



Setting A Record Bench Vise

Product #01A04, 01D09, 02B04

An excerpt from *The Workbench Book* by Scott Landis. Available from Woodcraft. See our catalog for more information.

"There's more to hanging a Record (or similar vise) than simply bolting it to the bench. To work properly, it must be straight, level with the top, and secure. At the very least, once the vise position is decided, you must accurately bore four holes, attach the mounting bracket (which is a single casting with the rear jaw) and add wood cheeks. But there are several fine points and a variety of mounting options to consider, as shown to the right.

"The rear jaw may be mounted onto the edge of the benchtop (Figure 1), inset flush with the edge (Figure 2), set behind an apron (Figure 3), or mortised into the underside of the bench (Figure 4). If the working surface of the rear jaw is the front edge of the benchtop (Figures 3 and 4), it will be easy to add additional clamps to secure a long board to the bench. On the other hand, if the cheek protrudes (Figures 1 and 2), irregularities in the stock won't strike the benchtop edge and make it difficult to close the vise jaws. Which vise-mounting method you choose depends on the thickness of your benchtop, the shape of the edge, and your own preference. Here are some other considerations to make vise installation easier and vise operation more effective.

When positioning the vise, make sure that when the vise is closed the screw and guide bars will not interfere with any dogholes or with the legs of the bench.

Fitting the rear jaw/bracket to the bench will be easier if you turn the benchtop upside down or on its edge. If this is not possible, you can remove the front jaw of the vise along with the lead screw and guide bars to reduce the weight.

Unless your benchtop is unusually thick, you will have to insert a spacer between the mounting bracket and the underside of the bench. This can be made of hardwood, plywood or fiberboard, or built up of 1/4" or 1/8" tempered Masonite.

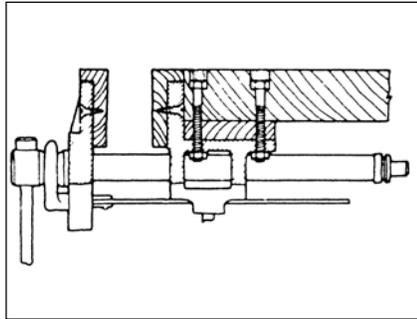


Figure 1, Edge Mount

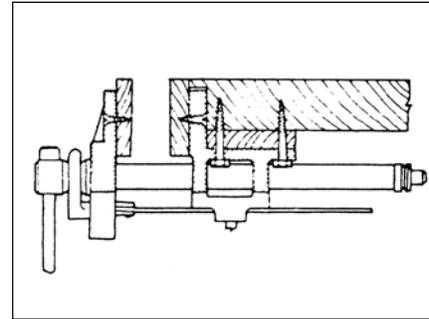


Figure 2, Flush Mount

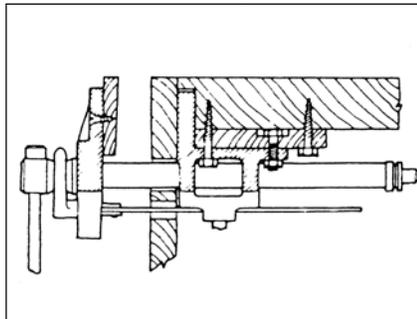


Figure 3, Flush Mount Behind Apron

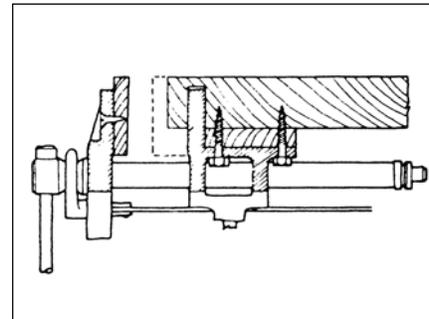


Figure 4, Mortised Mount

Size the spacers to position the top of the rear jaw about 1/2" to 3/4" below the top surface of the bench. This allows for periodic resurfacing of the benchtop. (The wooden cheeks should be flush with the top.)

If you let the rear jaw of the vise into the front edge or underside of the bench, allow a 1/16" gap above the casting. The spacer is bound to compress when you attach the vise, and this gap will close. Without the gap, the wood may buckle above the jaw and have to be planed off. (A snug fit on the sides of the rear jaw helps position the vise.)

