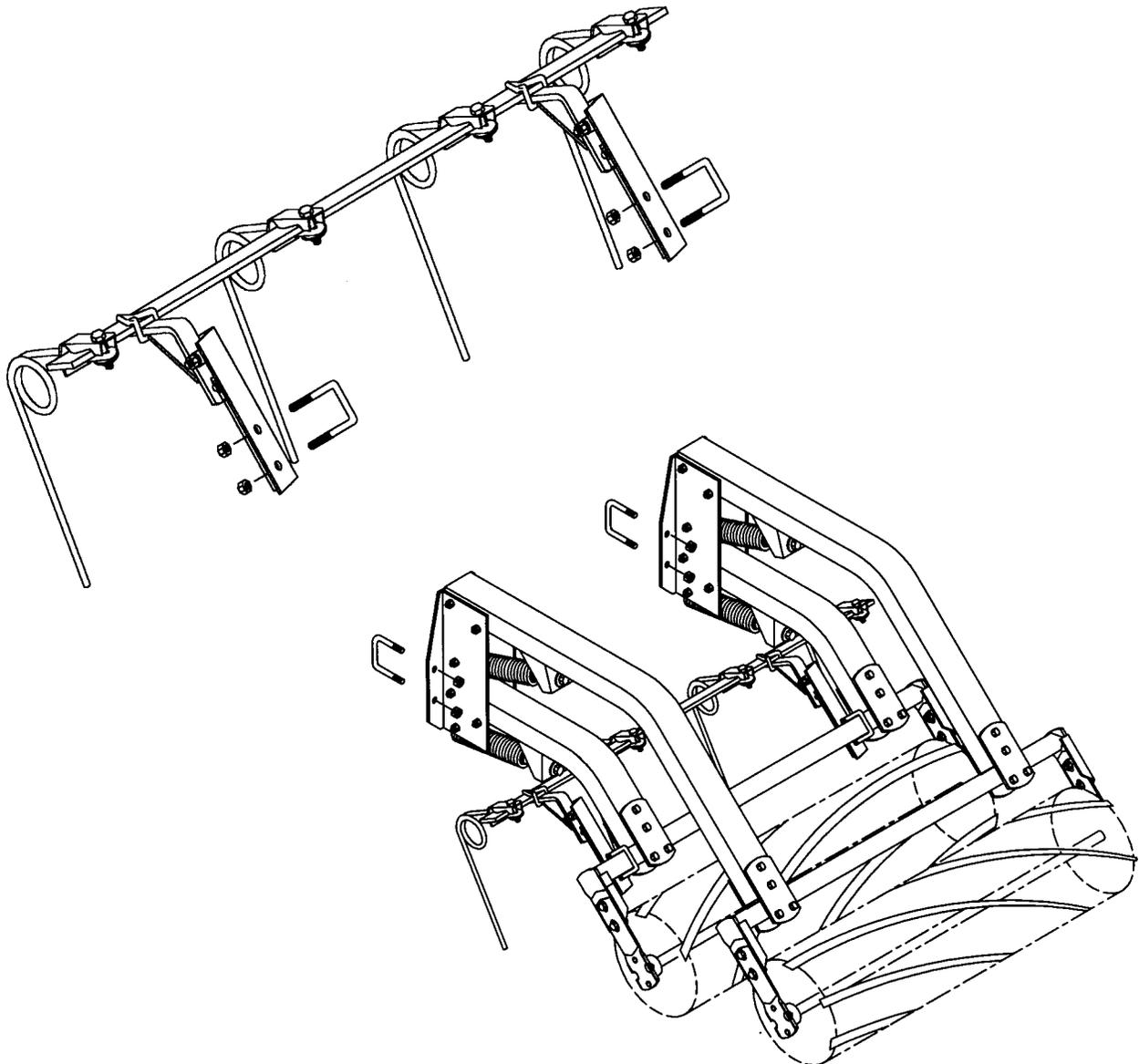


300FL Harrows ***Finger Tine Harrow Kit***

Kongskilde
300 FL Kit



**ASSEMBLY INSTRUCTIONS
& OPERATING GUIDE**

For 300FL Finger Tine Harrow Kit for 300SS Rota Harrows

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INTRODUCTION:

The Kongskilde 300 FL - Finger Tine Harrow Attachment has been developed as a optional pre-levelling attachment for Kongskilde 300 Series Double Rota-Harrows.

