

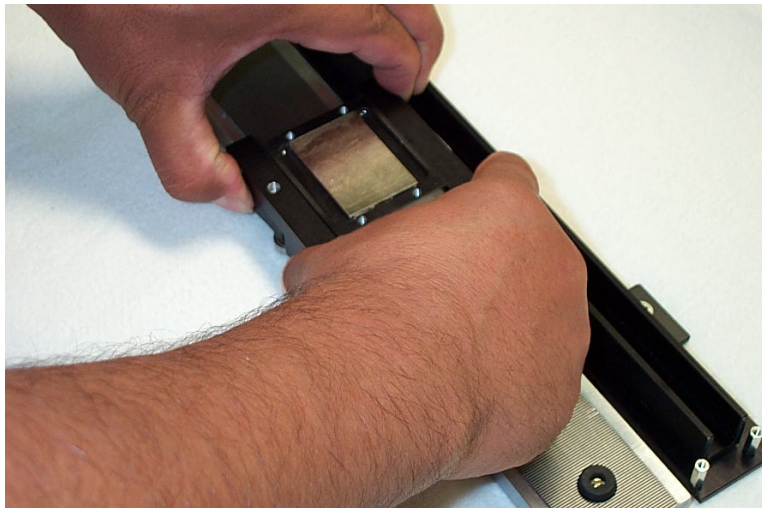
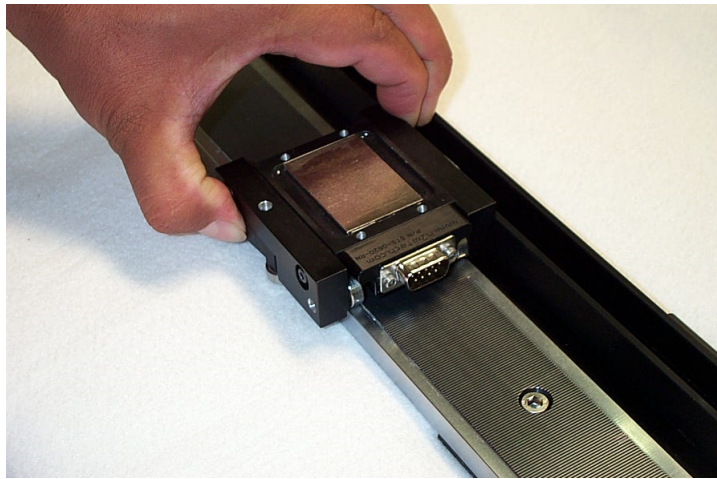


## Setting The Air Gap On Single Axis Linear Stepper with Roller Bearing

Procedure PR001 (9-1-15)

The forcer air gap was set to .0015-.002 inches [38 – 50 microns] prior to shipping from the factory. If the forcer becomes difficult to move manually, the air gap may have to be reset. The procedure is outlined below.

1. Remove the stepper motor from the platen by pressing your left thumb against the swivel and using your other thumb and index fingers to lift the motor and off the platen.

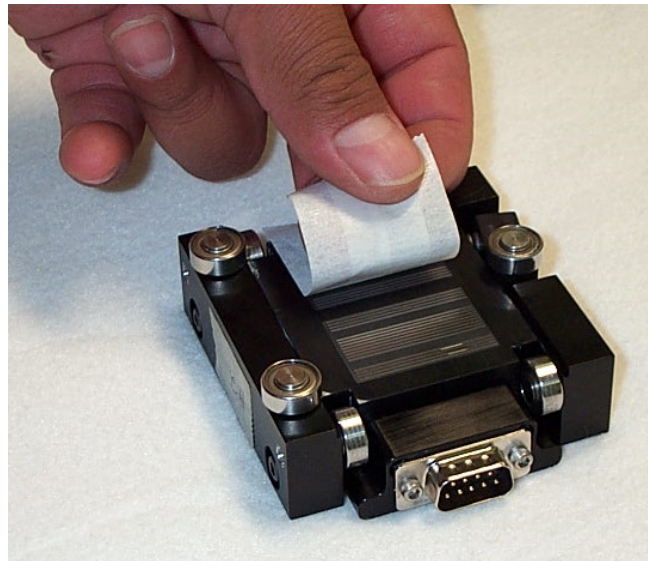
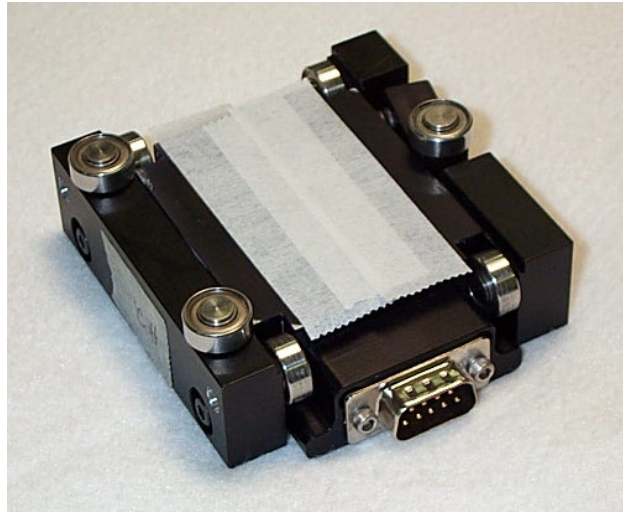


