

HYDRAULIC CYLINDERS

The most important thing with processing scrap hydraulic cylinders, as with any closed container, is to make sure beyond any doubt that they are empty and all pressure has been relieved. Cutting into a pressurized cylinder is a good way to go home in a box. The torch flame superheats the oil inside the cylinder even as it weakens the steel that contains the pressure. When the explosion happens, it drenches the torchman with scalding oil.

With cylinders, you need an expert to determine how to properly and safely drain or dismantle the cylinder. If you don't know, find someone who does. A local heavy equipment shop or someone similar who works with cylinders daily should be able to help.

Another potential danger with cylinders is mistaking hydraulic accumulators for regular cylinders. Virtually every hydraulic system has at least one, sometimes more, accumulator as part of its design. These accumulators range in size from smaller than a football to as large as a propane cylinder you would use for torching. These cylinders are charged with up to 3000 psi of nitrogen. The accumulator takes the highs and lows out of a hydraulic system and smoothes them out. The accumulator takes the shock rather than the entire system or the machine itself. These accumulators can be very dangerous. Only an experienced hydraulic expert should dismantle these! Never cut a hydraulic accumulator unless you are absolutely certain it is discharged and safe to do so. Remember, even if an accumulator is discharged of its nitrogen, it still retains hydraulic oil behind its bladder.

**If you are not absolutely certain it is safe to cut a cylinder:
DON'T DO IT!**

Produced by the Institute of Scrap Recycling Industries
www.isri.org

Comments/questions?
www.isrisafety.org

February 12, 2013