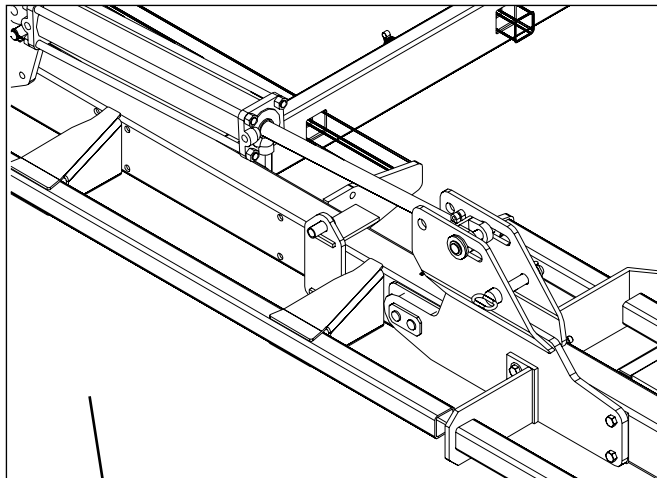
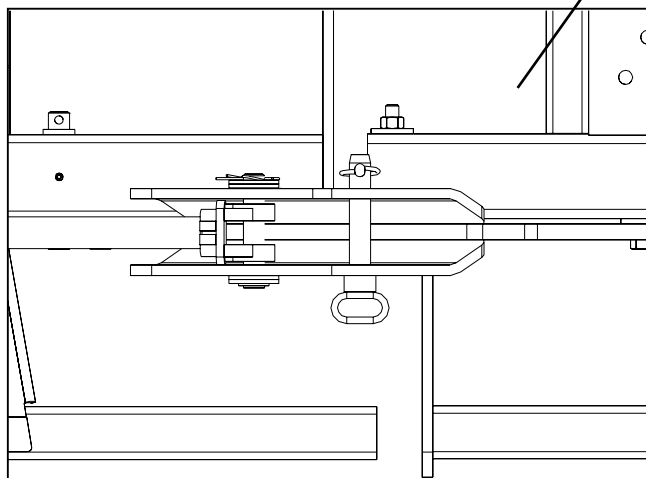
The 1.0 wing uses the mechanical adjust wheels as the main gauge wheels. These wheel attaches work the same on each wing because they are symmetric. The wheels are attached as shown below.



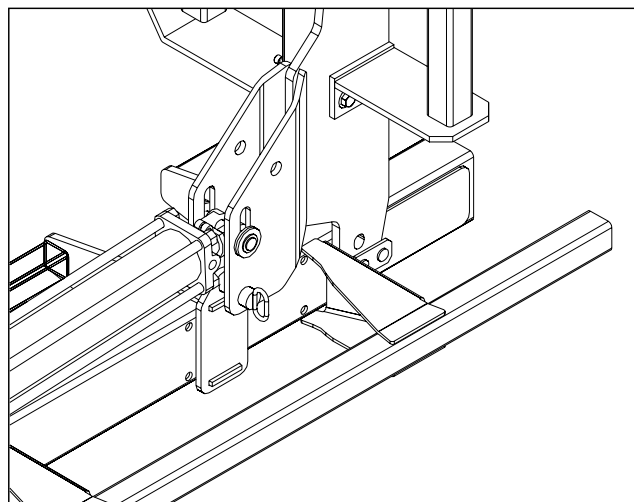
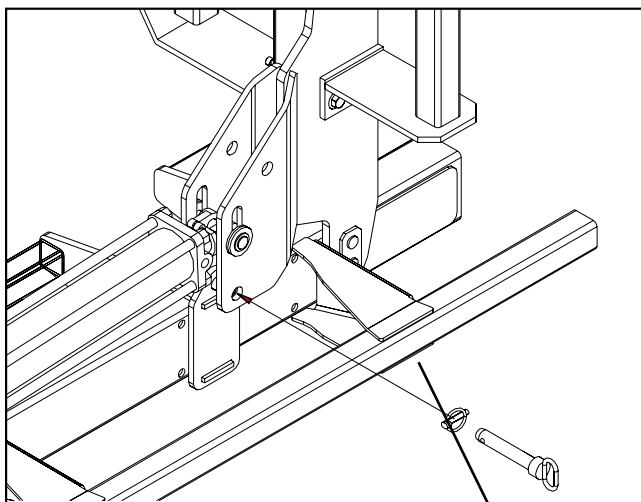
Fold Cylinders Installed:



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



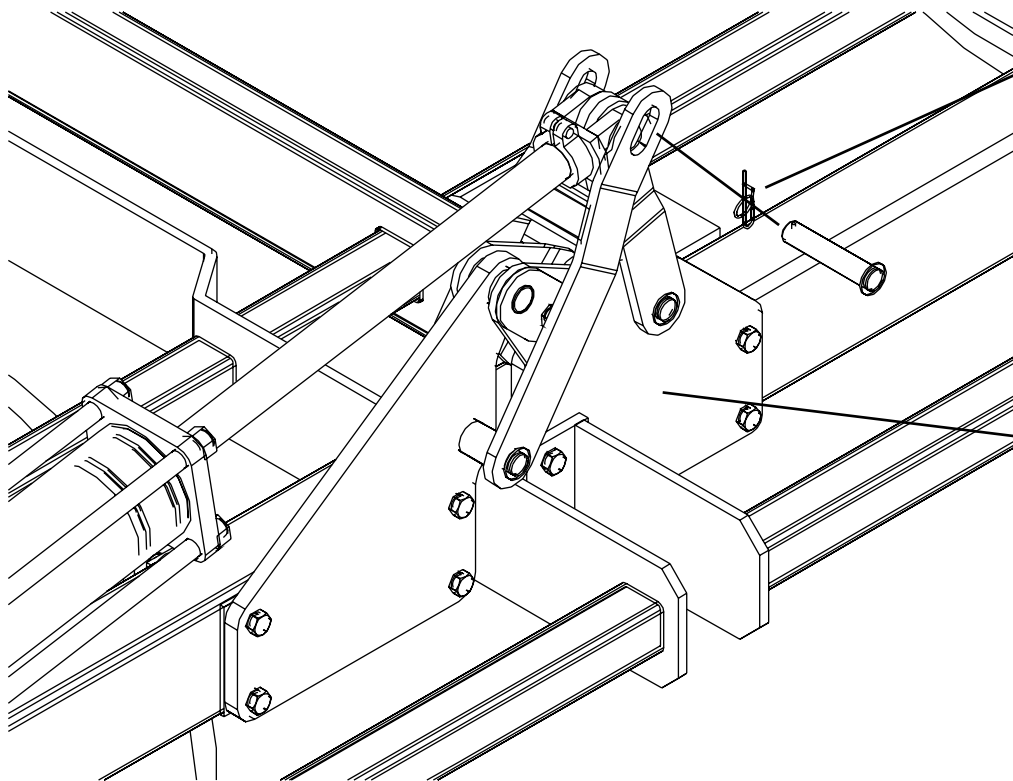
Shown: Cylinders in extended position. Fold lock pin goes in storage hole when not being used.



Cylinders in folded position. Insert fold lock pin as shown.