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2. In order to remove any magnetic particles from the bottom of the forcer, place some masking tape on the bottom of the stepper and peel it off. Do this several times to make sure that the forcer is properly cleaned. Remove any adhesive residue with isopropyl alcohol.

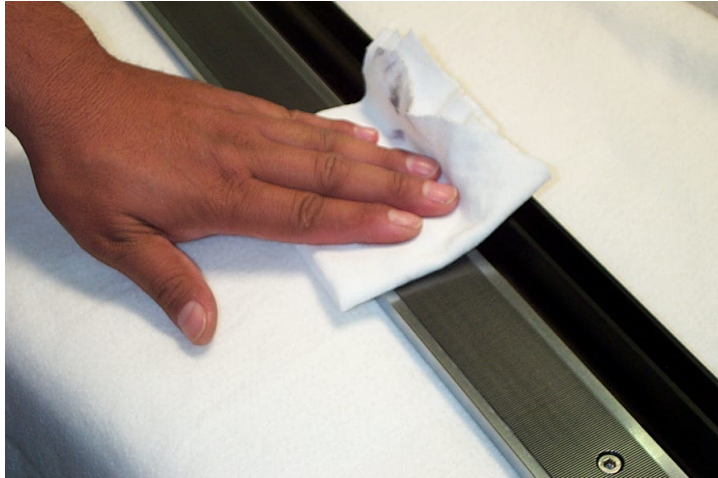


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3. Clean the platen by putting some isopropyl alcohol on a clean cotton cloth and running it along the platen. If any high spots or burrs are present, the platen surface must be hand lapped (consult factory for details). After cleaning, apply a thin coat of automotive wax to the surface of the platen to prevent corrosion.



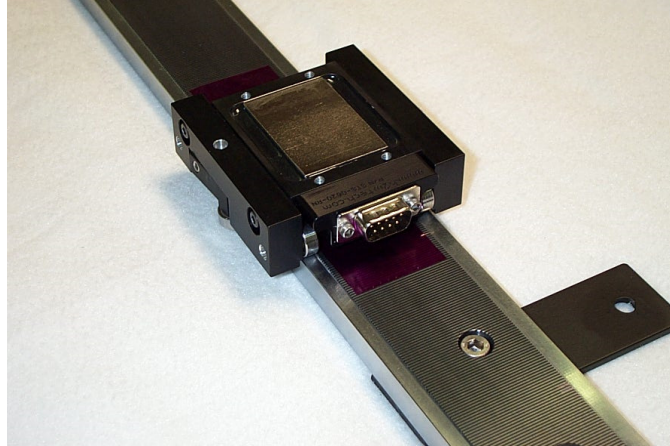
4. Place the .0015 - .0020 inches [38 – 50 microns] thk x 1.25" [38 mm] wide x 5.0" [125 mm] long plastic shim on the toothed section of the platen. The shim should not be over the smooth roller bearing guide surface part of the platen



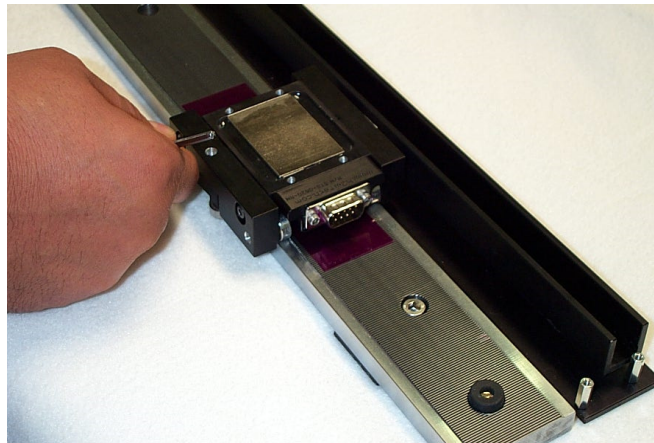
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5. Lower the stepper onto the platen. Make sure to place it over the center of the shim and the motor roller bearings are not in contact with the shim.