When properly adjusted, the 300 FL Harrow Attachment will help to divide the flow of soil from the back row of tines, thus reducing the ridges that form in front of the double rota harrows. This pre-levelling of the soil surface enhances the performance of the double rota-harrows in preparing a level surface for planting in various field conditions and soil types.

This booklet has been developed to assist you in assembling your 300 FL Harrow Kit for Kongskilde cultivator equipped with 300 Series Double Rota-Harrows.

PRE ASSEMBLY TIPS:

Prior to assembling the 300 FL Finger Tine Harrows, the cultivator should be carefully unfolded and lowered to the ground, (resting on the tines), on a flat level area.

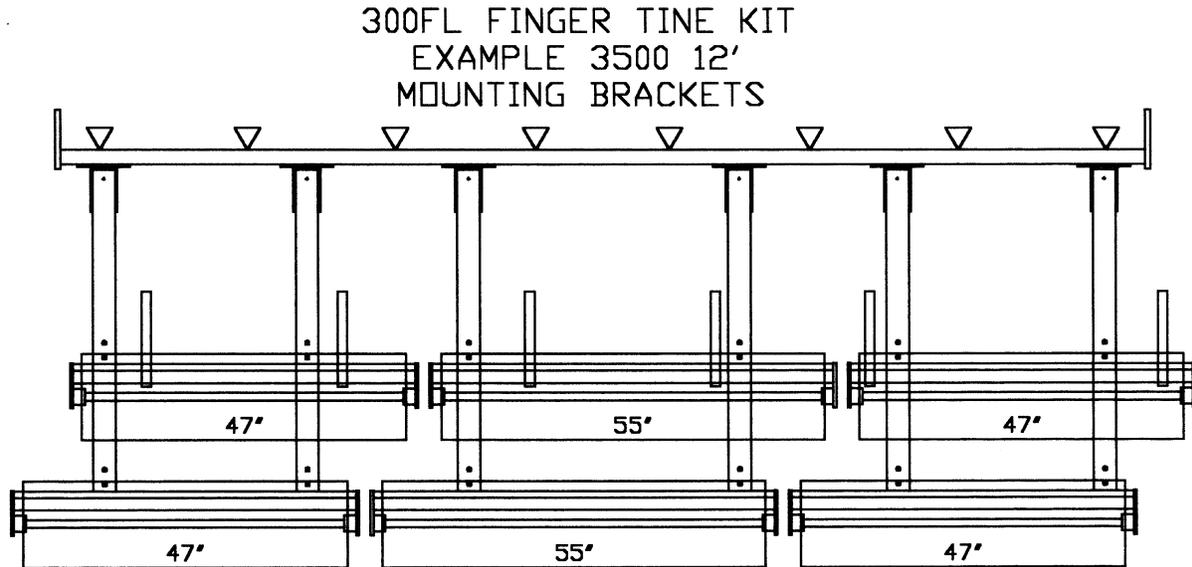
The 300 Series - Double Rota-Harrows must be mounted first, according to the instructions provided in the Harrow Assembly & Operator Manual no. 03 150 109.

We strongly recommend that you do not attempt to assemble the harrows before mounting to the cultivator, as the harrow sections are heavy and difficult to move when assembled. It is also difficult to insure correct placement and spacing of the harrow sections if they have been pre-assembled.

