

Strike Oil in Your Own Shop

If you're worried about rising heating costs, you have a built-in resource at your fast lube operation that can actually save you money. Don't WASTE your used OIL! It's black gold and worth more every day ... perhaps as much as \$3.00 per gallon when one considers heating costs, the uncertainty of fuel availability and haul-off costs. Turn crankcase oils, automatic transmission fluids, hydraulic oils, #1 or #2 fuel oil, or diesel oil and gear oil, up to 50 weight SAE into bottom line profits.

By using your waste oil to heat your facility, you also are eliminating your environmental concerns. If you produce it, you own it ...forever! Waste oil is a "cradle-to-grave" liability. One gallon of used oil can contaminate a million gallons of potable water. Generators are responsible for it from the moment it is created (or even collected) until it is processed or burned. Recycling onsite alleviates all environmental risks.

Why Burn Your Waste Oils?

- ◆ Free fuel eliminates or reduces heating expenses
- ◆ Responsible, environmentally friendly recycling
- ◆ Energy conservation
- ◆ Best possible return on investment
- ◆ Approved by EPA
- ◆ Haul-off costs eliminated
- ◆ Liability of oil spills removed
- ◆ Assurance and peace of mind »

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Using a waste oil heater or boiler will help your business alleviate environmental concerns as waste oil is burned on site and does not need to be hauled away.

What about Regulations?

Recycling of used oils onsite is approved by the Federal EPA and state regulatory agencies. The only exceptions are the State of California and New York City. The units are not illegal in either, as they are listed to burn standard heating oils as well. However, it is illegal to burn used oils in the systems in those areas. Simple requirements are set forth by the Federal EPA: 1) Units are not to exceed 500,000 BTU input; 2) Units must be vented to the outside of the facility; 3) Used oil that is burned is to be generated onsite or delivered to the site by "do-it-yourself" oil changers.

Who's a Good Candidate for a Waste Oil Heater or Boiler?

Any firm with heating bills and waste oil is a good candidate for a waste oil heater or boiler. Automobile, truck and heavy equipment dealerships, quick lube facilities, municipal fleet maintenance shops and any other firm generating used oils and having a need for heating of air or water. The colder the weather, longer the heating season, the more one saves. Boilers, of course, are not as seasonal and can fill various needs for hot water year round. Heating is only one of the benefits of burning used oils on site. For many, the total elimination of liabilities associated with shipping used oils off-site is the primary motivation to purchase.

How Do They Do It?

It's easier than ever to recycle the used oils onsite. Significant advances in burner technology and design features make for dependable performance and significantly lower maintenance. Quality designed and manufactured used-oil-fired heaters operate in similar fashion. The oils are delivered to a burner specifically designed for their combustion. They are usually pre-heated and then mixed with compressed air to create an atomizing condition. Primary combustion is accomplished in the heater combustion chamber area with resultant heat being passed into the heat exchanger part of the unit. Shop air is brought into the heater and circulated over/through the heat exchanger area. This air picks up the heat from the heat exchanger area and is then delivered into the shop through vents on the heater or through attached ductwork. Boilers are similar. However, instead of ambient air, water is brought into the boiler. Heat is passed from the boiler heat exchanger into the water. The water exits the unit as hot water.



What Unit is Best for Me?

Heaters and boilers range in BTU input from approximately 140,000 to 500,000, burning approximately 1.0 to 3.5 gallons per hour. Oil consumption varies depending on the range of shop temperature or water temperature desired. Unit heaters may be suspended from the ceiling, placed on stands or racks, or as part of a "Recycling Center", mounted on a stand over a Workbench Fuel Tank. Heaters are designed primarily for the heating of shop air. Boilers may heat shop air through use of remotely located hydronic units or utilize hot water for various services such as in-floor heating, car washes, etc.

What about Maintenance?