6. Using a 7/64 Allen Key, turn the 6-32 bearing block screws counter-clockwise to drop the forcer onto the platen.

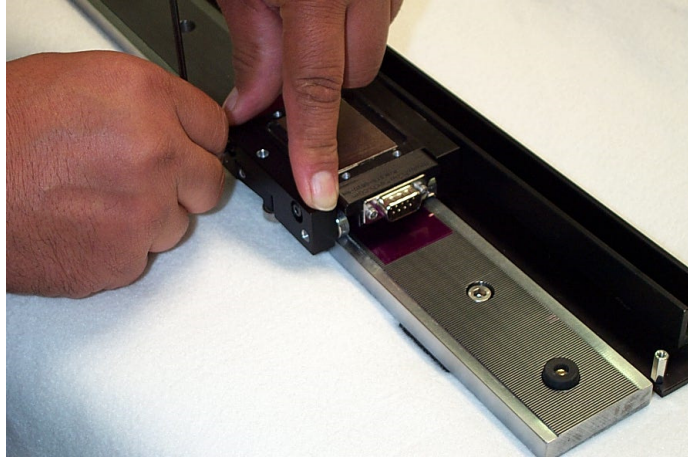


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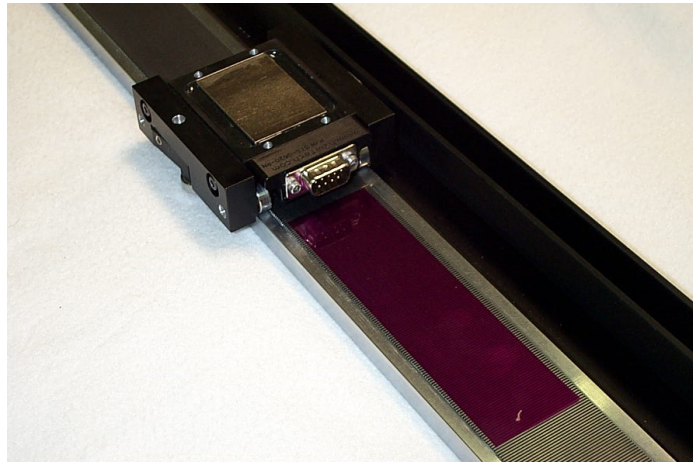
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7. Apply 5lbs (22N) of downward force using your thumb and index finger on the bearing block and tighten the 2 screws by turning the Allen Key clockwise. Repeat for the second bearing block.



8. Once the bearing blocks have been tightened, move the stepper off of the shim.



9. If the air gap was properly set, the stepper motor should be able to move freely along the entire length of the platen. If not, move the forcer to the area of the platen where it does not move freely and repeat above procedure starting at step 5.

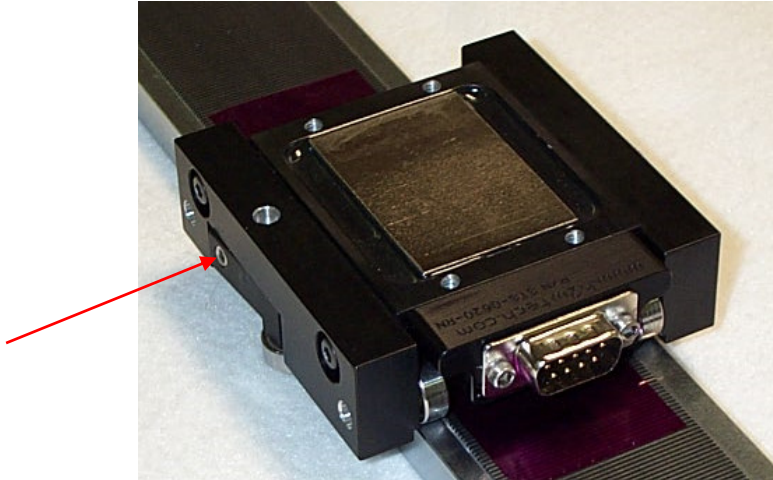
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### Adjusting Swivel

1. Using a 5/32 Allen Key, turn the 10-32 set screw clockwise to tighten the spring. Please refer to picture below.
2. Use a force gauge to adjust the set screw until the bearing is free to move with 6lbs of force. Please refer to picture below.



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