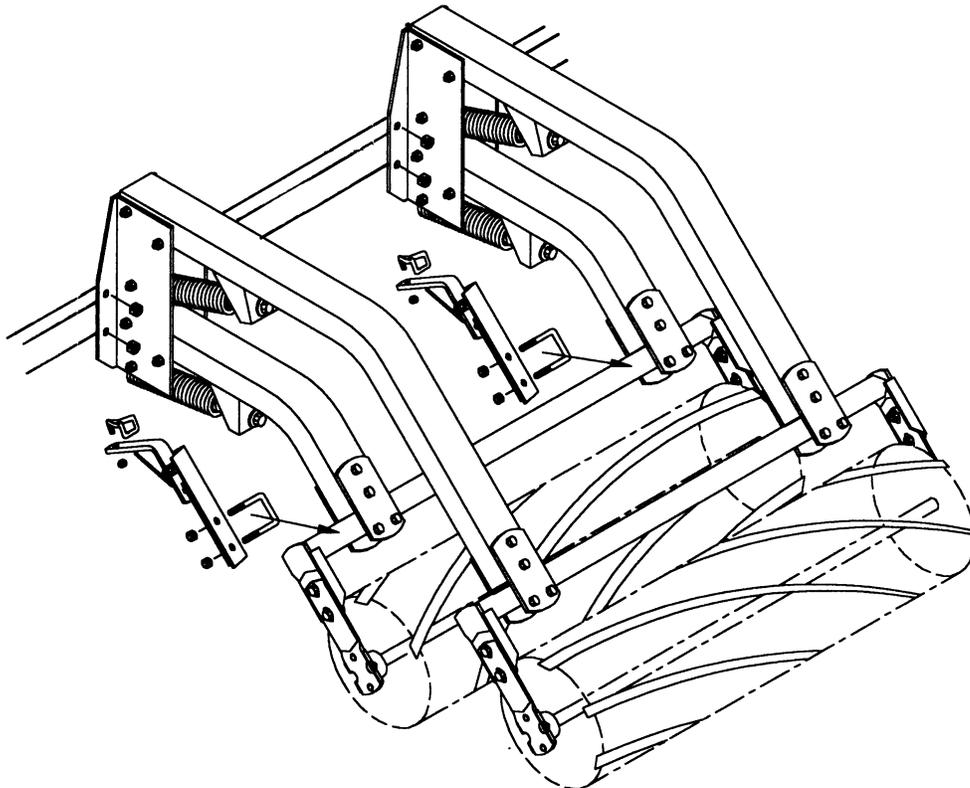
NOTE: Before starting be sure to check that you have all of the correct components in order to assemble each section of harrows as shown in the parts list booklet and assembly diagrams provided.

Mounting Brackets:

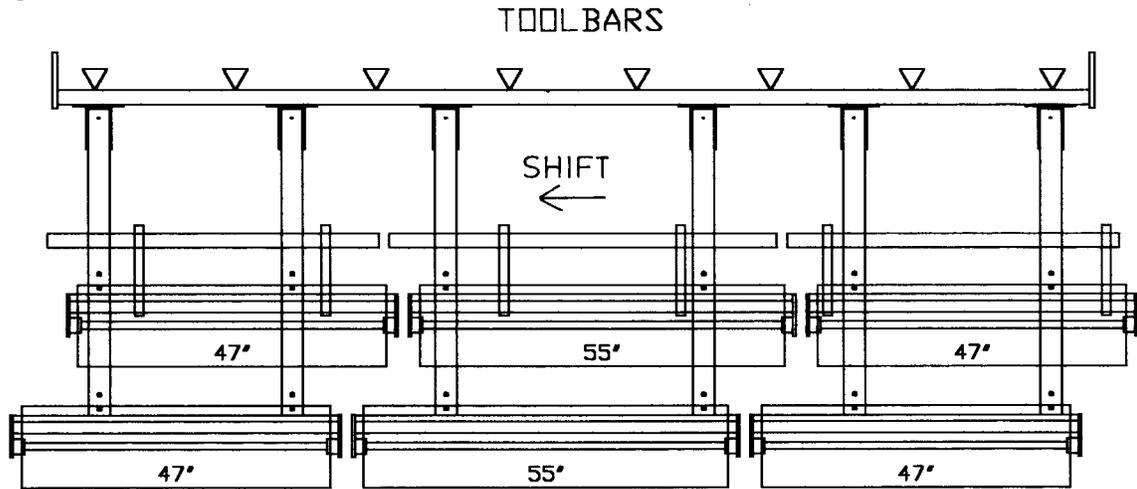
1. With the Double Rota-Harrows fully assembled and the cultivator laid out on a flat level area, begin by selecting the locations for the mounting brackets on the front roller frame tube.
2. The location of the mounting brackets will vary from roller to roller depending on the position of the roller harrow hanger arms and tine locations. Place the mounting brackets at the best possible location on the roller frame tubes so that they will not interfere with the placement of the FL finger tines in step 4.



