

How to Level Machine

I. Machine leveling.

1. Select the appropriate leveling feet and leveling screws like what is showing in figure 1.1. Move table to the center of travel (use spindle as reference), and adjust leveling screw so it reaches leveling feet.



Figure 1.1, Example of leveling feet and leveling screw.

2. Place two machinist bubble levelers at center of the table. One setup for front and back direction and another set up for left and right direction, like what is showing in figure 1.2.

- i. Adjust level screws locate at four corner of the machine first, and do so until the bubble of both leveler are centered.
- ii. Next, move table forward until end of travel, and adjust the two leveling screws located at the front side only until bubble of both levelers are centered. (Figure 1.3)
- iii. Move table all the way back until end of travel and adjust the two leveling screws located in the back side of machine until bubble are centered. (Figure 1.4)



Figure 1.2, Machinist bubble levelers at center of travel.



Figure 1.3, Move table all the way to the "front" and level in left and right direction.



Figure 1.4, Move table all the way to the "back" and level in left and right direction.

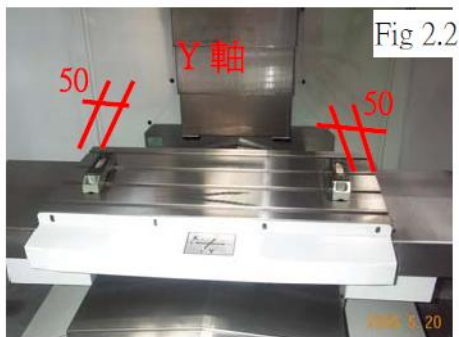
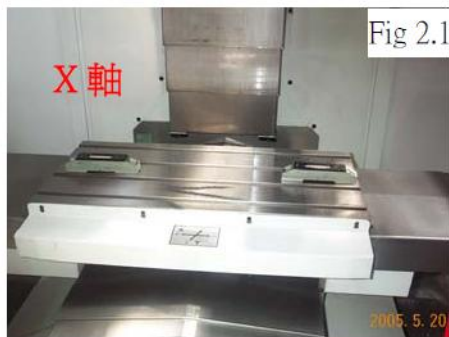
3. When front, back, and center are leveled, this indicates machine is leveled. Now adjust two leveling screws that located at the center of the machine lightly for the support of machine. At this time leveler should not exceed more than 1 mark on leveler indicator.

II. Table tolerances Check

Tolerances: X-Axis 0.06mm / 1000 mm, Y-Axis 0.06mm / 1000mm.

Scraping tolerance: X-Axis 0.04mm and Y-Axis 0.03mm

1. Move table to the center of travel.
2. Without moving the table, place leveler horizontally in respect to X-axis at right side, left side, and center of the table and check for tolerance. Please see figure 2.1 as example.
3. Without moving the table, place leveler horizontally in respect to Y-axis at right side, left side, and center of the table and check for tolerance. Please see figure 2.2 as example.



Document History

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