ICS Plunge Cut Saw

Cutting Tips

a. **For the straightest cuts use the "step cut" method.** After outlining the cut, score the entire cut line approximately a half-inch deep using the nose of the bar. Next, deepen cut by about two inches. Then plunge all the way through and complete the cut using the Wall walker® as a lever.

b. **Plunge cut instead of starting on top of a wall.** Plunge cutting generally results in a straighter start. If the cut doesn't start straight, it will not finish straight. Also, plunging is the fastest and easiest mode of cutting.

c. **When cutting heavy rebar . . .** slowly “rock” the saw over the rebar so that you're always cutting concrete as well as steel. This will help keep the diamonds exposed. Also, expect less chain life when cutting heavy rebar.

d. **Maintain proper chain tension**. The tensioning rule of thumb for a chain-based cut-off saw is: “The chain should be tight but must be able to be pulled around the bar by hand” (see Chain Tensioning tip sheet).

e. **If the saw begins to cut consistently crooked,** turn the guide bar over and use the other side. If problem persists, dress the worn rails with belt grinder. Note: The normal life of a guide bar is 2 to 3 chains. Heavy rebar can shorten bar life.

f. **When using a new chain, it may be necessary to “open up” the diamonds.** To do this, make a few cuts into an abrasive material like a cinder block. Opening the diamonds will increase the cutting speed.

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Chain Tensioning – Gas Cut Off Saws

⚠ IMPORTANT ⚠

A properly tensioned chain will optimize cutting performance. The tensioning rule of thumb for a concrete cutting chain saw is: **"A properly tensioned diamond chain must not be bowstring tight and can be pulled freely around the guide bar by hand easily without binding."**

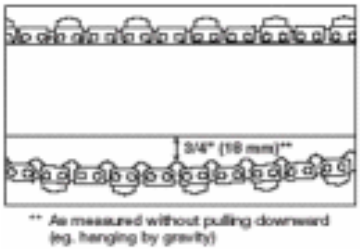
Chain Tensioning

If the chain is too loose, it could come off the bar, or it will allow the drive sprocket to spin

without turning the chain, which can chew up the chain drive links. If the chain is too tight, a lot of the saw's power goes into turning the chain rather than into the cut. In extreme over-tightened cases, the saw may not be able to turn the chain at all. In addition, damage can occur to the bar nose and premature stretch may occur. When it comes to chain tensioning, concrete cutting chainsaws are not like wood cutting chainsaws!! The chain tension requirements are different!!

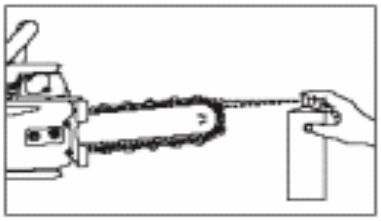
WHEN TO TENSION

All chains have a tendency to stretch when used. Diamond chains stretch more than wood cutting chains because of the abrasive materials they are cutting. When a chain stretches to a point where the drive links are hanging approximately 1/2" (12 mm) to 3/4" (18 mm)** below the bar, it's time to tension the chain.



HOW TO TENSION

To tension the chain, first loosen the side cover nuts, then while holding the nose of the bar up, use a screw driver to turn the tensioning screw clockwise until the chain drive links hanging below the bar are just beginning to enter the bar groove. Continue to hold up on the nose of the bar and firmly tighten the side cover nuts, (20 ft-lbs, 27 Nm). And remember, it's the side cover nuts that hold the bar in position. If the nuts are not tight, the bar can slip backwards during cutting and break the tensioner pin. Before cutting, check for proper tension by pulling the chain around the bar by hand. If you cannot easily pull by hand, the chain is too tight and needs to be loosened a little.



ADDITIONAL INFORMATION

Concrete cutting chainsaws run with looser chain tension than wood chainsaws. It is common, especially on gas powered, concrete cutting chainsaws to have the drive links hang completely out of the bar. Wood cutting chainsaws use oil to lubricate the chain. The oil of course makes the chain very slippery and allows the drive links to fully nest between the teeth of the drive sprocket. Concrete cutting chainsaws require water for cooling and flushing the cut. However, water is not as good as oil as a lubricant. Plus there are concrete particles mixed in with the water. As a result, sometimes the drive links do not nest properly on the drive sprocket. When this happens, the chain acts like it got tighter. There seems to be "tight" spots and "loose" spots as you pull the chain around the bar. The chain has to turn a shaper corner which makes it more difficult to nest properly.

Additional Tensioning Tips:

1) To reduce chain stretch and tensioning downtime, use 20 psi (1.4 bar) or greater water pressure.
2) Oil the chain at the end of the day to prevent rust but be careful not to over tension in this condition.
3) When pulling the chain around the bar by hand, be careful not to touch the bar with thumb or forefinger. The bar rails can be very sharp. Grab only the diamond segments to pull the chain.
4) Always pull the chain away from the Wallwalker. The point of the Wallwalker can also be very sharp.