Trendsetter VLF

Table Upgrade Procedure

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Table replacement procedure

CONTENTS

1. Scope....3

2. Related Documentation....3

3. Tools Required....3

4. Replacing the table....3
   - 4.1 Removing the Old Table....3
   - 4.2 Pivot Mounts....3
   - 4.3 Top Panel....4
   - 4.4 Switches....4
   - 4.5 New Table....4
   - 4.6 Auxiliary Switch....5

1. SCOPE

This procedure covers the installation of the version B table on the early production machines (to sn 019).

2. RELATED DOCUMENTATION

- Table Alignment Procedure
- ECO B530 (auxiliary start switch)
- ECO B465 (Table height adjustment and switches)

3. TOOLS REQUIRED

- Metric allen keys
- Drill with 5/8", ¼" and 4.5mm bits

4. REPLACING THE TABLE

To fit a new table it will also be necessary to install new switches for the table up and down as well as change the top panel which holds the operator interface. The auxiliary start switch and the pivot mounts are optional but highly recommended.

4.1 Removing the Old Table

To remove the old table completely remove the table tilt cylinders and pivot covers, disconnect the two vacuum lines and the plate sensor cable. Remove the counterweight and undo the screws that mount the table to the struts. Lift the table off. Remove the struts.

4.2 Pivot Mounts

Replace the table pivot mounts. The new ones have the improved height adjustment and a larger range of motion than some of the early parts. The early Beta units (sn 001 and 002) had a 3/16" aluminum plate which the switches and bushings were mounted to. These units will not accept the new mount so you will have to make due with the existing setup but the switches should be removed. The new pivot mount with the wedge unit assembled is shown in Figure 1.

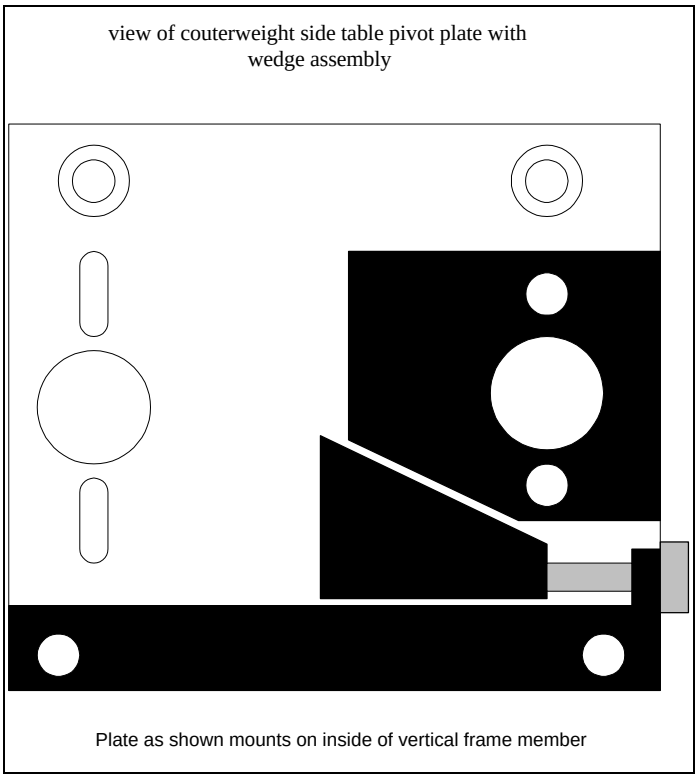


Figure 1: View of pivot plate with wedge assembly

4.3 Top Panel

Before mounting the table the counterweight-side top panel should be replaced. The new table is wider and will not work with the existing top panel. Remove the top panel on the counterweight side and move the operator panel to the new panel. Remove the raised plate support from the non counterweighted side.

4.4 Switches

The new table up switch mounts to the frame just below the pivot. You will have to drill holes to mount it, the hole pattern is shown in Figure 3.

The table down switch is mounted in the counterweight side pivot cover. This cover is provided and should fit on all machines.

4.5 New Table

Attach the rod end of the table tilt cylinder to the strut and install the struts using 7 of the nylon washers on each shaft. Put a layer of cardboard on the top panels and set the table over the struts and then slide it into position. Attach the table with the M5 X 45 screws using the nuts and washers.

4.6 Auxiliary Switch

The auxiliary start switch was added to compensate for the fact that the new table is too wide for an operator to comfortably reach the existing start button. It is not absolutely necessary and does require drilling a hole in a panel so the decision on weather or not to install it will depend on how the machine is used.