Secure the mounting brackets with the U-bolts and locknuts provided.

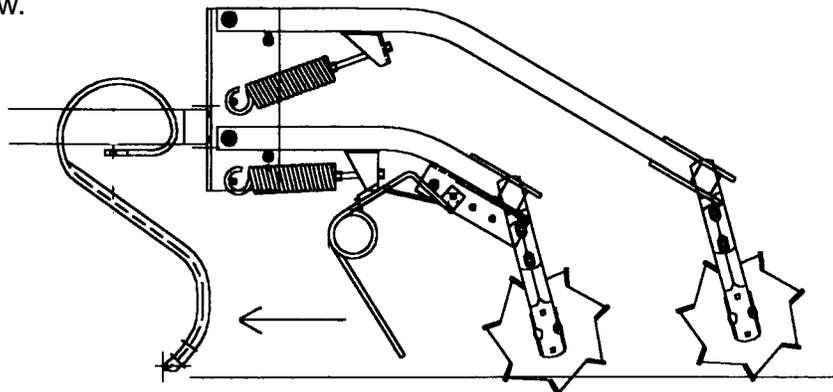


3. After securing the mounting brackets, match the toolbar length to the roller section and attach the toolbars to the mounting brackets with the wire tine clamps provided. The toolbars can be shifted a few inches to the right or left of centre as required for correct mounting of the FL finger tines.

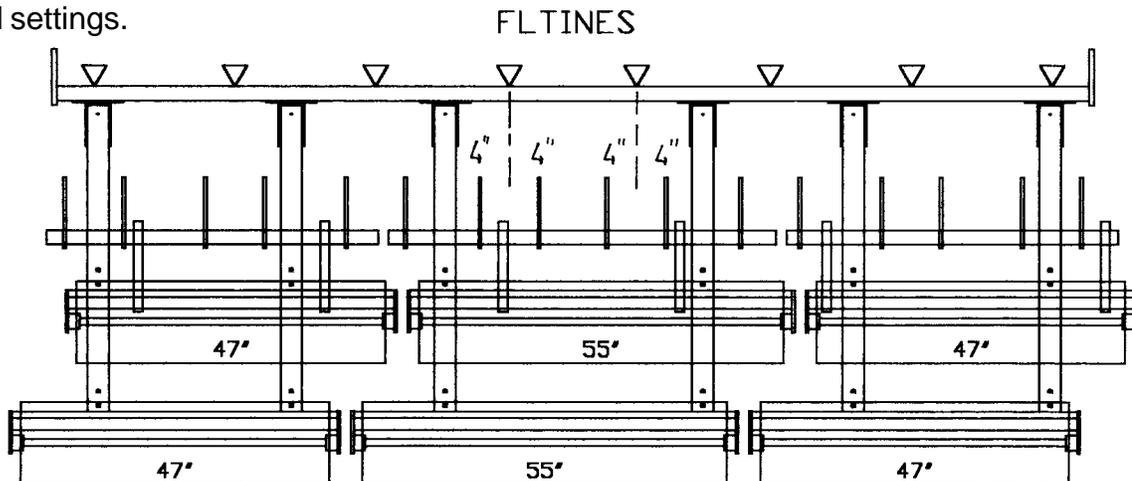


FL Tine Mounting:

