

# No Jig Lift Adjustments

## Internal Adjustments (Operator Manual)

(1) Support the unit in a vise in a vertical position with the control spring down as shown in fig. 67. The lift arms must be supported in the fully raised position as indicated by the marks on the lift arms and housing (fig. 67).

(2) Examine the constant draft spring adjustment nut (fig. 67). If it is a lock nut, it should be tightened until the washer bears against the shoulder. If it is a standard castle nut with a cotter pin, the nut should be adjusted to give the correct length of the constant draft spring, then the cotter pin can be installed. The constant draft spring should be 3.58 inches long (slightly over 3/16 inches is satisfactory) fig. 68.

(3) Examine the top of the quadrant support plate for locating marks as shown in fig. 69. The quadrant support cap screws should be loosened, locating marks aligned, and the cap screws tightened. If there are no locating marks, remove two cap screws from the quadrant support plate, loosen the two remaining cap screws, and center the slot in the quadrant support plate on the cap screws. Replace and tighten the cap screws that support the quadrant.

(4) Place the position control lever in the position shown in fig. 66. Move the hydraulic touch control lever until there is an opening of 3/4 inch between the edge of the lever and the top end of the slot in the quadrant as shown in fig. 67.

(5) Make sure that the control arm moves freely and is held in a horizontal position by its own weight as shown in fig. 67. Loosen the position control lock nut, and adjust the length of the position control spring by turning the position control spring adjustment bolt (fig. 67). Adjust the position control spring length until the position control pin contacts the cam, and the position control spring adjustment bolt contacts the control arm, as shown in fig. 67. It will probably be necessary to hold the position control pin in contact with the cam. The position control spring length should be 1-29/32 inches plus or minus 1/16 inch after the adjustment has been made (fig. 68). Tighten the position control spring lock nut after completing the adjustment.

## Control Arm Adjustment

(1) Place the hydraulic control unit upside down.

(2) Put the position control lever in the forward or draft position.

(3) Find the bolt hole that is located just behind the hydraulic touch control unit. Measure 1.7 - 1.75 inches forward from the front edge of this bolt hole. Make a mark on the mounting flange at this location.

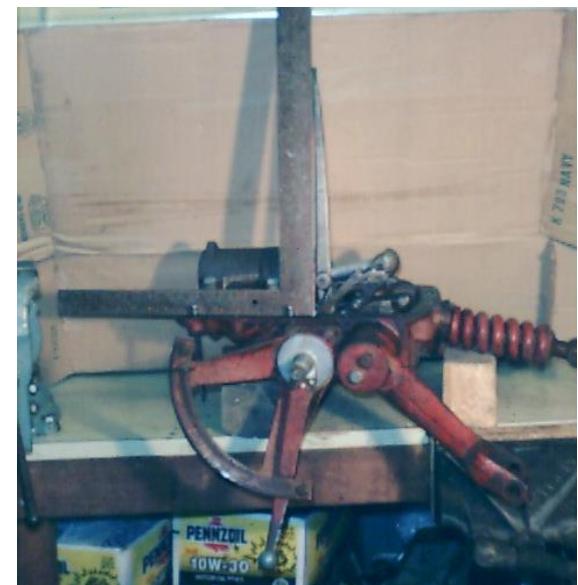


(4) Put a framing square on the mounting flange and align it with the mark you made above.

(5) Push the control arm lightly backward. The control arm is the long arm sticking up from the hydraulic unit.

(6) If the top end of the control arm aligns with the edge of the framing square (which is aligned with the mark), then it is adjusted correctly.

(7) If the control arm is not adjusted correctly, then you can adjust the quadrant support plate. The quadrant support plate is the part that holds the touch control lever. Loosen the 4 bolts that attach the plat to move it back or forward.



(8) If you are able to get the control arm adjusted correctly, then skip the rest of this procedure and go to the **Operator's Manual Final Adjustment**.

(9) If you CANNOT get the control arm adjusted correctly by moving the quadrant support plate, then something is bent and you should continue with this procedure.

(10) Make sure the piston control pin or cam follower pin is not bent or badly worn. If it's damaged, disassemble the mechanism, drive the pin out, and install a new one. Note: if the pin is just worn but not bent, then you can drive the pin out, rotate it about 180° and reinstall it.

(11) Remove the control arm from the hydraulic control unit.



(12) Put a 1/2 inch bolt in the end hole of the control arm. Put a 3/8 inch bolt in the next hole. Note: the control arm has a bend to the side; do NOT straighten out this bend (see picture).



(13) Put a straight edge against the bolts. The straight edge MUST BE ON THE BACKSIDE OF THE CONTROL ARM (see the picture). If you put the straight edge on the wrong side of the bolts, you will not get the correct shape to the control arm.

(14) The little ball at the end of the control arm should be aligned with the straight edge (or just a bit forward of the straight edge).

(15) If the control arm does not align correctly, then you will need to bend it.

(16). To bend the control arm, clamp it in a vice and hit it with a hammer. Use a block of wood to protect the control arm from the hammer blows. Also, use a shim in the vice to close the gap at the clamped end of the control arm. In the picture, I have used a small cold chisel as a shim.



(17) Continue to hammer on the control arm until it aligns correctly as described in step (14) above.

(18) When you get the control arm to the correct shape, put it back in the hydraulic control unit, and then adjust the quadrant support plate as described in steps (2) through (7) above.

(19) Now put the hydraulic control unit back on the tractor, and do the Final Adjustment.

## Final Adjustment (Operator Manual)

(6) Install the hydraulic unit on the tractor as outlined in section 382, but do not install the inspection plate.

(7) Place the position control lever in the forward position. Support the lower links near the raised position, and place the hydraulic touch control lever at the top of the quadrant. Check the position and operation of the intake control valve as follows:

(a) **Position of Valve.** The valve should be completely open when the hydraulic touch control lever is at the top of the quadrant. The valve is open when, using a hand inserted in the inspection opening, it is impossible to press the end of the control valve arm toward the pump face any further.

(b) **Operation of Valve.** Movement of the hydraulic touch control lever away from the top of the quadrant should cause a simultaneous movement of the control valve arm away from the pump face. Movement of the control valve arm should begin at the start of movement of the hydraulic touch control lever.

There is only one position in which the quadrant support plate can be located where both of the above conditions will be met. To find this position, slightly loosen the four cap screws that support the quadrant. Hold the hydraulic touch control lever at the top of the quadrant and gently tap the quadrant support plate forward or backward until both of the above requirements are fulfilled.