Drill a 5/8” hole in the front inner motor side panel as shown in Figure 2.

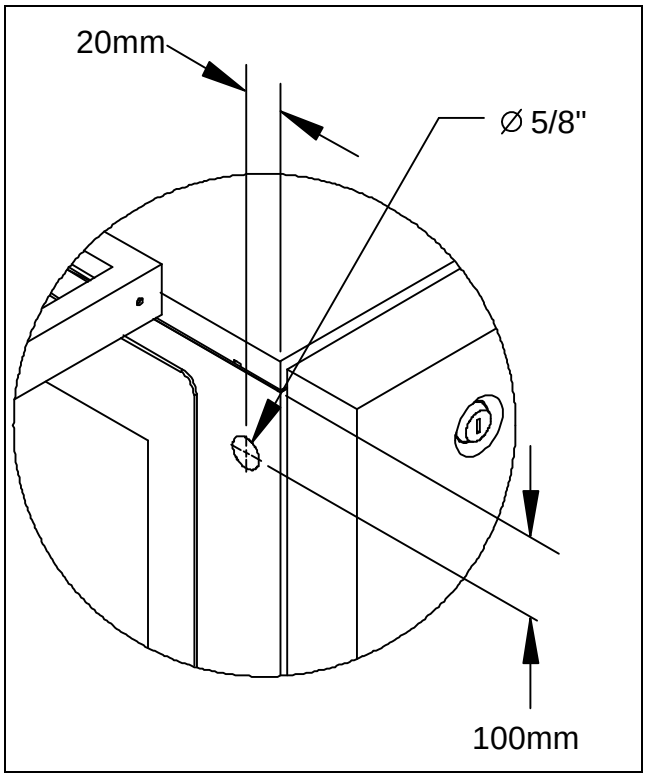


Figure 2: Mounting holes for auxilliary start switch

Install the switch in the panel

Attach the switch contact block to the switch and lock in place by turning the small red latch ¼ turn.

Remove the 4 pin molex from the back of the operator panel and attach the new cable to both the operator panel and the old cable.

Use the cable ties and adhesive mounts to secure the cable to the power box such that it will not foul the latch.

