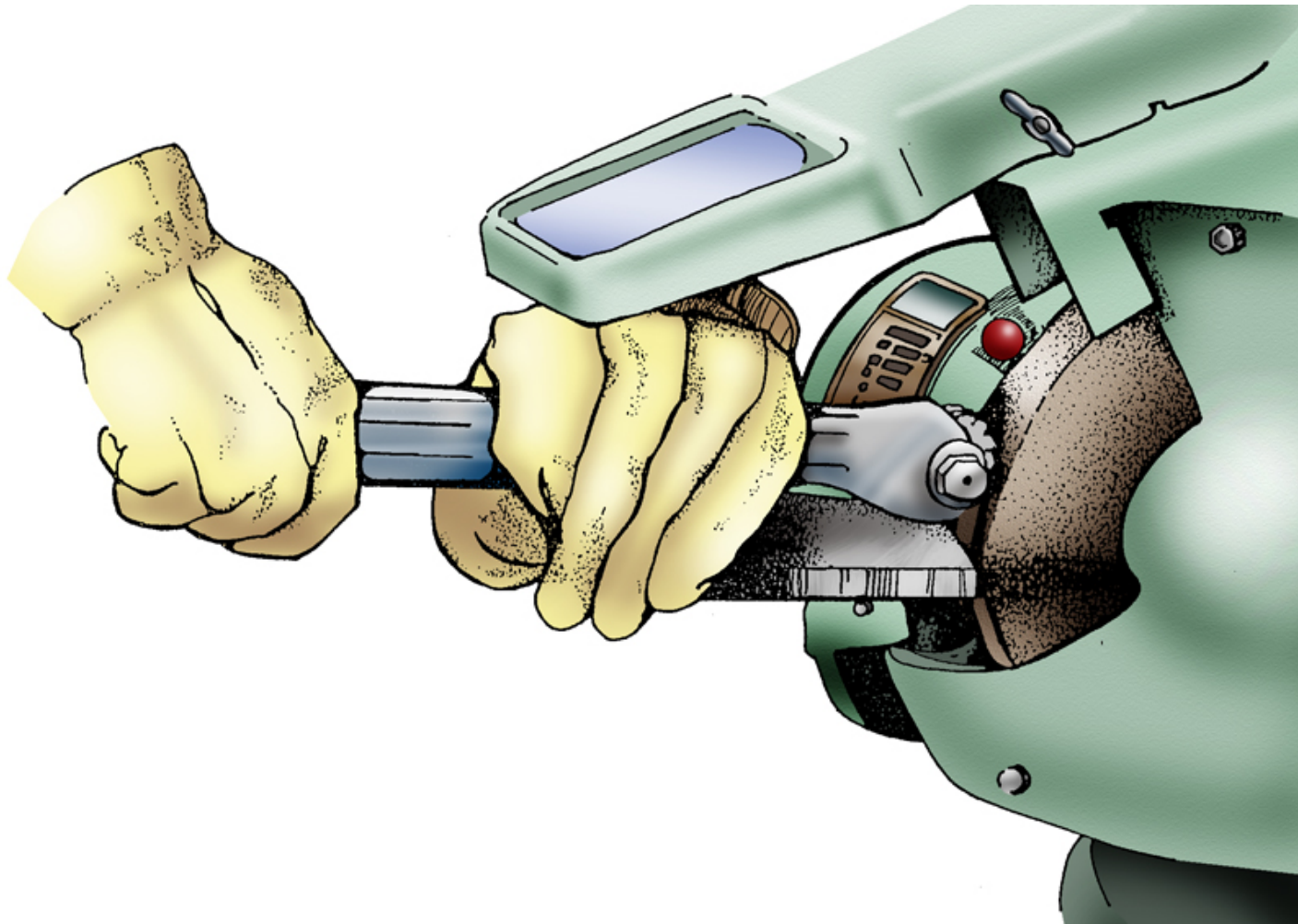
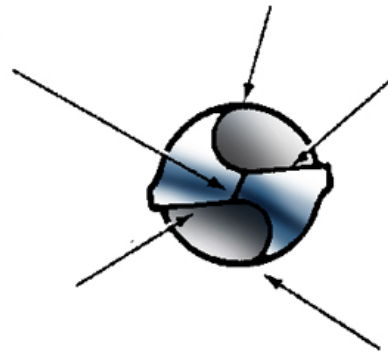
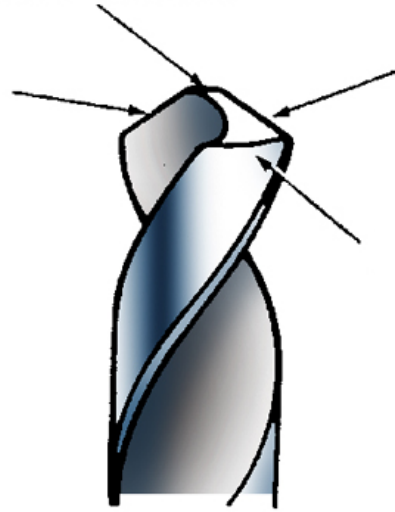


