



verdonkracing.com

Calibrating and resetting AF-1 and AF-L dial indicator

Tools needed:

2mm allen key
5mm allen key
Vernier Calipers or Tape Measure/Ruler

Step 1:

Remove the 2 thumb screws that secure the plastic guard to the machine and remove guard.

With the angle dial adjust the top 3 plates to be parallel on the left side of the machine. Do not worry about the indicator numbers at this time. Just focus on getting the top 3 plates parallel.

Note: If you have a AF-1 (base and side edge machine) open the machine into Base mode this will make it easier to make the measurements

Use your caliper or tape measure to measure all 3 top plates on the side of the machine in the front and the back. The measurement should be the same forward as in the back. This will be your "zero" or 90 degrees. When using a caliper use very light pressure to make the measurements, this will prevent you from squeezing the trays together and creating false readings.

Note: if you use a digital caliper your measurement needs to be within a 10th or 20th, if you try to get it completely even you will drive yourself nuts and the effective difference is far less than a 10th of a degree which is extremely small.

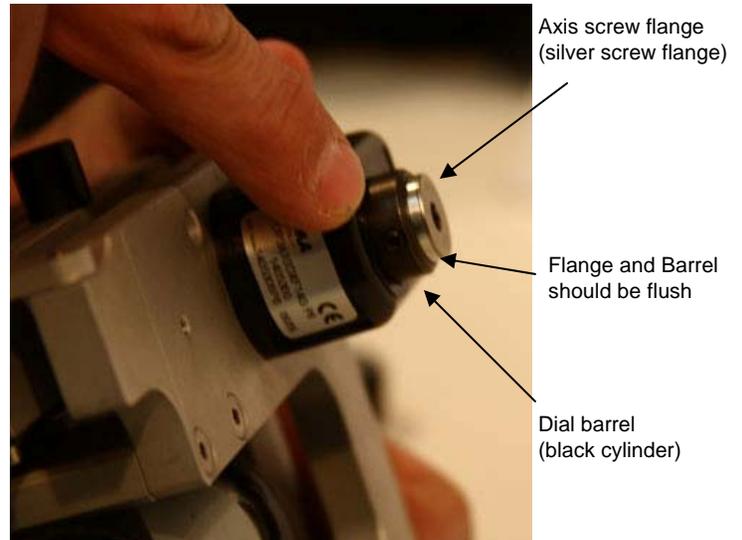


Step 2:

Remove cap on top of angle dial indicator by removing both 2mm allen set screws

Visually inspect and ensure that the center axis screw flange (silver with a 5mm allen head) is flush with the top of the black barrel of the dial

If axis screw is flush with barrel proceed to Step 4. if you see a gap between the axis screw and the black dial barrel proceed to Step 3



Step 3:

ONLY DO THIS STEP IF THE AXIS SCREW AND BARREL ARE NOT FLUSH OTHERWISE PROCEED TO STEP #4

Adjust the axis screw so that the plates are close to parallel.

Loosen the set screw which is located deep inside the top plate which is inline with the dial's axis screw. Do not remove, only loosen 2 or 3 turns

With your fingers pull the top tray up until the barrel is flush with the axis screw flange

Tighten the set screw inside of the top tray and reinstall the cap

Return to Step 1 and set the top 3 trays parallel



Step 4: Once you have the 3 top plates completely parallel and the forward and backward measurements are the same.

Remove cap on top of angle dial indicator by removing both 2mm allen set screws

With the Cap off, insert one of the 2mm allen set screws into the black barrel at the top of the dial. Just insert the screw loosely 1 turn or so, it should not be tight against the axis screw that goes through the dial.



Step 5: With the 5mm allen key hold the center axis screw at the top completely still. With your hand slow rotate the black barrel in the direction you need to get the dial to read 90.0 again.

Continue to rotate until the dial reads 90.0

Once you have the dial back to 90.0 its a good idea to double check you measurements one last time



Step 6: Remove the set screw you installed to help you rotate the barrel

Carefully place the cap back on the top of the black barrel

Reinstall the set screw that goes all the way through the cap and into the barrel. Install this screw first!

Reinstall the second set screw into the cap



Your machine is now recalibrated to 90 degrees

Notes on measuring angles other than 90 degrees:

The best method for measuring angles is to create a chart for your particular machine

Start by setting your machine to 90 degrees with the above instructions

Machining tolerances make each machine slightly different.

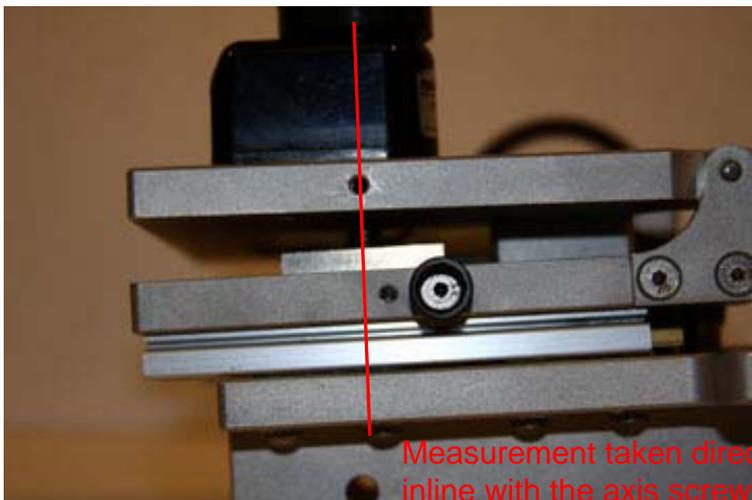
We are talking about 10^{ths} of a millimeter so don't get carried away. The Snowglide machines are extremely precise.

To create a measuring chart for your individual machine, you can apply the following rules

Every full turn/rotation of the dial is equal to 1 degree

Directly at the axis the measurement between the top and 2nd tray is 1.25mm per full turn/rotation of the dial

- 1st measure between the top tray and 2nd tray directly inline with the axis screw when the machines plates are parallel and the dial is "zeroed" at 90.0 degrees
- Then add 1.25mm for each angle from 90.0 degrees



Measurement taken directly inline with the axis screw

