

Vol.2, No.11 November 2005

# Fixed Ops

*Magazine*

## Collision Concerns

What You Can Do To Restore Efficiencies  
And Profitability In Your Body Shop

### Right On Repair

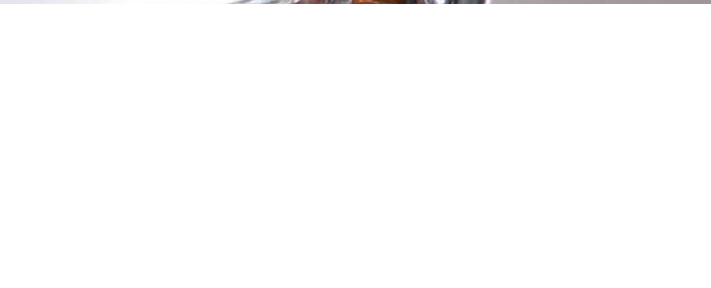
Advances In Technology Are Changing  
The Body Shop Repair Industry

### Pumping Up Iron

How You Can Increase Traffic And  
Business In Your Body Shop

### Taking Charge

How You Can Do A Better Job  
At Controlling Expenses In Your  
Fixed Ops Department



PRESORTED STANDARD  
U.S. POSTAGE  
PAID  
ARLINGTON, TX  
PERMIT #1881

## Under Fire

### How You Can Burn Your Used Oils And Fluids To Heat Your Fixed Ops Department

By Ron Foskey

**Y**our used oils and fluids are liquid gold and worth more every day. Considering heating costs, the uncertainty of fuel availability and haul-off costs, waste oils can be worth up to \$3 per gallon. This includes crankcase oils, automatic transmission fluids, hydraulic oils, #1 fuel oil, #2 or diesel oil and gear oil, up to 50 weight SAE.

Furthermore, “cradle-to-grave” liability is very much alive in today’s environmentally conscious public. Four quarts of used oil can contaminate a million gallons of potable water when improperly discarded. Though used oil is not classified as hazardous waste, generators are responsible for it from the moment it is created (or even collected) until it is processed or burned. If you produce it, you own it. Better to burn it onsite and never ship it out.

### Why Burn Waste Oils?

- Reduce heating costs with “free” fuel
- Environmentally responsible
- Conserve valuable energy
- Outstanding return on investment
- EPA approved “recycling”
- Eliminate haul-off costs
- Remove liability of oil spills

### Burning Is Legal And EPA Approved

The federal EPA and state regulatory agencies approve the “recycling” of used oils onsite. Waste oils can be burned nationwide except in California and New York City. The units are not illegal in either state, 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. The federal EPA requirements are: 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.

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 seasonal and can fill various needs for hot water year round. Heating is only one of the benefits of burning used oils onsite. For many, the total elimination of liabilities associated with shipping used oils offsite is the primary motivation to purchase.

### How They Work

It’s easier than ever to recycle the used

oils onsite. Major 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.

## Specs And Maintenance

Heaters and boilers range in BTU input from approximately 140,000 to 500,000. Approximate hourly consumption can be determined by dividing the BTU input by 140,000, the typical BTU value of a gallon of used oil. Units are thermostatically controlled. 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 and furnaces

(ducted 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 or other processes.

Consistent maintenance is the 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 tune-up of the burner 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.

## Return On Investment

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 that 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.

## Choosing

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 pre-firing.

*Ron Foskey is division manager for REZNOR Used-Oil-Fired Heating Products in Memphis, Tenn. He can be reached at 901-252-5323 or ron.foskey@tnb.com. ■*