Outside Wing Fold Cylinders Installed

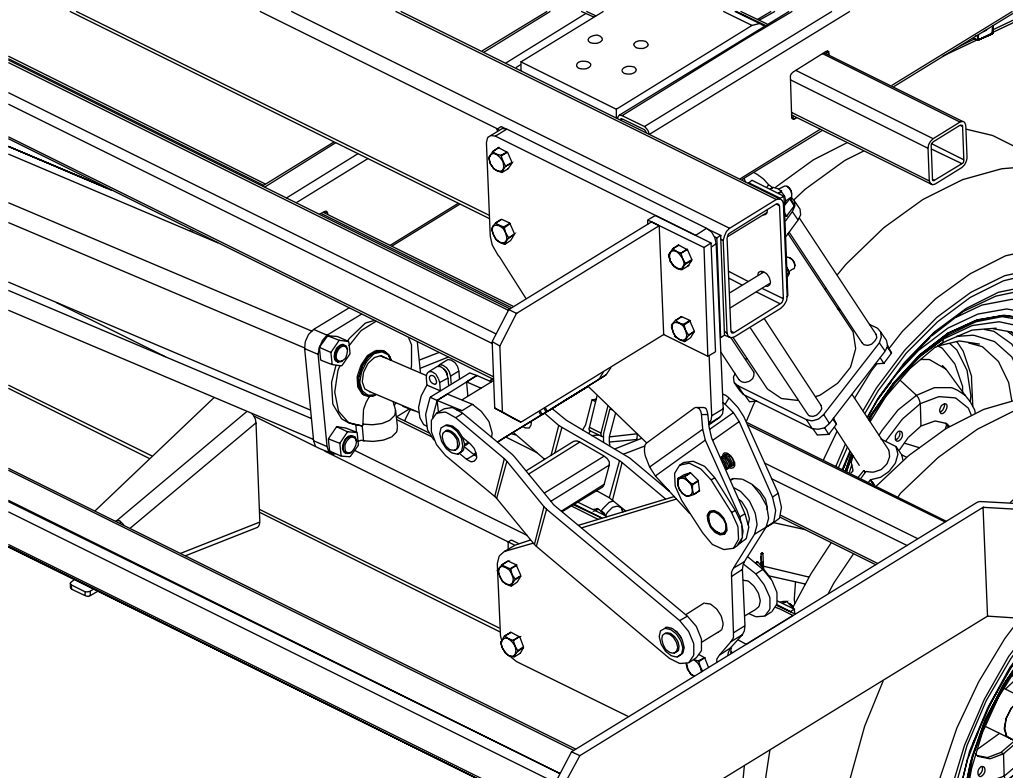
Cylinder in extended position



When installing the outside fold cylinder pin, remember to attach the clip pin.

Bolt the hinge plate to the frame.

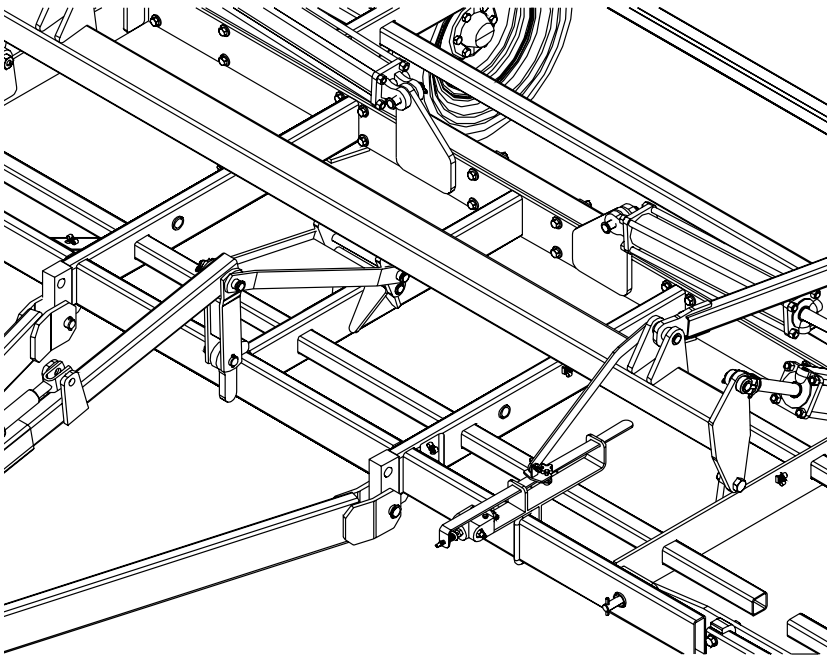
Cylinder in folded position



As with the inside cylinders, be sure to place four (4) 1" (25 mm) washers at rod end of outside cylinders. The inside two (2) keep the clevis centered.

