

## Waste Oil Good Source Of Heat

We all enjoy having a shop that is comfortable to work in during the winter months. Used motor oil, hydraulic and transmission fluids, gear oil, vegetable oil, even diesel oil when mixed with regular used oil, are great sources of heat.

There are a lot of waste oil heaters on the market. The price scares most of us off. Not only the initial cost, but the maintenance requires calling a serviceman.

Many have tried to build a waste oil heater out of a barrel stove or wood heater by gravity feeding the oil. The problem is control of the fuel and air mixture – as the oil heats up it flows faster and you have to readjust it again and again or risk burning the shop down.

There is something that really works! The price is right because it's a kit you build and maintain yourself. It also burns so clean (and this is hard to believe unless you've seen it) that there is absolutely no visible smoke during normal operation.

Here is what makes it work so well: 1) A fuel pump with speed control allows full control of the amount of fuel going into the combustion chamber. 2) There is no nozzle to plug, a common problem with other waste oil heaters. 3) A combustion air blower with air control allows matching the fuel with the

right amount of air. 4) A cast iron combustion chamber creates an intense heat area to thoroughly vaporize the fuel for complete combustion. 5) The cascade assembly located in the bottom of the combustion chamber helps to break up the fuel for more complete burning. 6) The heaters are packed with steel heat exchanger tubes, extracting the maximum heat and protecting the barrels from burning out, giving them a very long life. 7) An air plenum and powerful blower will fill your shop with heat, not only the area right next to it.

There are three sizes of heater kits, for shops from the size of a garage up to 5,000 square feet or larger. Clear assembly instructions have photos and diagrams. You supply the barrel, flue pipe, and basic tools, and everything else is included in the kits. The heater is not thermostat controlled. Priced from \$1195 to \$2195, or \$545 for the oil pump and combustion control



*PapaBurn (with cutout sides to show heat exchanger tubes)*



*BabyBurn*

package alone, plus shipping.

Contact: FARM SHOW Followup, Harold Ag & Mobile Products, 1-800-541-8910; website: [www.wasteoilheater.net](http://www.wasteoilheater.net).

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## Company Rebuilds Hydros With Care

Hydraulic component rebuilds can save a lot of money, but they're not usually do-it-yourself projects, says Cara Herrs of Herrs Machine. The company has been rebuilding hydraulic pumps and hydrostatic transmissions for 43 years, progressing from a home-based shop business to a high tech operation that can handle nearly anything hydraulic.

"Our most common repairs are combine hydrostats," says Herrs. "We have an ag background, so we understand how quickly equipment needs to be up and running. In addition to our rebuild service, we keep a large inventory of parts, pumps and motors on hand. We can usually ship out the same day we get an order."

Herrs suggests making a toll-free call for a cost estimate. If time is tight, most agricultural hydro units are available in exchange. The company works with tractors, combines, skid steers and a wide range of other equipment. However, long-term specialties have been IH hydrostats and torque amplifiers.

Whether for rebuild or exchange, Herrs emphasizes carefully wrapping the part for shipment, especially if components are exposed. One ding or gouge in a plate can increase rebuild cost considerably.

"Plates in a stack have to be perfectly flat," says Herrs. "A scratch can cause leakage, inefficiency and raise oil temperature."

When parts come in for a rebuild, they are first visually inspected and measured using a micrometer. If parts pass inspection, they are lapped within 1 millionth of an inch of surface flatness.

Even though a single plate with a gouge can often be refinished, Herrs says the refinishing might reduce the required height of the total stack.

"We have to stay in tolerance the whole way through," she says.

Once the part or component has been rebuilt, it goes through testing. Each step in the process is recorded. If testing identifies any problem, it also shows where the problem occurred.

"We will then tear it down and fix the problem," says Herrs. "We know it has to be done right."

Herrs handles pumps, motors, cylinders



**Herrs Machine has been rebuilding hydraulic pumps and hydrostatic transmissions since 1969.**

and valves. All remanufactured units come with a warranty.

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