Lie-Nielsen
TOOLWORKS®
INC.

Workbench Assembly, Care & Maintenance

How to assemble, protect, and care for one of the most important tools in your shop.

(Revised 7/22/22)

Congratulations on your new Lie-Nielsen Workbench!

Your bench is shipped with the following components:

(2) Trestles (left and right sides)	(4) 5-1/2" Stretcher Bolts and Washers
(2) Stretchers (front and rear)	(2) Locator Pins (to align the top with the base)
(1) Top	(4) 3-1/4" Top Bolts and Washers
(2) Vise Handles	(1) 1/8" Allen Wrench (for tail vise adjustment)
(2) Bench Dogs	Not included: 1/2" and 7/16" socket wrenches

WORKBENCH ASSEMBLY

STEP ONE: ASSEMBLE THE BASE

1. Before you begin, orient the trestles so that the holes for the locator pins (on the top of each trestle) are facing front and the mortises are facing inward.
2. Take the rear stretcher and insert its left tenon (marked “rear-left" on its tenon) into the rear mortise of the left trestle.
3. Insert the stretcher bolt and washer through the trestle and tighten it using a 1/2" socket wrench.
4. Insert the right tenon of the rear stretcher into the rear mortise of the right trestle.
5. Insert the stretcher bolt and washer through the trestle and partially tighten it (leave it slightly loose so you can install the front stretcher).
6. Repeat this process for the front stretcher, then go around and tighten all bolts securely.

STEP TWO: MOUNT THE TOP TO THE BASE (Requires two people)

1. Once the base is assembled, put the two locator pins into the brass inserts on the top of the trestles. These pins help align the front of the top so that it is flush with the front of the trestles.
2. Next, orient the top so that the brass Lie-Nielsen name plate faces front.
3. When setting the top onto the base, the tail vise end is easier to align since the line of sight is not blocked by the shoulder vise. The person on the tail vise end should set their end down first, then help guide the person on the shoulder vise end to set their end down onto their locator pin.
4. Position the tail vise cut-out so that it overhangs between 1/8" to 1/4" over the right side of the trestle. This should align you perfectly over the right locator pin.
5. Once the tail vise end is set on its locator pin, look under the bench and help direct the person lifting the shoulder vise end of the bench to position their end over their locator pin.
6. After the top is properly set upon the base, insert the four top bolts and washers through the upper cross piece of trestles and tighten securely with a 7/16" socket wrench.

WORKBENCH CARE & MAINTENANCE

The following information will help you keep your bench in good working order for years to come.

SHOP HUMIDITY

We maintain around 40% humidity in our Bench Shop and recommend keeping your bench in an environment that has a controlled humidity level, especially when the bench is new and still adjusting to its environment.

As with anything made of wood, sudden or drastic humidity changes put a great deal of stress on our benches and can cause issues. Slow seasonal changes should not present problems, but we do recommend keeping an eye on humidity levels as they can change quickly when, for instance, you start using supplemental heat in your shop.

Keeping a bench in an unheated shop should not cause any issues, as long as the bench is not subject to any drastic humidity changes.

Monitoring the humidity and controlling it with a humidifier or dehumidifier in the room with the bench is always recommended. Also, oiling the bench, especially the end grain, can help slow the moisture exchange in the wood during times of humidity change.

WATER DAMAGE

If your workbench suffers from direct water exposure such as a spill or a flood in your shop, address the issue immediately and then let the bench dry. Situations like this and issues arising from them cannot be covered by warranty, but we will do what we can to help you remedy the situation.

RE-OILING

We recommended that you re-oil your bench 1-2 times a year, depending on the amount of use the bench gets.

We use a three part mixture of boiled linseed oil, spar varnish, and turpentine, but you can also use just boiled linseed oil if you prefer. Be sure to apply oil to the end grain of the bench top as this will help stabilize the wood. Apply the oil, let it soak in for one half hour, and remove any excess.

Remember, boiled linseed oil is highly flammable, and can combust, so always dispose of oil rags and brushes in a safe manner.

FLATTENING

Over time, your bench may need to be re-flattened. A good way to do this is to use a No. 7 or No. 8 Jointer Plane in order to get the bench top true and flat, working first diagonally back and forth across the grain, then finishing along the grain.

In the February 2008 issue of Popular Woodworking, issue #167, Christopher Schwarz explains this method for flattening your bench with hand tools. You can find this article on their website.

TAIL VISE

Your Tail Vise can be adjusted in order to get the correct tension on the rails, taking up any slack that may develop and achieving the correct action. The jaw should move freely but not be loose. This adjustment may be periodically necessary.

Do this by adjusting the four set screws along the bottom rail under the vise jaw. Use a 1/8" allen wrench to tighten each set screw all the way, then back them off 1/10 of a turn.

CHAIN DRIVE VISE

Timing:

The alignment between the two vise screws of the Chain Drive Vise, is called "the timing" and may occasionally need to be adjusted due to wood movement. If you find that your vise jaw is closing unevenly (i.e., closing on one side but leaving a slight gap on the other), adjusting the timing might help.

To adjust the timing, open the jaw and slightly loosen the four stand-off screws holding each stand-off to the bench top. Close the vise jaw until it is snug (but not tight) with the bench top and then retighten the stand-off screws. This should allow the stand-offs to shift slightly aligning the timing of the two vise screws.

You may find it helpful to flip the bench top upside down to more easily access the vise screws and stand-offs.

Vise Action:

If the movement of the jaw has become sluggish or difficult, loosening the two jam nuts on the idle screw can release pressure on the bearing and will allow the vise screws to move more freely. Loosen both jam nuts, retighten the inner nut until it is snug, and then tighten the outer nut against the first to hold them securely. Adjusting the timing can also help with stiff vise movement in certain situations.

WOODEN BENCH DOGS

The wooden bench dogs supplied with your bench should slip freely in the dog holes. Depending on humidity, they may occasionally need to be adjusted by planing a few shavings off the width or back.

Wooden bench dogs purchased separately from your bench may need some fitting to slide smoothly in the dog holes of your bench.

If you encounter any issues or have any questions about your new bench,
please don't hesitate to contact us: toolworks@lie-nielsen.com or 207-273-2520
We are always happy to help!