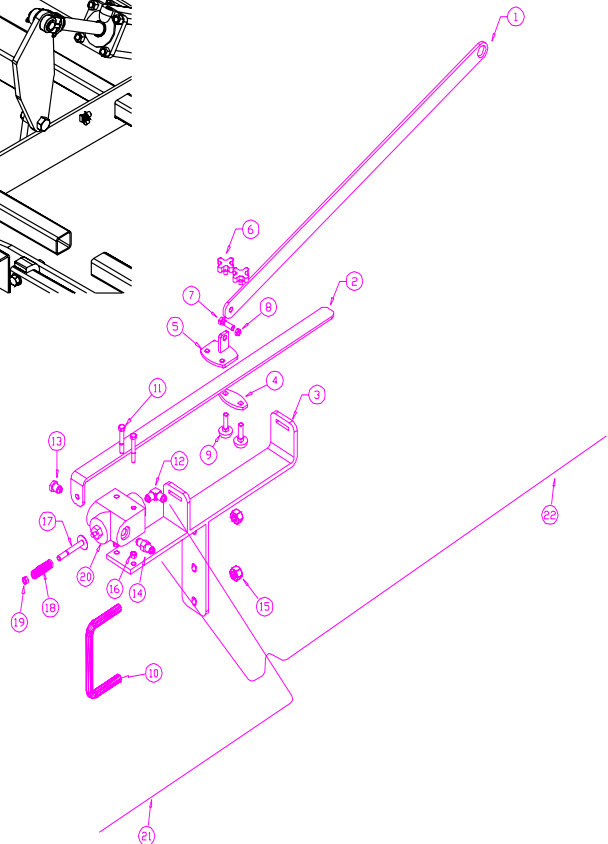
Single Point Hydraulics Instructions on 2800 Series Cultivators

- 1 - Be sure machine is lowered to the ground or jacked such that little or no pressure is on the lifting hydraulic cylinders.
- 2 - Assemble and install single point hardware as shown on drawings below. Note that item#1 is fastened using the 1" pin already in place on the cultivator.
- 3 - Locate the hose running from the Tractor to the Main lifting Cylinder (center section). Remove this hose.
- 4 - Replace with two hoses - one from Tractor to Valve, and one from Valve to Cylinder. Don't forget to plug the unused port of the valve.
- 5 - Once all hoses and fittings are tightened, loose the torque knobs (item#6 shown in the diagram from the spare parts list below). Lift the machine completely off the ground and hold for 5-10 seconds to remove any air from the system.



As the cultivator is lowered, the spring loaded 'striker' bolt approaches the valve. Once the bolt reaches the valve, no more oil from the tractor may pass. This sets the working depth.

The point when the valve is engaged may be adjusted using the torque knobs, and slider plate.

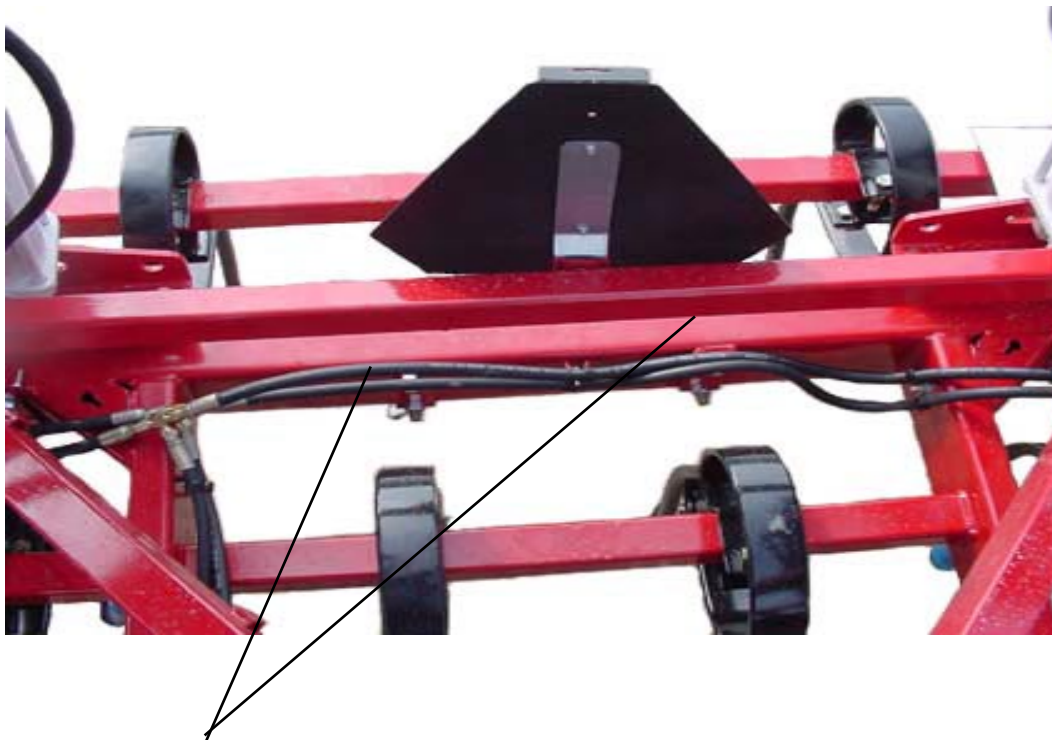


Hydraulic Diagrams and Assembly Information:

For proper installation of the hose lines and fittings refer to the hose layout diagram provided later in the 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.