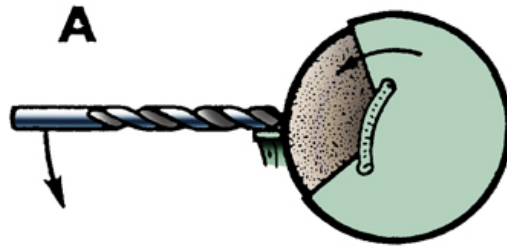
Dressing the Grinding Wheel Using a Mechanical Wheel Dresser



Parts of a Twist Drill Cutting Tip

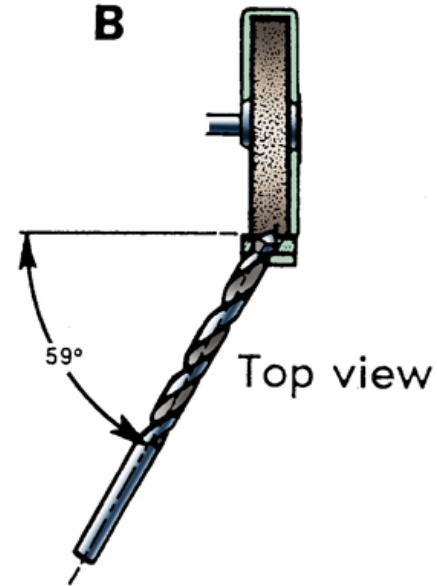


Placement of the Drill for Sharpening



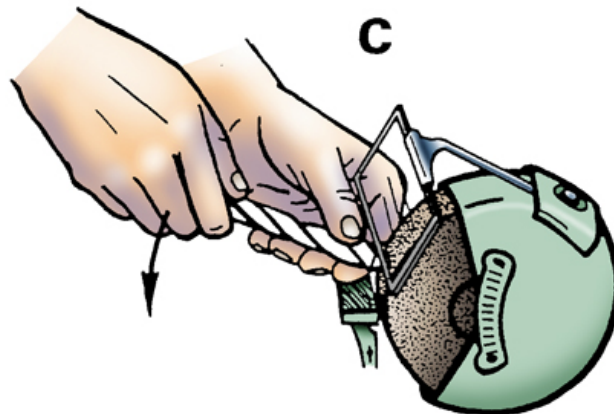
Side view

The end of the drill is placed flat on the work rest, with one cutting lip horizontal and against the grinding wheel, with the axis of the drill making an angle of about 59° with the surface of the wheel.



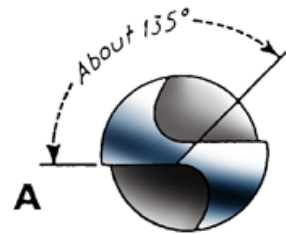
Top view

End view

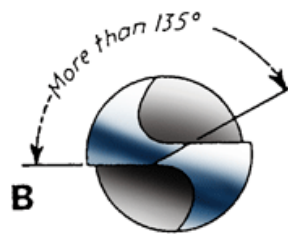


The end of the drill may be supported by the first finger of the left hand, which is placed on top of the work rest. Be careful not to let the finger touch the grinding wheel.

