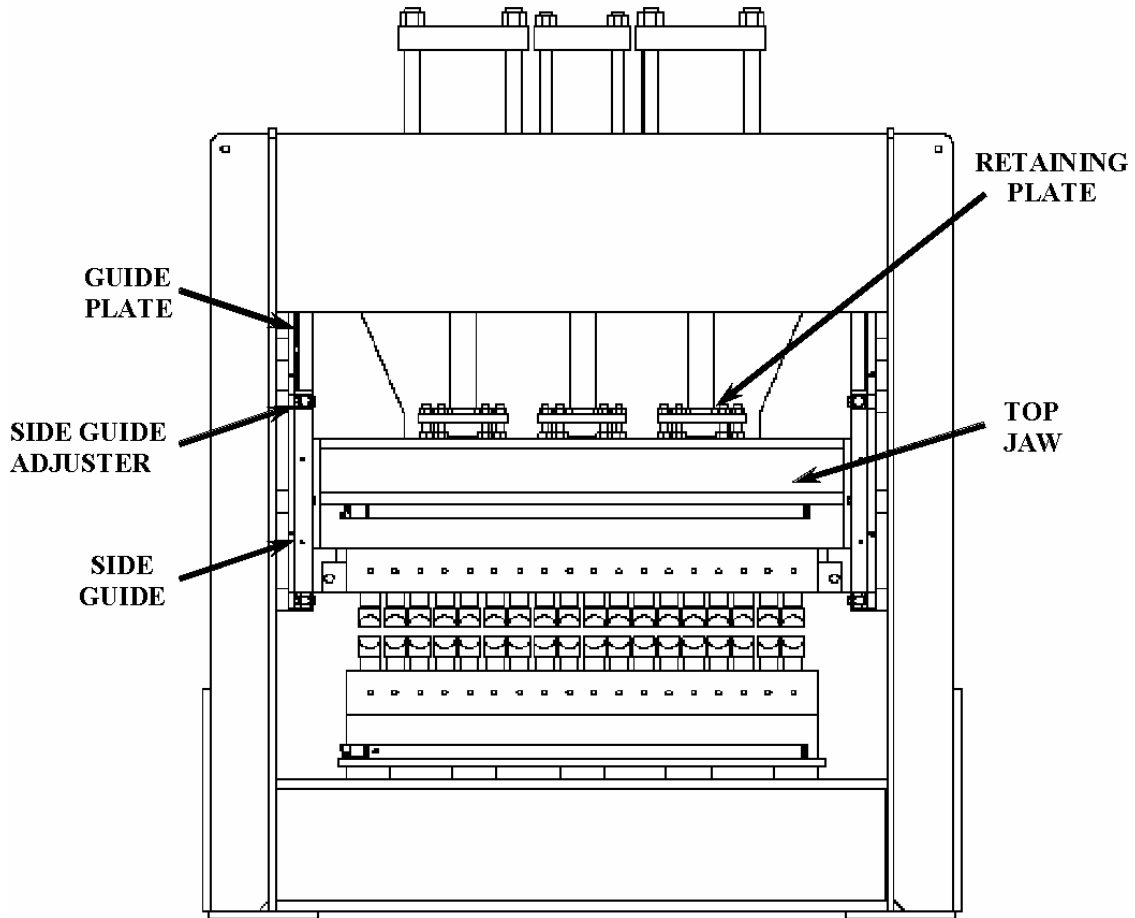


# **BOLT-ON BOTTOM JAW INSTALLATION # 41**

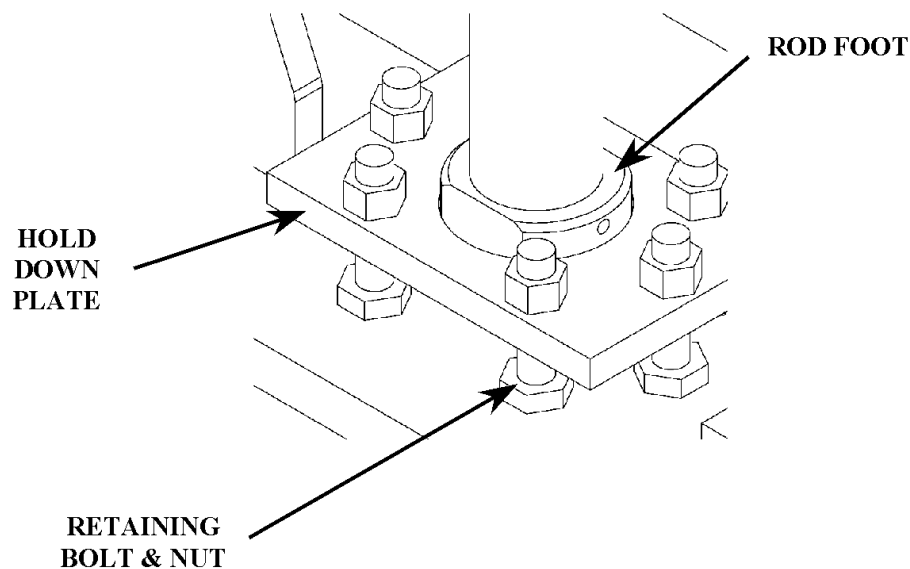
Line up the top jaw - Before removing the bottom jaw, align the top jaw to it. This will ensure the new bottom jaw is installed in the correct position when the time comes to align it to the top jaw. Clean off any debris on the top jaw and guides, including excess grease.



# **BOLT-ON BOTTOM JAW INSTALLATION # 41**

## **1. TOP JAW ALIGNMENT**

- 1.1 Inspect the position of the top jaw when it lowered all of the way. It needs to be true to the bottom jaw and centered under the upper hydraulic cylinder(s).
- The rod foot needs to be centered within the hold down plate. See figure 2.
  - The top teeth should be directly aligned above the bottom teeth. It may be helpful to remove the holding bolts and drop the two outermost teeth from the top jaw down to see if they line up with the bottom set of teeth.



**FIGURE 2 – retaining plate assembly where the cylinders connect to the top jaw**

- 1.2 In most cases the jaw will naturally seek the correct alignment and so the objective is to not move the top jaw while tightening the side guides. If the top jaw is out of alignment, then take a measurement of how much so that it can be moved back into position with the guide adjusters.
- 1.3 Using the side guide adjusters, tighten the square headed bolts by small amounts to push the top jaw back into position. Do this uniformly with the top and bottom bolts to keep the top jaw in vertical alignment.

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- 1.4 A note on the hold down plate: Do not over tighten the nuts on the retaining bolts shown in figure 2. There may appear to be a gap between the rod foot and the top jaw beam. This is natural and desired. Only the cylinder shaft should be pushing against the top jaw, not the rod foot. The system is designed to allow the rod foot to adjust to any misalignment with the top jaw.