DO NOT DO THIS! 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.



NOTE: Fasten the hoses to the wing frame and feed the cylinders from there.

NOTE: Tie hoses to the rod port as shown above to avoid interference with hinge movement.

NOTE: Route the fold hoses under top frame leg. compare this view with that of above picture



Charge the wheel lift hydraulics by fully extending and retracting the wheel lift hydraulic cylinders several times. Hold the hydraulic lever open at the end of the stroke to purge the air from the system.

The wheel lift cylinders are rephasing type cylinders and must be fully extended at the end of the field when turning to equalize the oil pressure across the system.

This will ensure that the cultivator raises and lowers evenly and stays at a uniform working depth when working in the field.

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.

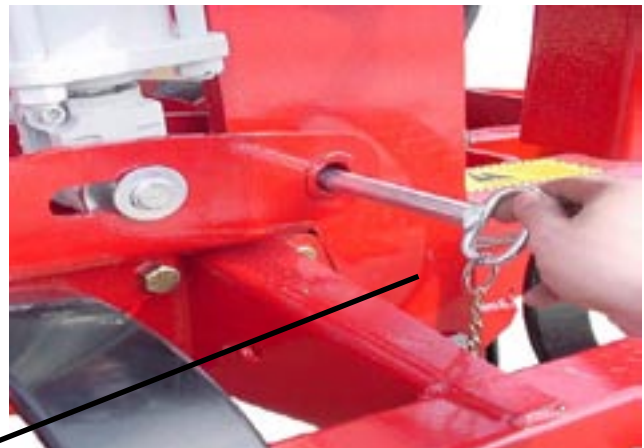
Connect the hoses to the tractor or portable hydraulic unit and stroke the wing fold cylinders in and out several times holding the lever at the end of the stroke to remove the air from the system and ensure the cylinders and hoses are full of oil. Remove the block and reconnect the cylinder to the fold 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 insert the wing fold lock pins and secure the lynch pin when ever the wings are raised in the folded position. Be sure to remove the pins and store them in the storage holes before unfolding the cultivator.

