

*Note: Take your time and don't rush gib adjustments, they are critical! Do not adjust any gibs unless you have verified that the machine is leveled properly.*

## Table Gibs

There are two gibs at the front of the table and from 4 to 6 Gib/Strap assemblies on the underside of the table (depending on the VMC model). At this point we are going to adjust the front table gibs; there is one at the left and one at the right. All of the following adjustments apply to all models.

- a. With the table centered at the X axis cold start position. Attach a magnetic base and indicator just below the gib to be adjusted, and set a zero reading (see Figure 1).
- b. Place a pry bar between the front table Gib/Strap assembly and saddle.
- c. With the pry bar move the table forward so the solid rear way of the table is up against the saddle.
- d. Zero the indicator.

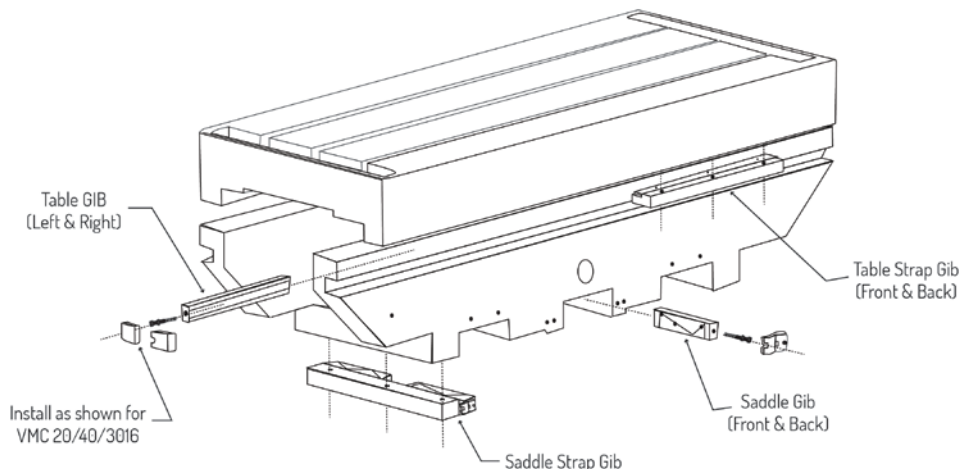


**Figure 1**

- e. Now place the pry bar between the rear table Gib/Strap assembly and the saddle.
- f. Gently pry the table the opposite way.
- g. The indicator reading is the adjustment that needs to be made.

*Note: A properly adjusted set of gibs will have front to back motion of .0005 (Steel Gibs - .0003)*

- h. If the gibs need adjusting, there is a gib adjuster screw located at the end



**Figure 2**

of each gib (see Figure 2). Turning this screw clockwise will loosen the gib and counter clockwise will tighten the gib.

- i. Repeat the above steps until you get .0005 indicator motion, then go do the other gib at the opposite end.

After both gibs have been completely adjusted run the table to its extremes at the plus and minus end and then back to center again. Then repeat the above gib adjustment procedure for verification.

### Table Gib/Strap Assembly

*Note: When adjusting gibs with shim stock be very careful not to cause the shim to rip and leave a piece between the gib and way surface.*

There are Gib/Strap assemblies on the underside of the table at the front and rear. Depending on the model of VMC there will be from 1-3 Gib/Strap assemblies at the front and rear.

The Gib/Strap assemblies are adjusted as follow:

- a. Jog the table in the X axis to clear the cold start indicator.
- b. Loosen the three hex head bolts. The slot for the bolt is tapered, and when the gib is moved the head of the bolt may bind, be sure that the bolt is loosened enough to allow the gib to slide from left to right.
- c. Slide the gib to the right to loosen. (The gib must be loosened before it can be tightened)

*Note: To move the gib use an open end wrench on a hex head bolt and tap with a mallet.*

- d. To adjust, slide the gib to the left (as you face the strap) until it contacts the underside of the saddle. Push to the left with finger pressure.
- e. Make sure that each of the three hex head bolts are still loose and not caught on the tapered slot. If the bolts were binding on the slot, loosen and re-adjust.
- f. Tighten the three hex head bolts.
- g. Repeat the above steps for the other table Gib/Strap assemblies.

### Saddle Gibs

There are two gibs at the right of the center rail on the base and 2 Gib/Strap assemblies on the underside of the saddle. At this point we are going to adjust the center gibs of the saddle only. All of the following adjustments apply to all models.

*Note: It may be necessary to remove the rear Y axis tray to adjust the saddle gibs!*

- a. With the saddle centered at the Y axis cold start position. Attach a magnetic base and indicator to the saddle and place the indicator (see Figure 3), set a zero reading.



Figure 3

- b. Place a pry bar between the right saddle Gib/Strap assembly and base.

- c. With the pry bar move the saddle so the solid way of the saddle contacts the center base rail.
- d. Zero the indicator.
- e. Now place the pry bar between the left saddle Gib/Strap assembly and base.
- f. Gently pry the saddle the opposite way.
- g. The indicator reading is the adjustment that needs to be made.

*Note: A properly adjusted set of gibs will have front to back motion of .0005 (Steel Gibs - .0003)*

- h. If the gibs need adjusting, there is a gib adjuster screw located at the end of each gib (see Figure 2). Turning this screw clockwise will loosen the gib and counter clockwise will tighten the gib.
- i. Repeat the above steps until you get .0005 indicator motion, then adjust the other gib at the opposite side (closest to column).

After both gibs have been completely adjusted run the saddle to its extremes at the plus and minus end and then back to center again. Then repeat the above gib adjustment procedure for verification.