- 1.5 Slide the remaining side guides in until they are against the top jaw guides and are flush. Tighten the bolts on each side guide.
- 1.6 For the side guide adjusters, loosen the jam nut and turn the square head keeper bolt clockwise until it pushes against the side guide. **DO NOT OVERTIGHTEN. 10 FT-LBS MAXIMUM.** Check to be certain that the teeth are still aligned top and bottom and that the rod foot is still centered in the hold down plate. Tighten the jam nuts.
- 1.7 Repeat steps 1.5 and 1.6 on the remaining guide plate and side guides.

## **2. BOTTOM JAW REMOVAL**

- 2.1 Remove and plug each of the hoses connected to the cam cover. Label each so you know which port to attach it to on the new jaw.
- 2.2 Remove the old bottom jaw. Using a torch or grinder, cut each of the welds that hold the one inch thick plate to the 1 ½ inch thick blocks. Pull the bottom jaw off the beam.
- 2.3 As with step one, cut away each of the 1 ½ inch blocks from the top of the beam.
- 2.4 With a grinder, clean up the top plate of the beam to remove burrs and left over weld. After that, clean the surface with acetone to remove any oil and dirt that may cause bad welds.
- 2.5 Position the bolted together bottom jaw and mark the exact location of the bolt plate with the beam. Make sure the top and bottom bolted plates are perfectly lined up with one another. The notch in the middle of the plates should face the outbound side of the cutter. Refer to figure 3.
- 2.6 Note where the bolts come close to the beam flange. Half moon cutouts will need to be cut from the beam flange to make room for the nuts. Mark each location so you can later cut that part out.
- 2.7 Note how close the springs will come to the bottom jaw plates. If they are touching the plates try the supplied offset spring cups to see if that gives you clearance.

