5-step Router Tune-up

On some days, it seems like I turn my router on first thing in the morning and it only goes off with the lights at the end of the day. While this might be a stretch, I'm guessing you can relate to the value of a well-tuned router.

The emphasis here is on *well-tuned*, because when the router you depend on isn't working right, things can get frustrating real fast. That's why I make it a point to periodically give my router a quick "once over." This simple five-step tune-up only takes a few minutes and easily pays for itself in less wasted time and aggravation. The workhorse router in my shop is the *Porter-Cable 690* shown in the photos, but the same basic steps apply to almost any router.

1. Height Adjustment

First, I turn my attention to the inside of the router base and the motor housing that slides into it. The problem is that after countless bit changes, height adjustments, and the cuts that follow, these two parts get roughed up and covered with grime. Once this happens, you can forget about making the quick, accurate height adjustments that you rely on.

But solving this problem is pretty simple. First, take some fine sandpaper or an abrasive pad and use it to remove the accumulated grime, scratches, and burrs from the motor housing (photo above). Next, do the same to the inside of the base. A small wire brush will get into the grooves in the base that can get caked with dust. And after wiping down the motor and base, a light coat of spray lubricant completes the job.

2. Lock Mechanism

▲ ***Out With the Old.*** *The bolt is bent, the knob chewed up and the threads are wearing out.*

▲ ***In With the New.*** *An inexpensive solution is to upgrade to an easy-to-grip, lever-type lock.*

The next step is to inspect the mechanism used to lock the motor in place after you adjust the bit height. For most routers, this means tightening a knob and bolt to clamp the base snugly around the motor. Ideally, firm finger pressure should be all that's needed to tighten or loosen the knob — no pliers. And when tightened, the motor shouldn't budge.

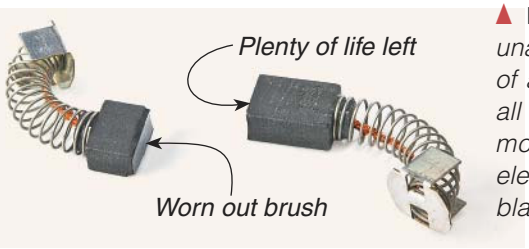
Cleaning and lubrication with some light grease is the first step. This will often free up a sticky mechanism. But with heavy use, this is one part of a router that just plain wears out. So if on inspection, your lock is starting to look like the one in the photo at left, don't take a chance. You can replace or upgrade the lock and not have to worry about surprise height changes.

3. Motor

Although a router motor is designed to stand up to hard use and dirty conditions, there are a couple of routine things you can do to keep it and all the other electrical parts in top shape.

Dust is the number one enemy here. It's constantly being sucked through the motor and settling in every nook and cranny. So the goal is to prevent excessive wear by keeping the inside of the motor as clean as possible. The photo at right shows how easy this is. After removing the motor cover, a sharp blast of compressed air will dislodge most of the dust. And as you can see in the inset photo, the switch and other electrical connections need attention as well.

Brushes. While cleaning the motor, I like to inspect the brushes. Badly worn or chipped brushes make the motor work harder. The near brush in the photo at left is pretty worn and ready for replacement.



▲ Blow Out the Dust. *It's unavoidable — the inside of a router traps dust. But all it takes to clean out the motor and the important electrical connections is a blast of compressed air.*

4. Base Plate

The phenolic base plate is where the router meets the wood. So naturally, it gets a lot of wear and tear. And a rough, dinged-up base plate can make routing harder and possibly leave "tracks" on the workpiece.

The simple cure for a worn base plate is shown in the photos at right. First, I make sure the base plate screws are tightened securely. Then I use some fine sandpaper on a sanding block to remove any scratches or burrs. A quick buffing with a fine abrasive pad follows. The final step is simply to minimize any friction, as shown in the far right photo.

▲ Keep It Smooth. *Lightly sanding the base plate with fine-grit sandpaper will keep it smooth and level.*

▲ ***Make It Slick.*** *A light coat of surface lubricant will make the base plate slide effortlessly.*

5. Collet

The final stop is the business end of the router — the collet that holds the bit. The goal here is to make certain the collet gets a guaranteed, rock-solid grip on the bit while also allowing hassle-free bit changes. The photos below show my short checklist.

First, I work on the shank hole in the collet. It should be smooth and clean. Next, you want to make sure the collet seats properly by cleaning the debris out the arbor socket. Finally, I lubricate the threads so that the collet nut can be tightened and loosened easily.

▲ A Clean Shank Hole. *A brass wire brush is the perfect tool for gently cleaning the shank hole.*

▲ ***A Snug Fit.*** *The accumulated dust and debris in the arbor socket should be wiped or blown out.*

▲ ***Lubrication.*** *A coat of white grease on the arbor threads ensures hassle-free bit changes.*