To hang the vise, use either 3/8" bolts or lag screws. Bolts provide a more positive fixing (Figure 1), but their heads must be countersunk beneath the top surface and the holes should be plugged. (The square shank beneath the head of a carriage bolt will strip the wood after several installations, so I prefer to use machine bolts and lock washers.) Lag screws



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work well (Figure 2), but make sure that you size and bore the pilot holes carefully, and don't remove the vise more often than is necessary. Lag screws and machine bolts may be combined using an enlarged spacer (Figure 3), which strengthens the fixing.

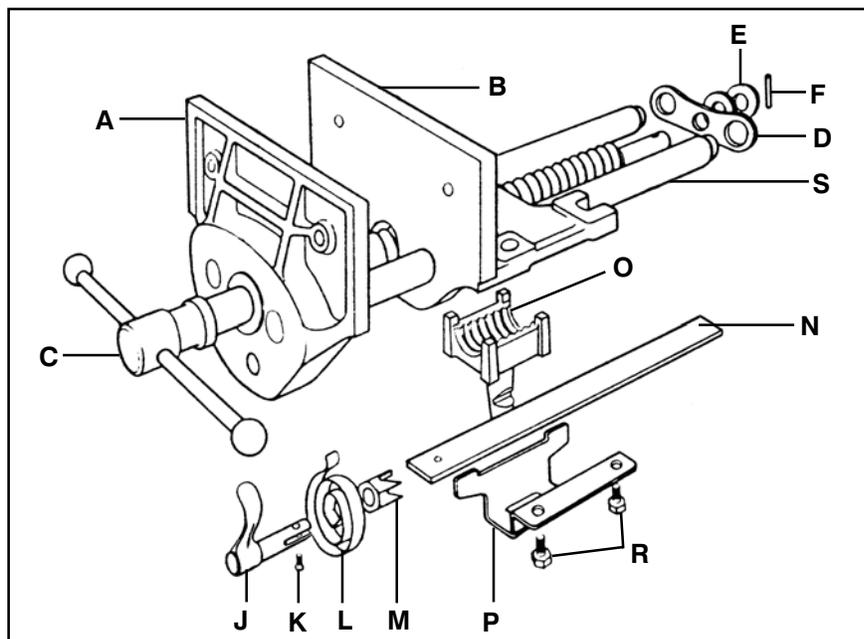
Metal vise jaws should always be covered to protect your work and the edges of your tools; 3/4" to 1"-thick hardwood is fine. You can make these cheeks wider than the metal jaws to extend the clamping capacity, but bear in mind that the farther you clamp away from the center screw, the more the vise will rack out of square. For a neater job (and more protection), the wooden cheek can also be routed to fit around the top and sides of the front jaw (Figure 1). Allow about 1/2" of space between the tops of the guide rods and the bottom of the cheeks so that veneer edges or moldings can fit between them.

If you let the rear jaw into the front edge, wood must be routed away to the exact thickness of the casting. If too much wood is removed, the wooden cheek will dish. If not enough is removed, there will be a gap at the top between the cheek and the front edge of the bench. Sawdust will work its way in and wedge the cheek away from the bench.

The Record and Paramo vises are designed to make contact first along the top edge of the jaws. This "toe-in" should be retained for a better grip. If your vise jaws are parallel, you can create your own "toe-in" by tapering the wooden cheeks.

To make it easy to align work vertically in the vise, inlay thin pieces of veneer in the top of the front cheek. These should lie at the right angle to the outside edges of the guide rods. Work can be quickly installed in the vise by pushing it against a guide rod and aligning it with the veneer on top."

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Parts Listing

A	Sliding Jaw	L	Trigger Spring
B	Body	M	Adjusting Nut
C	Mainscrew	N	Rocker Bar
D	End Bracket	O	Half-Nut
E	Washers	P	Nut Bracket
F	Pin	R	Steel Bracket Screws
J	Trigger	S	Steel Slides
K	Trigger Screw		

Maintenance

All working parts should be oiled periodically. To do this, first open the vise fully and add a few drops of light oil to the following points:

1. Behind the main screw head
2. Quick-grip trigger mechanism (if fitted)
3. Slide bars
4. Main screw and nut (where a nut cover is fitted, an oil hole is provided)

The vise should then be wound to the closed position to distribute the lubricant along the entire screw length.

The nut on quick-grip vises can easily be removed for cleaning as follows:

1. Unscrew nut bracket screws (R) and remove bracket
2. Unscrew trigger screw (K) and remove rocker bar (N)
3. Nut can now be removed