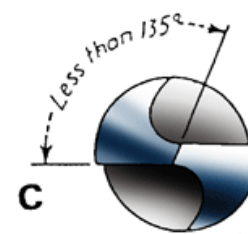
Judging Lip Clearance



Correct clearance

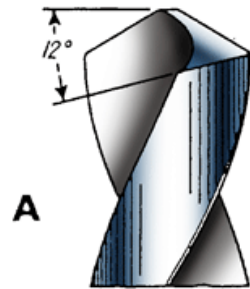


Too much clearance

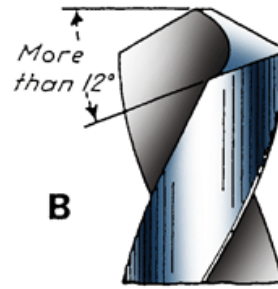


Not enough clearance

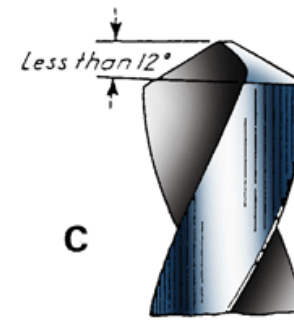
With the cutting edges horizontal, the short line across the end of the drill should be about halfway between vertical and horizontal, as at A. If it is much more nearly horizontal than vertical, as at B, the lips have too much clearance. If the short line is nearly vertical, as at C, the lips have insufficient clearance.



Correct clearance



To much clearance



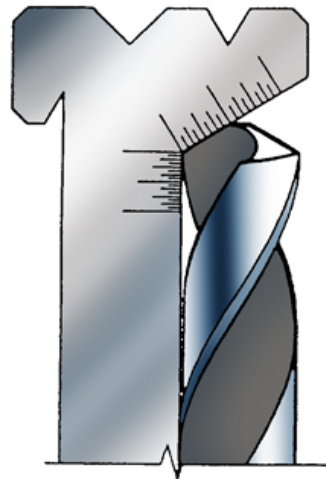
Not enough clearance

Judging the lip clearance at the outer edge of or periphery of the drill.

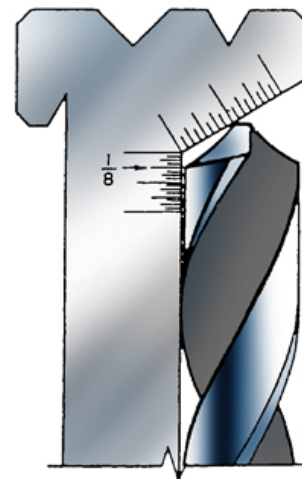
Using a Gauge to Check the Shape and Clearance of a Twist Drill

For 12° clearance

Drill Size	Amount of drop
$\frac{1}{4}$ ''	$\frac{1}{32}$ ''
$\frac{1}{2}$ ''	$\frac{1}{16}$ ''
$\frac{3}{4}$ ''	$\frac{3}{32}$ ''
1''	$\frac{1}{8}$ ''
other sizes	prorated amount

