

Lie-Nielsen Toolworks Product - Use and Care Instructions

Medium Shoulder Plane

The Lie-Nielsen Medium Shoulder Plane is based on the Record 042, which was in turn based on a Preston model. The body of this all-metal Shoulder Plane is cast of Ductile Iron, and the cap is Bronze. Body is 7 3/4" long by 3/4" wide, weighs 2.35 lbs., and has an adjustable mouth.

We have made some design improvements to the Record version. The cap is a bit higher in the back to allow a better grip; the front of the cap is closer to the bevel of the blade for better support; the geometry of the mouth will allow better chip clearance; the mouth adjustment is much easier, and the blade is much harder and thicker.

Geometry: The blade is bedded in the tool at 18° with a 25° bevel, making the included cutting angle 43°.

Blade Sharpening: The blade comes ready to use. Slight additional honing will increase performance. We recommend a secondary bevel of 1° or 2°, especially for hard woods. This is easily accomplished with a good honing guide. Further modifications of the bevel angle can be made to suit your style and the work.

Mouth Adjustment: Loosen the lock screw on the top front of the tool by a half turn or so. Adjust the mouth opening by turning the screw head at the very front of the tool with a screwdriver. Make sure you do not close the mouth on the blade edge. Re-tighten the lock screw.

Blade Adjustment: Loosen the Brass spinwheel under the cap a couple of turns, tighten it halfway, and adjust the blade with the Stainless Steel adjuster nut. Make sure the mouth is open adequately before advancing the blade to avoid damaging your edge. Re-tighten the spinwheel. Do not overtighten.

The blade is a couple of thousandths of an inch wider than the body — align the edge of the blade with the side of the body that you want it to be flush with. Laying the tool on its side can help you do this quickly and accurately. Or if you wish, you can grind a little material off the side of the blade to make it flush with both sides.

Maintenance: The body of this tool is cast Ductile Iron and will rust. To protect it, you should oil, wax and/or wrap the tool after use. At the least, wipe your fingerprints off with an oily rag. The body casting is ground dead flat. Occasional hand lapping with fine wet/dry sandpaper (320 grit or higher) on a flat surface will help remove dings and keep it true. The cap iron can be polished with any good brass polish, or it can be allowed to patina with age and use. Occasionally, the tool should be disassembled, cleaned, and the moving parts oiled. The blade should be kept lightly oiled to prevent rust, especially when the tool is not in use. We recommend Camellia Oil, a vegetable oil based product. It is non-toxic, odor-free and easy to use. Also, in our shop, we use a fine abrasive handblock to remove any light surface oxide from tool bodies and blades. Camellia Oil and the abrasive handblock are available from us.

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Materials: The body is cast from Ductile Iron, a very strong alloy that will take a lot of abuse. These castings are fully stress-relieved, a process that removes inherent stresses and ensures that the tool will remain flat and true. The cap is Manganese Bronze. Other parts are Brass; the adjuster nut is Stainless Steel.

The blade is A-2 Tool Steel hardened to Rockwell 60-62, cryogenically treated and double tempered. Our heat treating technique ensures that the blade will take and hold a very fine edge for a long time. After heat treating, the blade is fully surface ground on the top, back, and cutting edge, giving a smooth, flat surface that will take a mirror finish very quickly. The .150" thickness provides solid chatter-free cutting.