4. The Finger Tines must be mounted so that they are being pushed in the direction of travel as shown below.



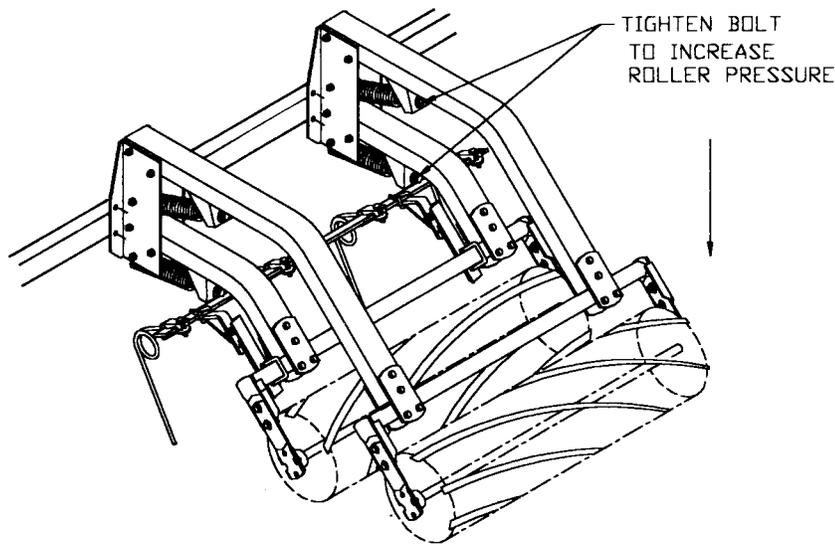
5. Position one finger tine about 4" to the right and left of each tine on the back row of the cultivator. Secure the FL tines to the toolbars with the tine clamps, nuts, bolts and washers provided. When completed, there will be 2 FL tines mounted on the toolbars for every S-tine on the rear bar of the cultivator. For further instructions on locating the FL tines refer to the section on field settings.



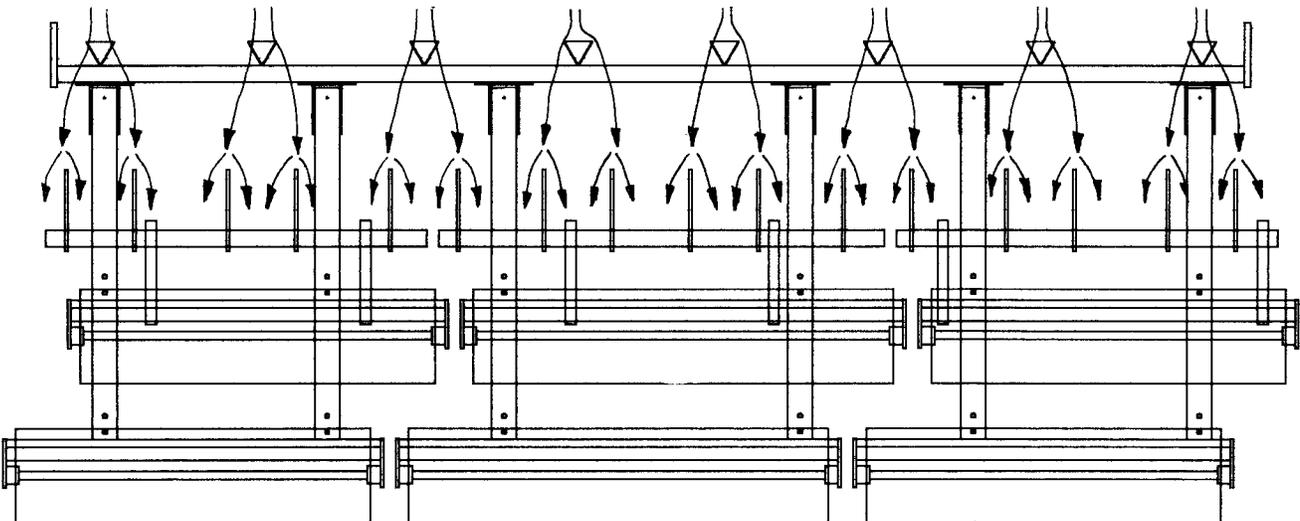
FIELD SETTINGS:

A) **NOTE:** There are many factors that can affect the ability of the harrows to level the soil surface behind the cultivator; Cultivator tine spacing, type of shares (sweeps), cultivating depth, ground speed, direction of travel across the field (angle), soil type, and soil conditions like moisture content and crop residue levels, all have an affect on the quality and levelness of the seed bed. Therefore, do not expect the same settings to work in every case. Be prepared to adapt and adjust your equipment and operating practices to obtain the best results for each field condition.

