

### Step 1

- Obtain the following:
  - Microscope unit
  - Tilt Stage and 4 cap head screws
  - Micrometer and two set screws
  - 1/16 and 3/32 Allen Keys.

### Step 2

- Insert the four cap head screws into the holes marked by the arrows in the picture.
- Place the tilt stage on top of the microscope by lining up the screws with the four holes on top of the microscope unit.
- Tighten the screws with a 3/32 Allen Key.



### Step 3

- Remove the shipping screw and the warning label on the right side of the tilt stage.

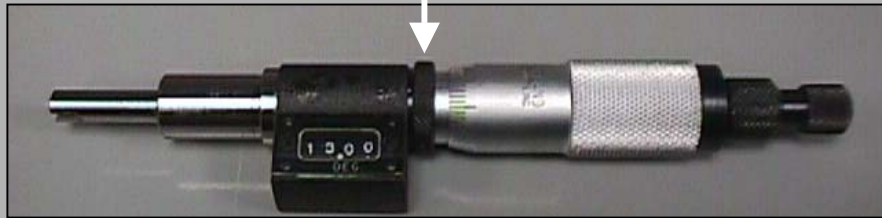


### Step 4

- Acquire the micrometer.
  - Regular (top picture)
  - Digital (bottom picture)



Lock Collar



### Step 5

- Verify that the lock collar is in the unlocked position by turning the lock collar counterclockwise.

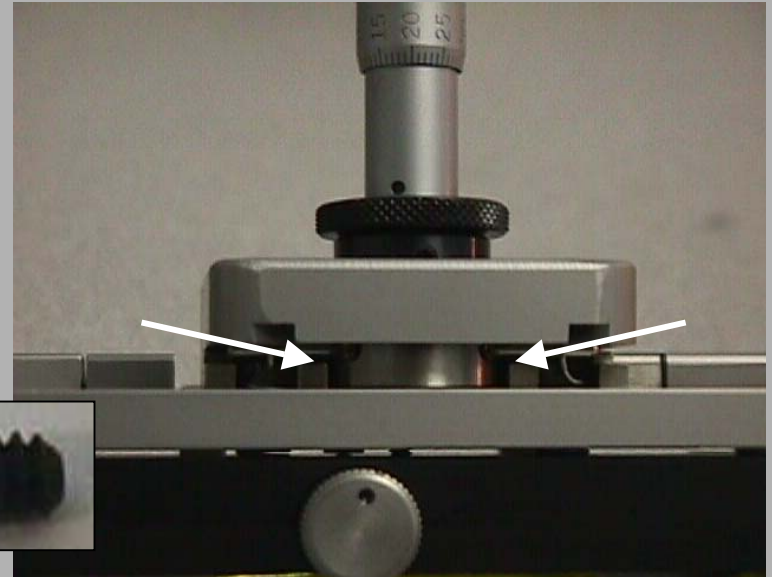
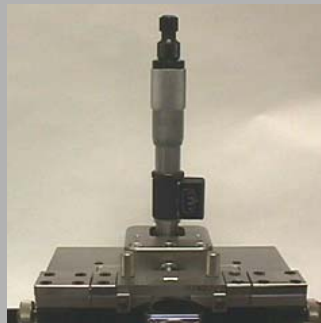
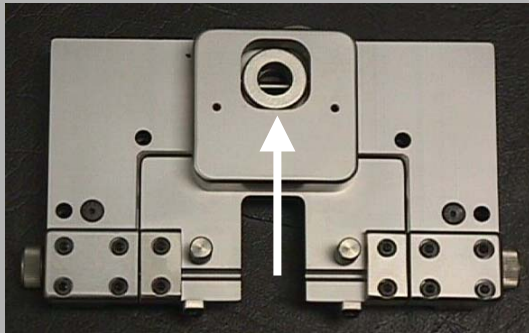