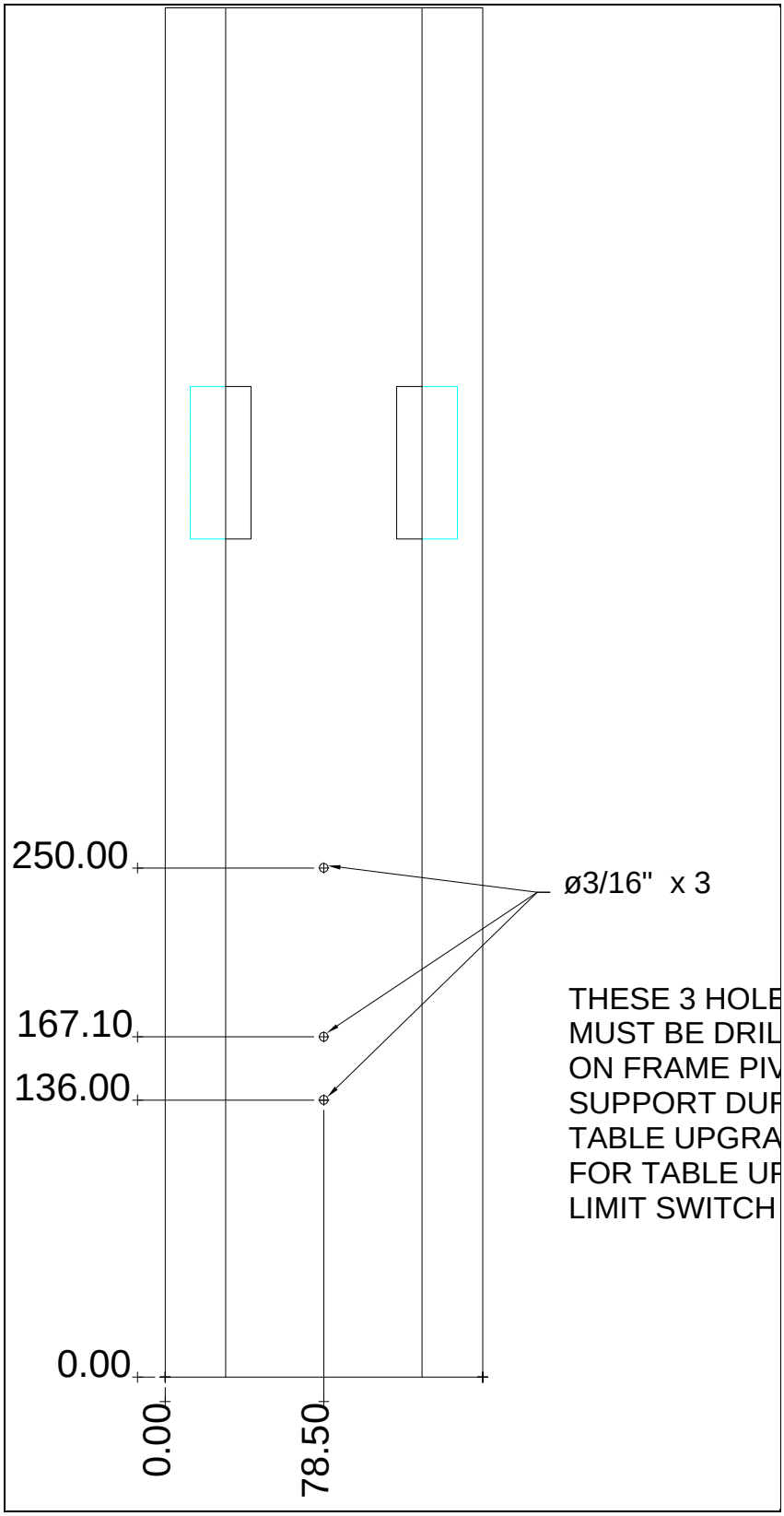


Figure 3: Mounting holes for table up limit switch

ADJUSTMENT SEQUENCE

The order in which the adjustments are made is important. First adjust the horizontal and vertical position of the table pivot. This is done when the table is down and must be set before the angle is set. Moving the table pivot will change the table angle. The correct sequence is

- Horizontal position
- Vertical position
- Recheck horizontal position
- Table angle

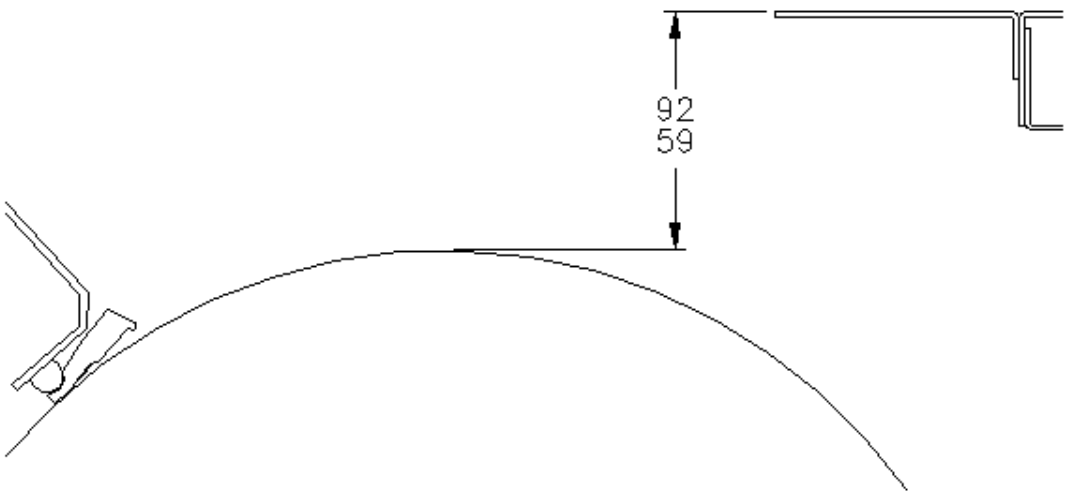
Horizontal Position

The horizontal position is determined by measuring the distance from the edge of the engine clamp plates to the table.. The table must be level to within ¼ of a degree for the measurement to be accurate. It may be necessary to do a rough vertical adjustment in order to level the table.

- Measure the distance from the table edge to the clamp plate. It should be 222 mm for a 5080 and 250mm for a 5880
- If it is not within 2 mm of this adjust by loosening the 4 m6 bolts on each side of the frame and sliding the pivot back and forth.
- Tighten the bolts.