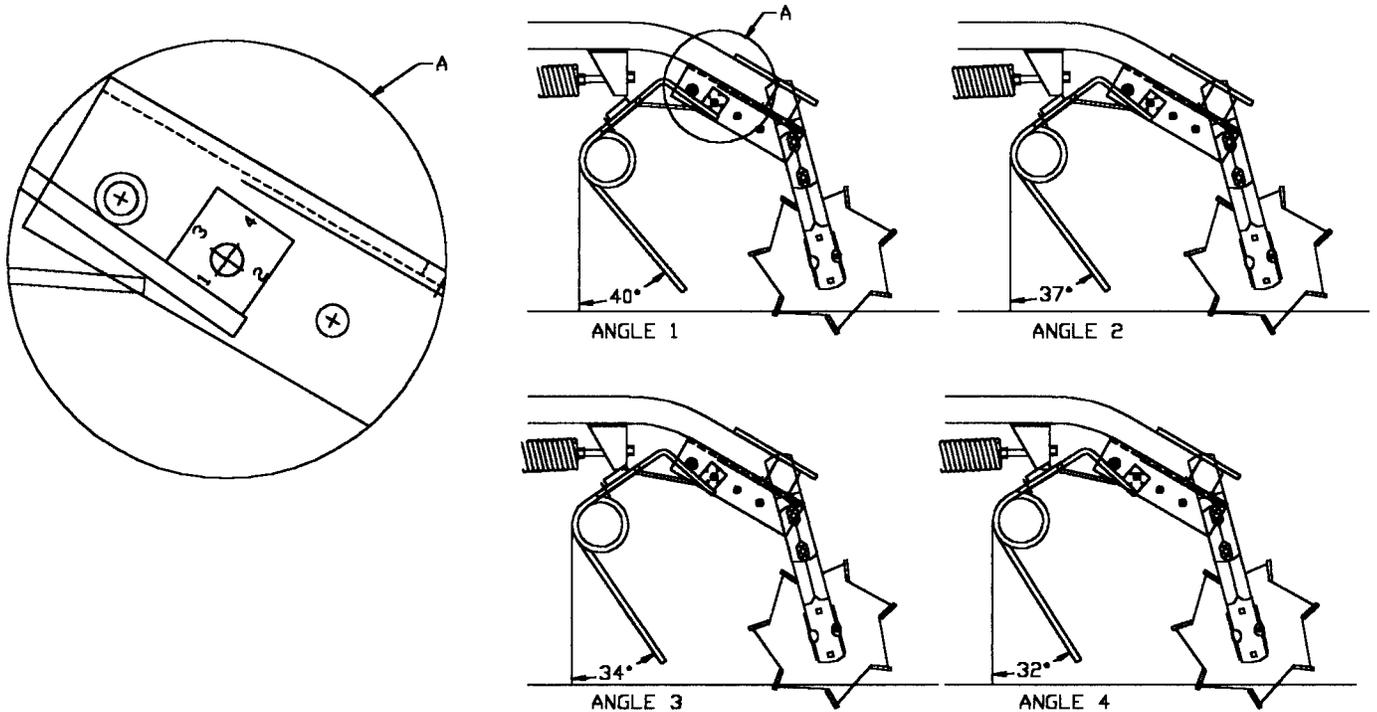
B) The down pressure on the rota-harrows can be increased or decreased by turning the spring adjustment bolt with a 15/16" socket wrench. First loosen the jamnut then adjust the down pressure on the rollers as required to break lumps or clods and obtain a level soil surface. Secure the jamnut. (For further instructions on the double rota-harrows refer to the appropriate section in the 300 SS harrow manual.)