### Step 6

- Set the micrometer to 0.0



“U” shaped tip

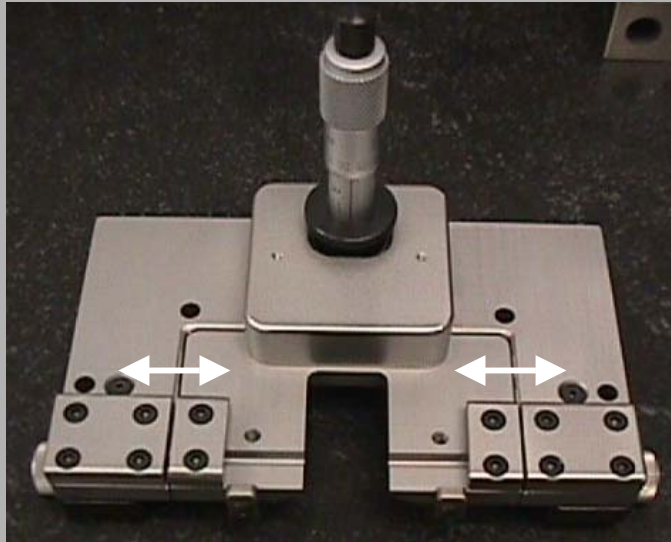


### Step 7

- Insert the micrometer into position by seating the “U” shaped tip (on the bottom of the micrometer) onto the dowel pin in the hole marked by the arrow.

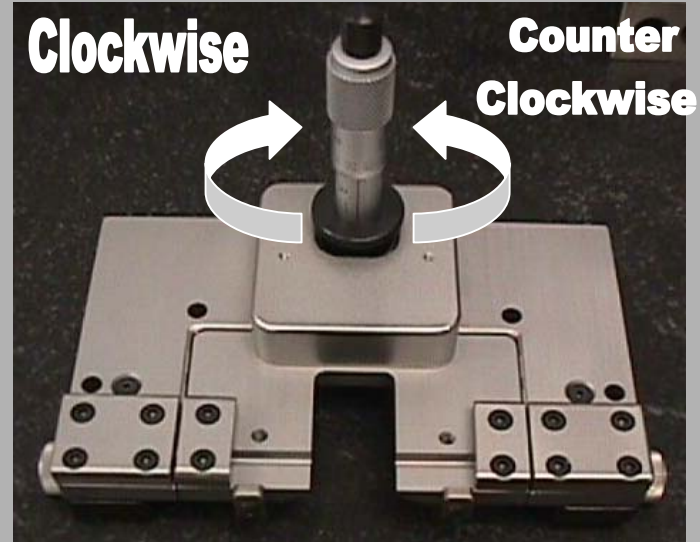
### Step 8

- Push down on the micrometer and attach it to the top plate with the two set screws provided, into the two threaded holes in the collar (on the back of the tilt stage) using a 1/16 Allen Key provided, as shown by the arrows. The micrometer is installed correctly when the part of the plate where the mount is attached is lower than the main top plate.
  - If it is higher, the micrometer was installed incorrectly. To correct this, loosen the two set screws, make sure that the micrometer is seated correctly over the dowel pin and then tighten the set screws.



### Step 9

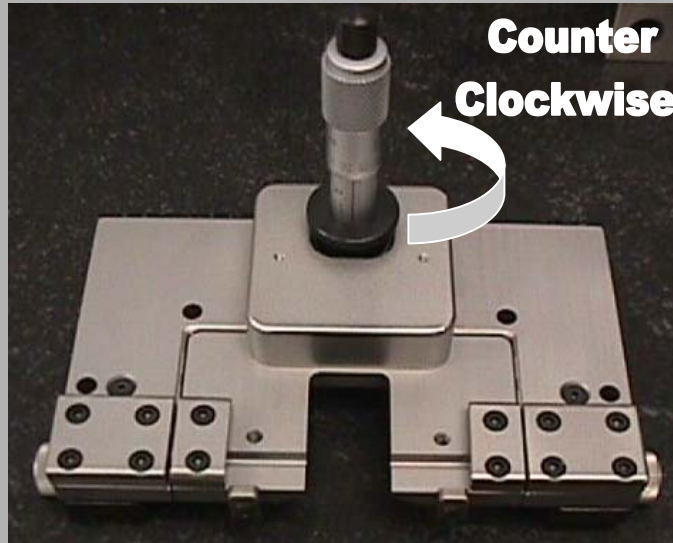
- Check to see if the two top plates are level.
  - Acquire a mount, or any other flat piece with a distinct edge, and run it across the plate following the arrows shown.
    - If the mount slides freely across the surface without stopping, the plates are level and installation is complete.
    - If the mount does not slide freely, go to step 10 for further instructions.
  - This can also be done by feeling across the plates.