Vertical Position

With the table level measure the distance from the top of the table to the top of the drum. This is best done using a straight edge on the table to extend out over the drum.



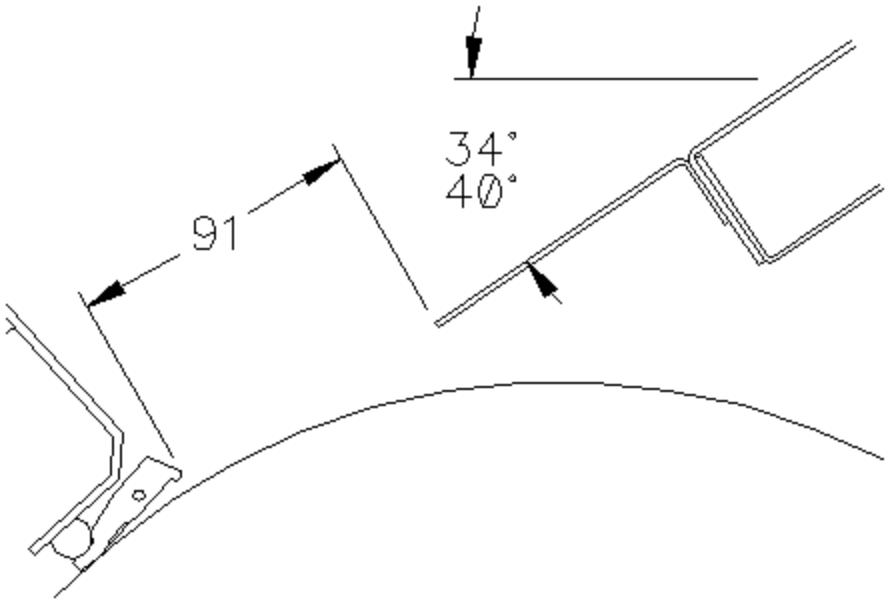
- The distance from the highest point on the drum to the bottom of the straight edge should be 92mm for a 5080 and 59mm for a 5880.
- If it is not within 2mm adjust by loosening the m5 screws that mount the pivot bushing and slide it up or down as necessary. Units made after #19 have a sliding wedge to make this adjustment easier.
- Tighten the M5 bolts.

Recheck Horizontal Position

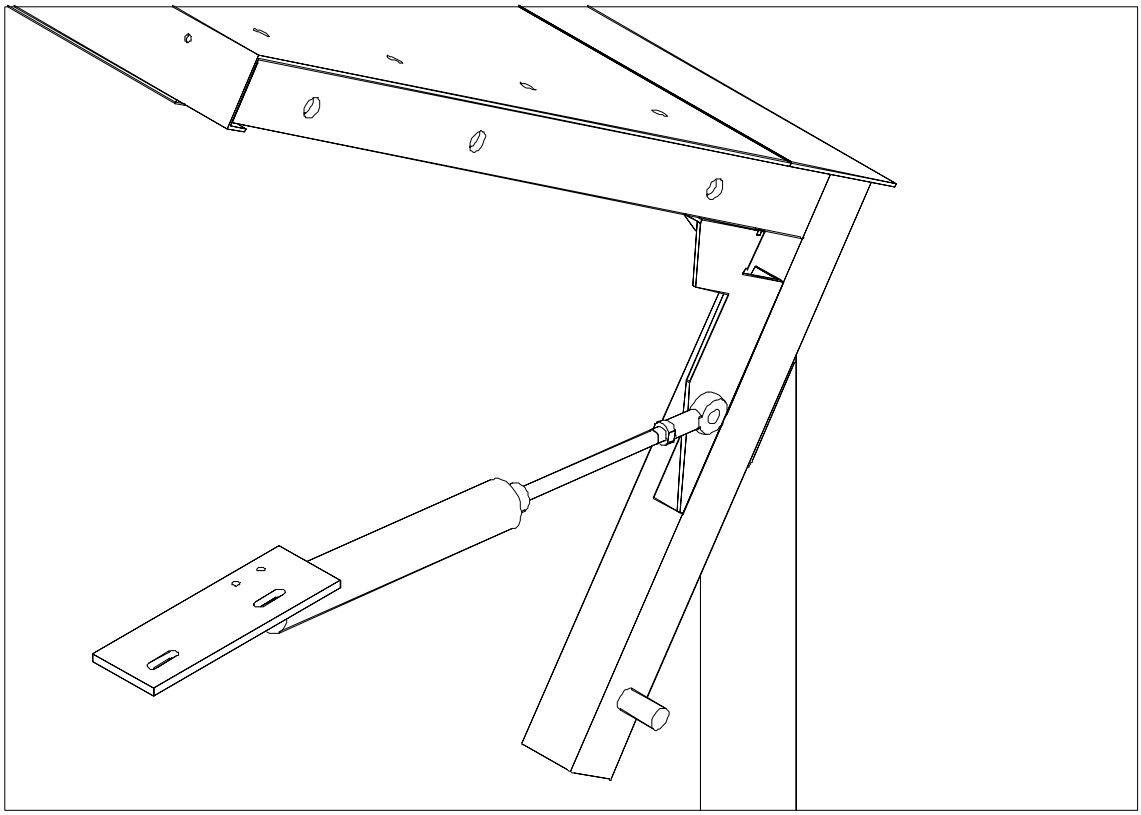
If it was necessary to move the table vertically the horizontal measurement should be repeated as the two adjustment do interact.