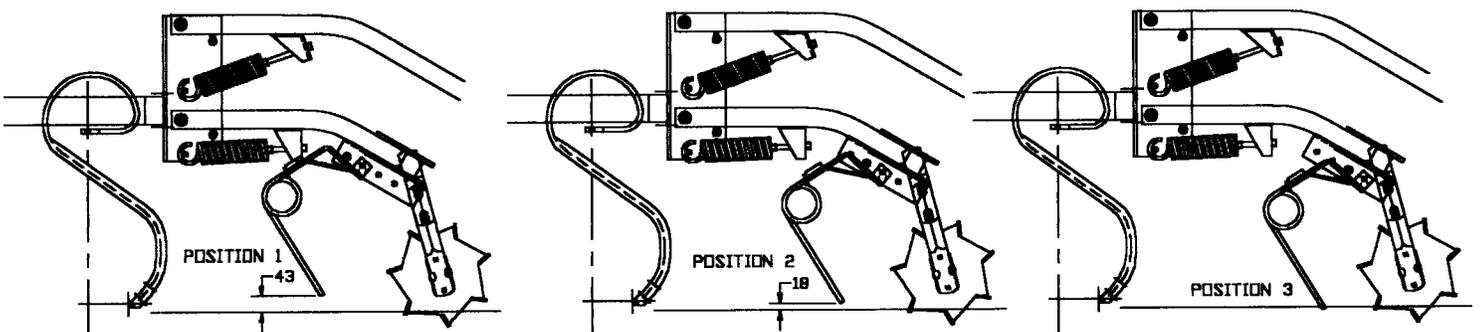
C) For best results, move the FL finger tines from 4" to 8" to the right or left behind the tines as required, so that the finger tine divides the flow of soil coming from the rear row of cultivator S-tines in half, or knocks down the ridge formed in between the tines into 2 smaller ridges. By pre-levelling the soil in this way the rota harrow has better contact with the entire soil surface creating a more uniform surface and soil structure for planting.



D) The angle of the FL tines can be adjusted to 4 different positions. The steeper the angle - the more aggressive the tine action becomes. Selection of the working angle will again depend on the soil type and the amount of crop residue left on the soil from the previous years harvest. Field testing has shown that in most cases the best working angle for the FL tines is when the stop block is located in position 4.



E) The height of the FL tines on each toolbar can be adjusted to 3 different positions. Normally the bracket should be set at the highest position (1) and then lowered to position (2) or (3) as the finger tines wear. When the tines becomes worn down after position (3) they should be replaced.



ADJUSTMENTS / PRECAUTIONS:

When the assembly of the harrows has been completed check to make sure that the complete assembly appears evenly spaced and centred across the back of the cultivator. If the harrow assembly is not centred you may have to shift the harrow sections as required. Improper centring of the harrows may cause the cultivator to pull crooked in the field.

Check to make sure that each section of harrows can move up and down freely. It is important that the harrow sections will not hit each other when working on uneven ground.

Check all nuts and bolts and secure if loose.

Take care when folding the cultivator for transport for the first time after completing the assembly. Check to make sure that the harrows do not interfere with each other or other cultivator frame components when folding and unfolding.



DANGER! NEVER STAND OR WORK IN THE AREA BELOW THE WINGS OR UNDER AN UNSUPPORTED CULTIVATOR FRAME.

ALWAYS USE WING LOCK PINS, AND WHEEL CYLINDER TRANSPORT LOCKS.

USE EXTREME CAUTION WHEN WORKING AROUND HEAVY EQUIPMENT. BLOCK THE WHEELS AND MAKE SURE THAT THE UNIT IS SUPPORTED TO PREVENT IT FROM FALLING BEFORE ATTEMPTING TO MAKE ADJUSTMENTS OR WHEN PERFORMING MAINTENANCE OPERATIONS.

MAINTENANCE:

- A) Periodically check all nuts and bolts and secure if loose.
- B) Lubricate the G-bearings after every 12 hours of operation. **DO NOT OVER GREASE THE G-BEARING:** Over greasing may cause damage to the bearing seals.
- C) Periodically check and remove any foreign material that may become wound around the FL tines, rollers or bearings and remove any objects (ie: stones) that have become trapped in the rollers. Any bent or damaged roller sections should be repaired or replaced.
- D) Replace or repair any bent, broken or very worn down FL tines.

Always check the condition of your field cultivator and levelling attachments at regular intervals and keep in good repair. Optimal performance cannot be expected of equipment in poor condition.

