

Cutting Poly Pipe with a Chainsaw



Not so long ago it was discovered that chainsaws are one of the best, most efficient tools for cutting medium to large diameter poly pipe as used extensively in the mining and irrigation industries.

A growing part of our chainsaw training is delivered to operators who are involved in poly pipe welding and need to trim the pipe ends before the process can be undertaken. We also conduct training to poly pipe manufacturers where chainsaws are used to cut damaged pipe so it can be shredded and fed back into the process to start again.

From this training and consultation involvement, we have developed a good working knowledge of what works and what doesn't when it comes to cutting this material. This information

sheet outlines some of our tips to help you get the best out of your chainsaws in this operation.

Tip # 1: The risk of Kickback is much higher when cutting poly pipe. Because of its density and double wall construction, kickback is a much higher risk when cutting poly pipe. For this reason, make sure you get a trainer with poly chainsaw experience.

Tip # 2: Use the correct chain cutter profile. Poly pipe is quite soft but it does have quite a hard surface. For this reason we recommend that you use a square profile (full chisel) chain. This is the best profile chain to efficiently cut both the hard surface conditions, and the soft inner material.



Tip # 3: Chain oil or no chain oil – read below and make your choice

I have consulted with five HDPE manufacturers here in Perth and all of them have different ideas on chain lubrication when cutting HDPE. This ranges from **a)** no chain oil, **b)** soluble oil mixed with water (50:50), **c)** straight oil, **d)** vegetable based oil **e)** off the shelf chain and bar oil. The argument given by those using no oil or soluble oil is to avoid contamination of the HDPE prior to welding. *The factory, (a poly weld testing lab) who use normal chain / bar oil advised that their tests showed no reduction in weld quality with pipe cut with standard chain oil as long as the pipe was correctly prepared (shaved and cleaned (isopropyl)) immediately prior to welding.*



Tip # 4: Keep the plastic chips out of the engine cooling system.

When cutting any material with a chainsaw, chips are produced and some of the chips will inevitably be drawn into the cooling system. When cutting wood, the wood chips don't normally cause a problem as they are normally blown across the engine cooling fins and come out the other side. With poly pipe however, the chips are plastic, and when they hit the hot cylinder fins they melt, stick to them and clog them up. If this continues unchecked, it will result in total blocking of the system and ultimately, overheating of, and costly damage to the engine.

There are a couple of simple ways to avoid this.

A): Glue fly screen to the starter cover (as per picture). Because the plastic chips are quite large, this dramatically reduces the amount that will get drawn into the cooling system.

B): Clean cooling fins regularly. At least once a week, remove the cylinder cover and clean any plastic from the cooling fins.

C): Cut with starter side away from the pipe opening.

Where this is possible this will reduce the amount of chips drawn into the cooling system.



A Plus Training Solutions can conduct this specific training at your site or ours. Contact us for details.