

Scrub Plane and Gent's Plane

(24P07.01 & 24P22.01)

The following instructions were provided by the manufacturer.

Tips for Adjusting Planes with Wedge-Held Plane Irons

This Plane is provided with a ready-to-use plane iron of highest quality.

Remove the plane iron packaging and set the desired cutting depth as follows:

1. First, lay the plane iron into the body of the plane so that the ground side of the cutting edge is facing down and toward the rear of the plane. The iron must not reach past the sole of the plane.
2. Insert the wedge on top of the iron and pressurize the wedge with a *light* mallet blow.
3. Now use *light* mallet blows to drive the plane iron gently and slowly downward. While doing this, sight along the sole of the plane to see if the desired depth of cut has been achieved. The depth of cut equals the distance that the cutting edge of the iron extends beyond the sole of the plane. At the same time, make sure that the cutting edge of the iron is parallel to the sole of the plane. If needed, use light mallet blows to set the edges of the iron to achieve parallelism.
4. Once the desired depth of cut and parallelism are attained, fasten the iron by using a well measured, but not too hard, mallet blow to the *wedge* (not the iron).
5. Choose a depth of cut between 1/10mm and 3/10mm. Do not set the iron for too deep a cut. Very deep cuts require too much force and cause tear-outs on the surfaces of the workpiece.
6. If you have set the iron for too deep a cut, aim a few mallet blows on the bright button at the rear or the top of the plane (depending on the plane you are using). This will drive the iron up. After this operation, make sure that the wedge is still tight.
7. Grinding plane irons is best done *wet* to preclude overheating the iron, thereby drawing the blade's temper. (There are special grinders for plane irons and chisels on the market.) The wheel must be large enough to preclude grinding a convex surface. The cutting edge must not be ground concave or convex (rounded). It must be absolutely flat, 6.5mm to 7mm in depth, or approximately at a 25° angle.

8. The wire edge created during the grinding operation is removed by honing on an absolutely flat honing stone using water or oil to float away metal particles. Proper procedure:

- The side opposite the angled cutting edge is honed by laying it *absolutely flat* on the stone and moving it back and forth. The angled cutting side is *not honed* by laying the angled surface flat on the stone, but by raising the rear of the iron a little higher. By doing so, a very narrow, secondary angle just back of the cutting edge is created. (Secondary bevel provides clearance to accommodate the depressing of the iron into the wood when the plane is pressed down). The above operations are done alternately until no wire edge can be felt on the iron (e.g., flat side, angled side, flat side, angled side). (For some planes, irons are available with replaceable cutting edges, and, if such a plane is purchased, sharpening will not be necessary.)
- In capped plane irons, make sure that no shavings can enter between the cap and the iron. (This problem is most evident when wood from the top of a tree is planed, where different grain directions will be encountered.) The plane will choke up immediately, making further work impossible. To eliminate this problem, hone the edge of the cap facing the iron absolutely flat so that the cap's forward edge is absolutely tight against the plane iron.

Do not use a metal hammer for setting the plane.