Consistent maintenance is the

The waste oil generated at a fast lube can turn into heating oil by utilizing a waste oil heater.


key to dependable and efficient operation of the product. This includes cleaning of ash from the heat exchanger one to three times per season, depending on the unit design, hours of operation and the condition of the oils being recycled. An annual burner tune-up is recommended, possibly including cleaning or replacement of the nozzle and electrodes. Other than this, oil filters need to be cleaned or replaced as necessary. Fuel tanks should be well monitored to prevent contamination of the oil and drained of water or antifreeze as needed.

What's the Payback?

Usually, a return on investment can be calculated with available heating and haul-off cost figures. However, the most basic part of the equation is whether or not one has used oils available and in what quantity. "On-spec" lubricants, used oils that have been processed or cleaned, are available in many areas at a much lower cost than conventional fuels. These lubricants are no longer considered "waste" or "used" oil and are an excellent supplement for firms who do not produce enough used oils to justify a unit purchase. Even though these fuels are not "free" as with used oil, the return on investment can still be very appealing as they are much less expensive than typical heating oils, natural gas or propane. Paybacks can actually be one year or less, depending on cost of standard fuels, used oil disposal and the actual hours of usage.

How Do I Make a Wise Choice?

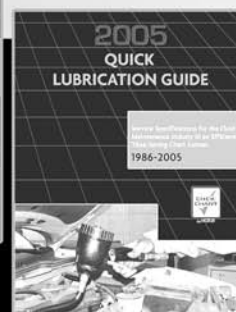
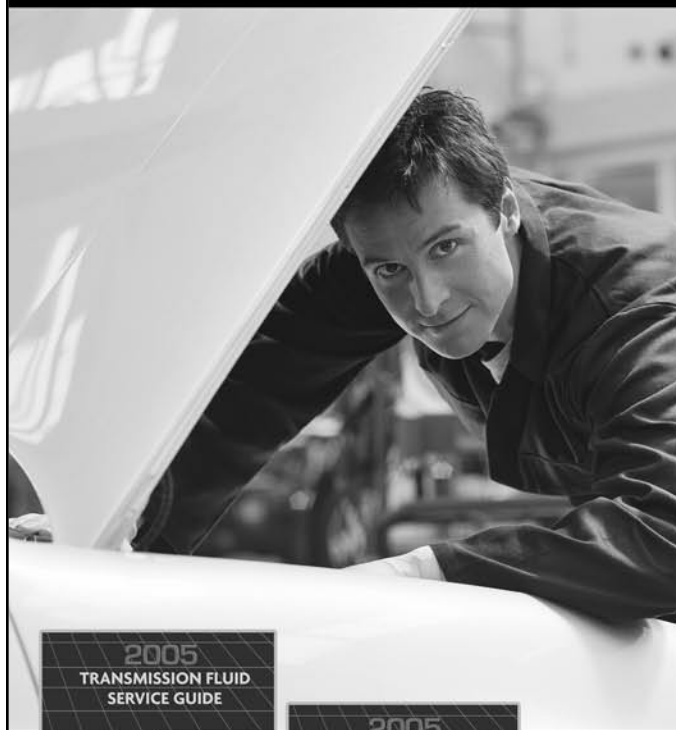
Designs vary from manufacturer-to-manufacturer by configuration and air movement. Basic sizing depends on quantity of oils available for recycling and the size and layout of the facility. Pricing can play into the decision but isn't the major concern since paybacks are usually very acceptable. Purchasers should look for atomizing type equipment, designed and assembled by long-term manufacturers in ISO shops. Units should be completely packaged, including on-board air compressors, metering pumps (for consistent fuel delivery regardless of oil mixture or viscosity) and factory-tested, including firing.

Don't waste your waste oil! Make it pay off for your operation by utilizing it in a waste oil heater or boiler. 

Editor's Note: Ron Foskey is Used-Oil-Fired Products Group Manager for Reznor Waste Oil Heaters & Boilers. For more information, e-mail ron.foskey@tnb.com or visit www.reznorheaters.com.

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