### Step 10

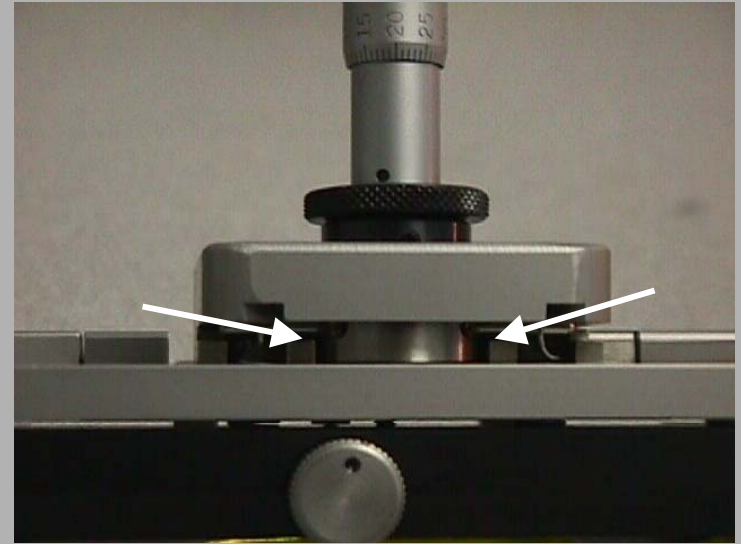
- Increase the micrometer clockwise until the two plates are level.
- Record the reading on the micrometer.
  - Ex. It reads positive  $0.40^\circ$
- Turn the micrometer counterclockwise back to 0.0





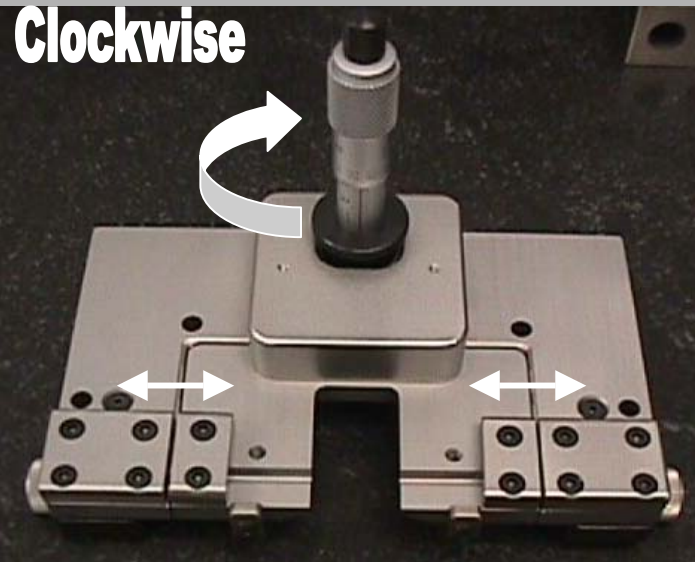
### Step 11

- From 0.0 turn the micrometer counterclockwise in the negative direction to the recorded number from step 10.
  - Ex. Regular Micrometer
    - $0.40^\circ$  counterclockwise would take you to  $0.10^\circ$  ( $0.50^\circ$  minus  $0.40^\circ$  equals  $0.10^\circ$ )
  - Ex. Digital Micrometer
    - $0.40^\circ$  counterclockwise would take you to  $99.60^\circ$  ( $100.00^\circ$  minus  $0.40^\circ$  equals  $99.60^\circ$ )



### Step 12

- Loosen the two set screws.
- Push down on the micrometer.
- Tighten set screws.



### Step 13

- Turn the micrometer clockwise back to 0.0
- Check to see if the plates are level.
  - If not, repeat steps 10-13 until the two plates are level.

### Step 14

- Upon completion of the installation, turn the lock collar clockwise to lock it into position.
  - Always turn the lock collar counterclockwise to unlock when changing the angle of the stage. When the correct angle is reached, lock the micrometer into position.
- If any other problems arise, please contact Tech. Services @ Norland Products Inc.