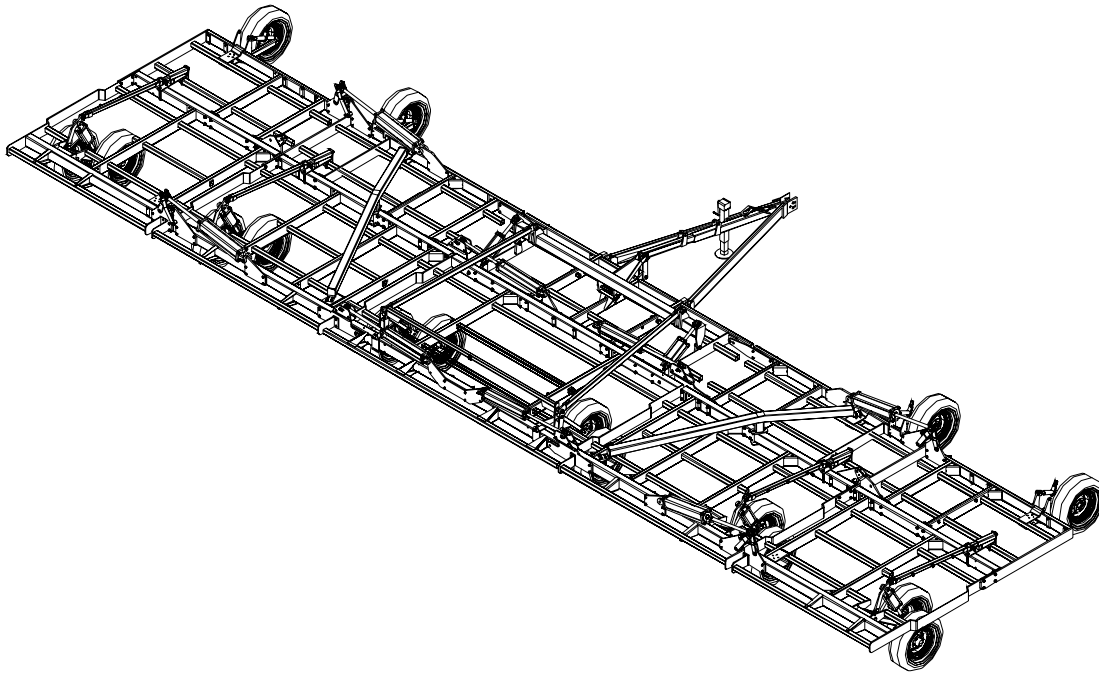


On Completing the Assembly:

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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Installing the Product Identification and Safety Decals:

1) Install the Kongskilde Logo decals #600475113 and Vibro-Till 2800 decals #600475168 on both sides of the draw tongue and wing frames as shown.

KONGSKILDE & 2800 Double Fold
on both sides of hitch



KONGSKILDE & 2800 Dou-
ble Fold on both side of wing
frames



2) Install a Kongskilde Decal #600475113 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



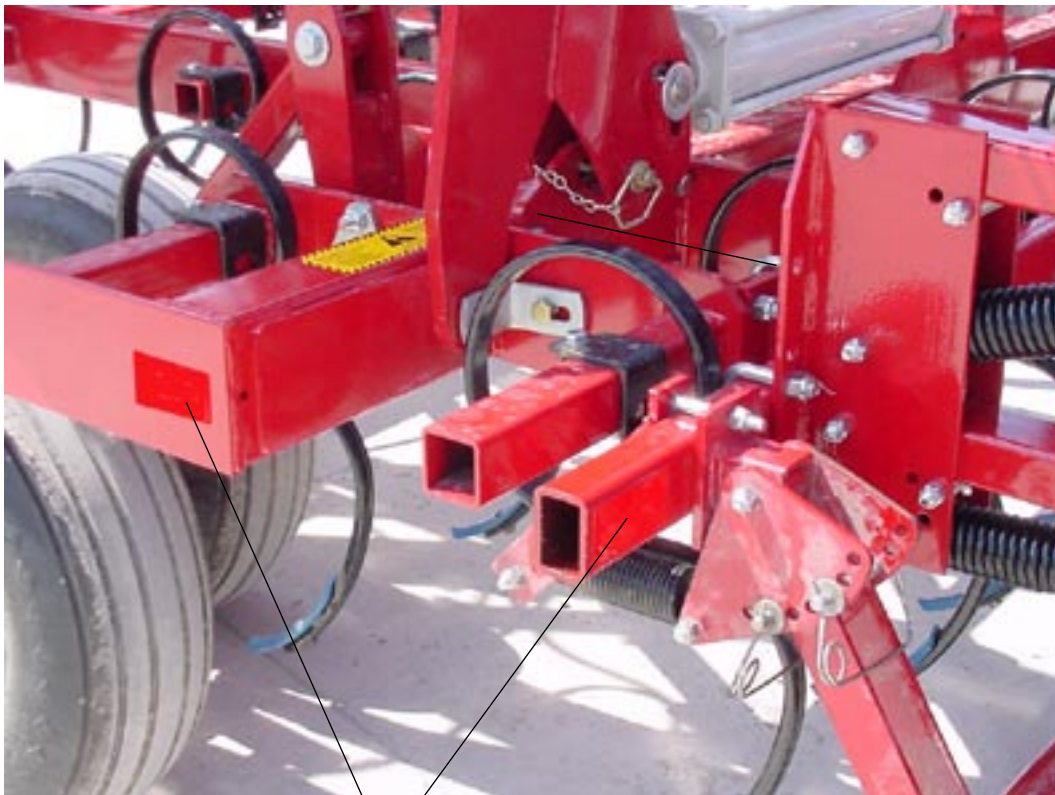
YELLOW REFLECTORS
side view

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 place 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



Notes:

[illegible]