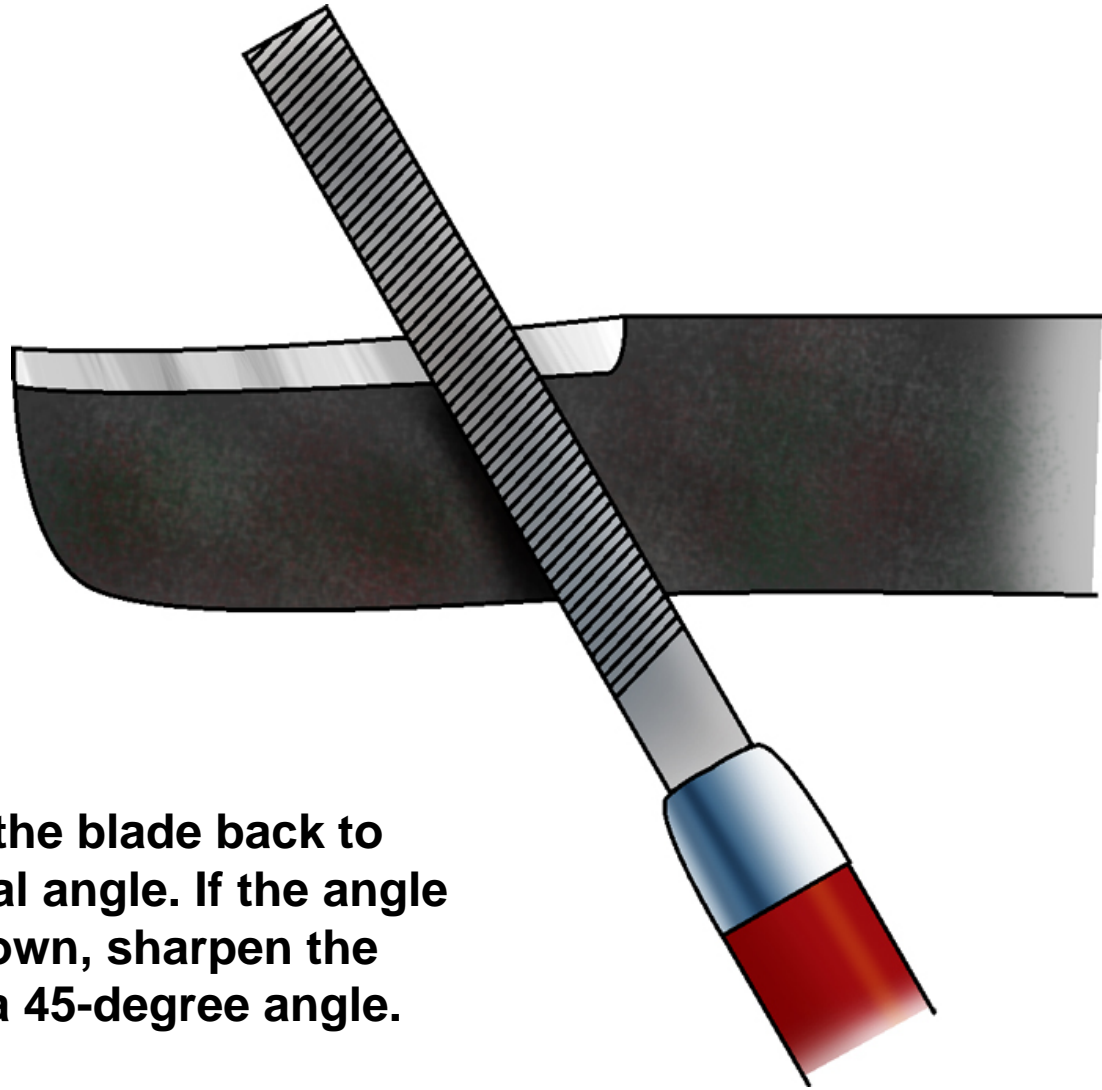


Checking the shape
of the point



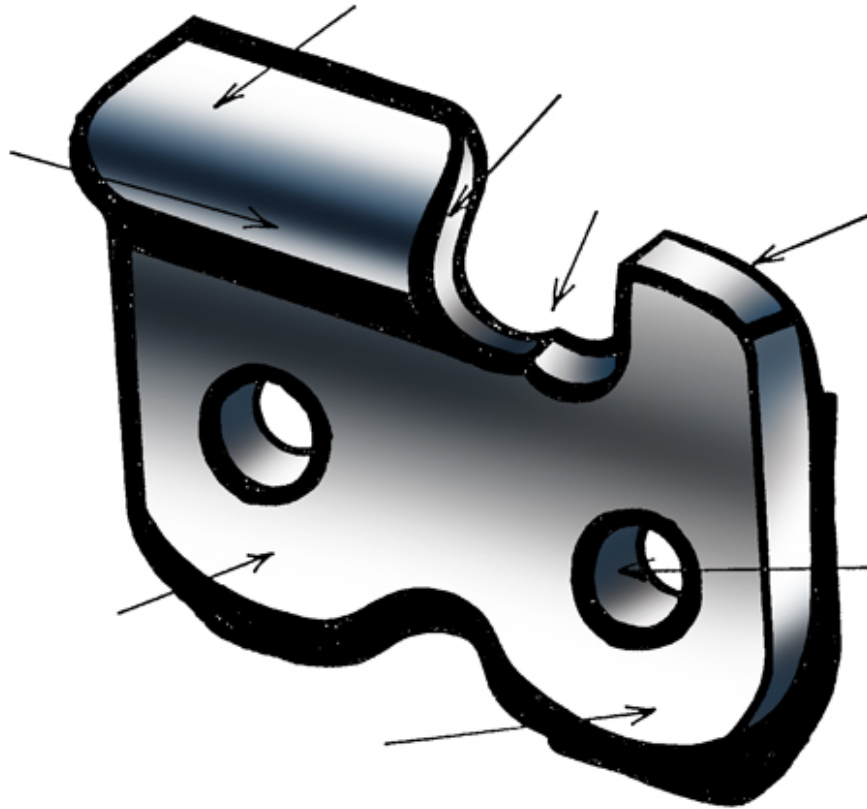
Checking the
clearance

Filing a Lawn Mower Blade

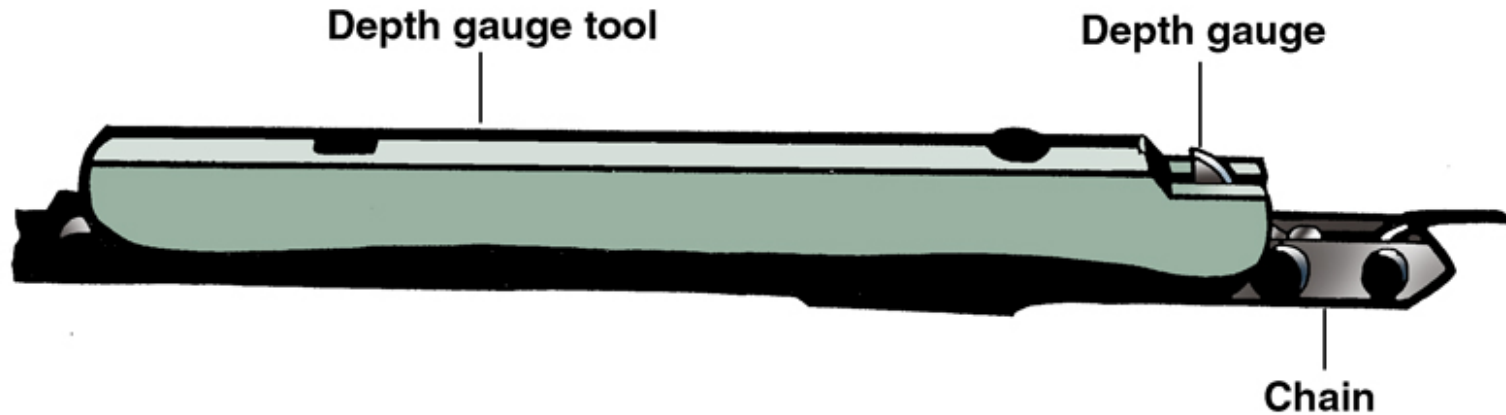


Sharpen the blade back to its original angle. If the angle is not known, sharpen the blade to a 45-degree angle.

Parts of a Cutter



Using the Depth Gauge Tool



If the tops of the depth gauges extend above the gauge tool, the part above the tool should be filed off using a flat file. The original shape of the depth gauges should be maintained.

Proper Chain Tension

Right



Wrong