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- 2.8 Remove jaw and make the required clearance modifications for the bolts and nuts.
- 2.9 Clean up the top surface of the beam and place only the bolt plate back on top of the beam and position it exactly where it was before using your markings.
- 2.10 Tack weld the underside of the bolt plate to the beam between the bolt holes.
- 2.11 Check the final position of the plate.
- 2.12 Weld it onto the bottom plate through the middle cutouts. Start with the center and move towards the outside.
- 2.13 Clean up the welds and the top of the plate to prepare for the bottom jaw.

## **3. FIT BOLT-ON BOTTOM JAW**

- 3.1 Add the remainder of the bottom jaw to the beam. Place the pin and key in their proper slots. Carefully fit the bottom jaw over the parts and down onto the beam plate. The notch in the middle of the bottom jaw plate should match the notch on the beam plate. This notch is made to clear the veneer gage cylinder.
- 3.2 Hang the tables back onto the pivots using  $\frac{3}{4}$ " bolts and nuts. Place the springs over the bottom cups and guide them over the top cups on the tables. As the tables rest on the springs, they should be level with the ground (if the cutter is level to the ground) and the rollers will be  $\frac{1}{4}$ " below the edge of a sharp edged tooth that is fully extended. Adjust this height by adding spacers between the bottom spring cup and spring perches.
- 3.3 Check the cylinder mount locations. Hang the cylinders from the top mounts under the table to see if they will hit the bottom jaw plate. They will compress a few inches so make sure the cylinder body also clears the plates. If they hit the plates the new mounts will have to be welded on.

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- 3.4 Prepare the new mounts (if necessary). Allow about 1-2 inches of cylinder clearance from the bottom jaw plate. Modify the length of the mounts to get the distance you want. Take care that the bottom mount ends are flat and have a clean surface to weld too since this joint will have a good amount of stress on it. Fully extended the cylinders will push the tables up where the rollers will be  $\frac{1}{4}$  -  $\frac{1}{2}$  inches above the teeth. Fine adjustment can be done with the threaded ends of the cylinders to even out the cylinder strokes.
- 3.5 Test your vertical welding skills and weld on the cylinder mounts.
- 3.6 Mount the greasing hoses. Run the hoses from the bottom ports of the tooth bar out to the outbound side of the cutter frame. The free ends will be mounted to a piece of angle iron that is to be welded to the cutter frame. Once a good position for the angle is found, weld it to the frame.
- 3.7 Grease the bottom jaw until grease runs out of the relief valve on the other end. This will be a significant amount of grease since it will be the first time. Keep the bottom jaw well greased! Do it once or twice a day and maintain good seals and you will not have to replace the bottom jaw again for a very long time.
- 3.8 Reconnect all of the hoses. Run the hoses to the tops of the outbound table cylinders. Reconnect both hoses to the veneer gage cylinder. Connect the hoses to the cam cover on the bottom jaw. If you find that you might have mixed up the hoses, don't worry about breaking anything. Test run the cutter and see if you have the right hoses connected to the correct ports, then switch them if needed.
- 3.9 Test run the tables and the bottom jaw. Make sure the table sits in the correct position below the teeth when neutral, and sits above the teeth when raised. The teeth should all raise until fully extended when the tables are raised. They should all lock in position when the control lever is pulled towards you.
- 3.10 Bleed the air out of the system. Put the teeth in unlock position by pushing the right control lever into the detent position then back to neutral. Starting with the two teeth farthest to the left of the cutter, take a 2x6 wood board and push the teeth in until the heads sit against the tooth bar. Do this by raising and lowering the top jaw down onto the board. Compress one set of top and bottom teeth at a time until all are done and the air will be out of the system.
- 3.11 Paint all exposed steel areas John Deere Green if desired.