Table Angle

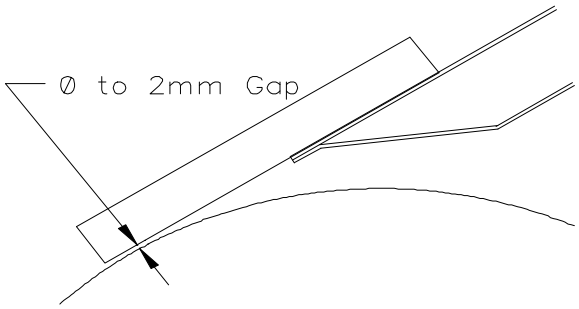
Move the table to the upright position and adjust the cylinders so that it is at 34 degrees for a 5080 and 40 degrees for a 5880.



- The rod end can be used to make fine adjustments (1 degree total range) and the cylinder mounting plate can be moved for coarse adjustments.
- Check that there is no interference between the leading edge clamps and the front edge of the table when the drum is rotated.
- The final phase of the alignment can only be done when the machine is basically working. The previous steps should have set the table in the correct position and the following procedure will compensate for any manufacturing tolerances that may have found there way into the machine. Put the table in the load position. The lec actuator must be on and the table cylinders must be pressurized.



- Use a straight edge to check that the projected plane of the table is tangent to the drum at the leading edge clamp. Due to the twist in the table from the counter weight it may be a bit higher at the counterweight side but both sides should be within 1mm of the drum.



- Measure the distance from the tip of the table to the leading edge clamp. It should be 91mm. plus or minus 2 mm. The distance should be within 1mm all along the drum.

TROUBLESHOOTING

- The first thing to check is always the horizontal and vertical position (2.1 and 2.2).

- If the projected plane of the table is wrong and the lec to table distance is correct then adjust the height of the table pivots.
- If the projected plane of the table is high and the lec to table distance is to large then increase the table angle.
- If the projected plane of the table is low and the lec to table distance is to small then decrease the table angle.
- If the projected plane of the table is low and the lec to table distance is to large then adjust the table pivot forward.
- If the projected plane of the table is high and the lec to table distance is to small then adjust the table pivot backward.
- These adjustments will interact with each other and it may be necessary to iterate a bit. Be sure that the table is stopped on both cylinders when it is up. If one cylinder is set to long the measurements will not be repeatable at that end of the table.

NOTES

The table angle should be set to a nominal 34 or 40 degrees but it may be necessary to change this setting to compensate for other factors. The angle may have to be set a bit less if the leading edge clamps hit the table. The table can usually be set 1 or maybe even 2 degrees less depending on other adjustments. The most important thing is that the projected plane of the table be tangent to the drum. To check this put a straight edge on the table and extend it over the drum. There should be no more that 2mm between the drum and the straight edge with less being better.

After changing the table angle it may be necessary to readjust the table up/down switches. This is done by adjusting the switch brackets which are mounted on the counter weight side of the frame.

It will also be necessary to re-calibrate the NVS parameter ***al stl*** (sensor to leading edge distance) This is the distance in mm from the center of the plate sensor to the registration pins. To calibrate this, load a plate of known height ***x***, type **>>*load x cal***, and when the load is completed, type **>>*nvs save al***. This will save the new value of ***stl*** based on the calibrated value.