

# Lie-Nielsen TOOLWORKS<sup>®</sup> INC.

Heirloom Quality Tools<sup>®</sup>

## Shoulder Planes

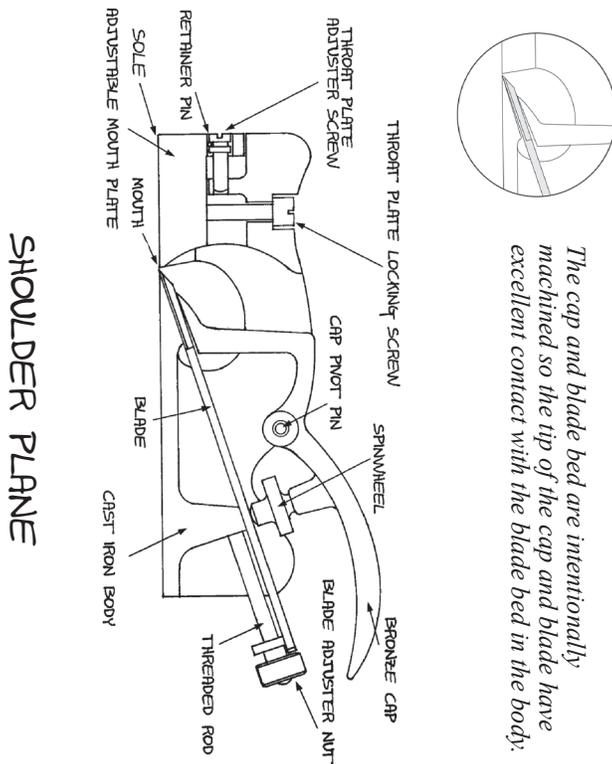
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Made in Maine, USA, since 1981



The cap and blade bed are intentionally machined so the tip of the cap and blade have excellent contact with the blade bed in the body.



**WARNING:** This product can expose you to lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov). Wash hands after handling.

## Shoulder Planes

The Lie-Nielsen Shoulder Planes are based on Record models. The Large Shoulder Plane is based on the 073, the Medium on the 042, and the Small is based on the 041. Each in turn was based on a Preston model.

We have made some design improvements to the Record versions. 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, but honing a secondary bevel of 5° will increase performance, help achieve a razor edge quickly, and improve edge life in hardwoods. For information on sharpening, we recommend David Charlesworth's video, *Plane Sharpening*, available via our website in both DVD and streaming formats.

**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 about .005" 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.

**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.

**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 A2 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 thick blade provides solid chatter-free cutting.

**Maintenance:** 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 can be polished with any good brass polish, although many people like the patina that Bronze gets with age and use. Occasionally the tool should be disassembled, cleaned and moving parts oiled. A light oiling on the threaded rod and Brass adjuster will keep them moving freely. The blade should be kept lightly oiled to prevent rust, especially when the tool is not in use. We recommend Jojoba Oil, a plant based oil product that 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. Jojoba Oil and abrasive handblocks are available from us.

**Guarantee:** Materials and workmanship are guaranteed for the life of your tool. Call for repairs or replacement parts. We are available for advice if you ever have a problem using your tool.