### **Saddle Gibs/Strap Assembly**

*Note: When adjusting gibs with shim stock be very careful not to cause the shim to rip and leave a piece between the gib and way surface.*

There is one Gib/Strap assembly at the left and right of the saddle. Each Gib/Strap assembly has two gibs that need adjusting.

Adjust the saddle Gib/Strap assembly as follows:

- a. Loosen both the front and back gibs on the strap by turning the gib adjuster screw clockwise.
- b. Insert a .001" shim about 3-4" between the gib and the way. Place shims in both the front and rear at the same time.
- c. Tighten the gib to pinch the shim between the gib and way by turning the gib adjuster screw counterclockwise (see Figure 2). Tighten enough to prevent the shim from moving.
- d. Slowly turn the gib adjuster screw clockwise while pulling on the shim.

*Note: Shim Stock is very sharp!*

- e. When the shim begins to pull out, stop turning the gib adjuster screw and remove the shim completely.
- f. Turn the gib adjuster screw 3/4 turn counterclockwise.
- g. Repeat the above steps for the front, rear, left and right gibs.

### **Head Gibs**

There are 2 gibs that ride between the column ways, one at the top and bottom. There is also 1 Gib/Strap assembly on the back of each column rail. We are going to adjust the center gibs only at this time.

Either gib can be adjusted first. Adjust as follows:

- a. Remove the Z axis head cover.
- b. Center the Z axis head within its travel limits so it will be easy to work on.

- c. Attach a magnetic base and indicator to the column (see Figure 4).

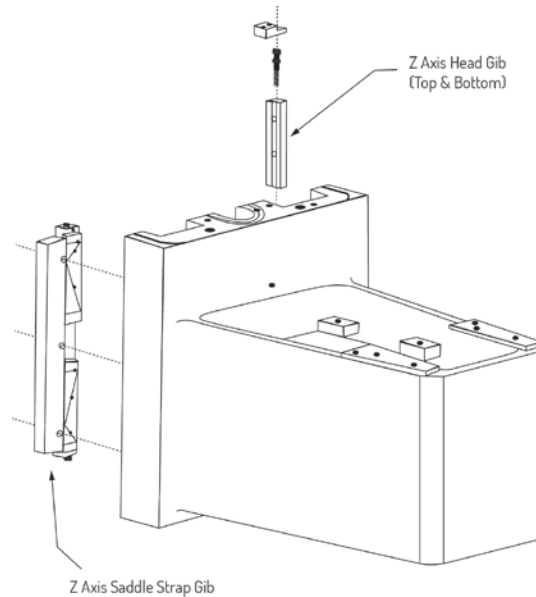


**Figure 4**

- d. Using a pry bar between the left side of the head and Z axis way, move the head so the left inside way contacts the left column way.
- e. Zero the indicator.
- f. Now place the pry bar between the right side of the head and Z axis way.
- g. Gently pry the head the opposite way.
- h. The indicator reading is the adjustment that needs to be made.

*Note: A properly adjusted set of gibs will have front to back motion of .0005 (Steel Gibs - .0003)*

- i. If the gibs need adjusting, there is a gib adjuster (see Figure 5) screw located at the end of each gib. Turning this screw clockwise will loosen the gib and counter clockwise will tighten the gib.



**Figure 5**

- j. Repeat the above steps until you get .0002 - .0003 indicator motion, then adjust the gib at the opposite end.

After both gibs have been completely adjusted run the head to its extremes at the plus and minus end and then back to center again. Then repeat the above gib adjustment procedure for verification.

### Head Gib/Strap Assembly

*Note: When adjusting gibs with shim stock be very careful not to cause the shim to rip and leave a piece between the gib and way surface.*

There is one Gib/Strap assembly at the left and right side of the head. Each Gib/Strap assembly has a top and bottom gib that needs adjusting (see Figure 5).

Adjust the head Gib/Strap assembly as follows:

#### Top Gibs

- a. Loosen all four gibs by turning the gib adjuster screws clockwise.
- b. Insert a .001" shim about 3-4" long between the column and the Z axis head. Be sure the shim is in the center of the way. Do the same for the left and right side.
- c. Tighten the gib to pinch the shim between the head and way by turning the gib adjuster screw counterclockwise. Tighten enough to prevent the shim from moving.
- d. Slowly turn the gib adjuster screw clockwise while pulling on the shim.
- k. When the shim begins to pull out, stop turning the gib adjuster screw and remove the shim completely.
- l. Do the same for the other side.
- m. Turn both gib adjuster screws 1 turn counterclockwise after the shims have been removed from the left and the right side.

### **Troubleshooting**

If you become stuck or confused, simply contact us at 208.855.9426 and one of our friendly service technicians will be happy to assist you.

*Note: Shim Stock is very sharp!*

- e. When the shim begins to pull out, stop turning the gib adjuster screw and remove the shim completely.
- f. Do the same for the other side.
- g. Turn both gib adjuster screws 1 turn counterclockwise after the shims have been removed from the left and the right.

### **Bottom Gibs**

- h. Insert a .001" shim about 3-4" long between the rear of the column way and the bottom gib. Do the same for the left and right side.
- i. Tighten the gib to pinch the shim between the gib and way by turning the gib adjuster screw counterclockwise. Tighten enough to prevent the shim from moving.
- j. Slowly turn the gib adjuster screw clockwise while pulling on the shim.

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*Instructions written by FadalCNC.com. We put in hundreds of hours of hands-on experience in the field each year.*