



## Used Oil Filter Recycling

This I-CAN report examines used oil filter recycling. In particular, it reviews the environmental impact of oil filters, the current EPA and Iowa regulations on oil filters, and the incentives for recycling oil filters in various states.

### Environmental Impact

The purpose of an oil filter is to remove impurities from the oil used to lubricate an internal-combustion engine. A filter must be replaced regularly for optimal engine functioning.<sup>1</sup>

Recent research shows that improper disposal of used oil filters has a negative impact on the environment. Statistics regarding used oil include:<sup>1</sup>

- In the United States, more than half of the 450 million oil filters sold annually are not properly disposed of.
- A hot-drained oil filter still contains up to 0.2 gallons of oil that has been absorbed into the filter element.
- One gallon of used oil can contaminate up to one million gallons of fresh water.
- Used oil contains substances that contaminate both soil and ground water, causing health problems in humans and animals. These substances include trace metals, chlorinated solvents, gasoline, poly-nuclear aromatic hydrocarbons, glycols, and PCBs.

### EPA Overview

The Environmental Protection Agency (EPA) provides a set of standards for all states to follow regarding used oil regulations. The standards, which are part of the EPA Resource Conservation and Recovery Act (RCRA), require businesses and individuals who store and transport used oil to document and ensure its proper handling. To

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<sup>1</sup> Oil Stopper, Quick Facts on a Hot Topic, 2007, Grand Terrain, LLC. December 2007  
<[http://www.oilstopper.info/quick\\_facts.html](http://www.oilstopper.info/quick_facts.html)>

<sup>2</sup> Matt Walter, Disposal of Terne-Plated and Non-Terne Plated Oil Filters, January 2001, U.S. Army Center for Health Promotion and Preventive Medicine, December 2007.  
<<http://chppm-www.apgea.army.mil/hmwp/Factsheets/OilFilters.html>>

accomplish this, the RCRA has established regulations in the notification, testing, tracking, and recordkeeping of used oil disposal.<sup>2</sup>

To properly dispose of an oil filter, the EPA recommends performing a hot-drain.<sup>2</sup> Hot-draining is the process of puncturing the filter and allowing for the oil to drain out for at least 12 hours at a temperature over 60 degrees Fahrenheit. There are no requirements stating who can perform a hot-drain.<sup>3</sup> EPA guidelines make this process optional at the federal level to allow for state experimentation with more efficient forms of disposal.<sup>2</sup>

### Types of Oil Filters

There are two types of oil filters: terne-plated and non-terne-plated. Prior to 1992, the EPA considered both types hazardous materials. In 1992, the EPA regulation changed and now only considered terne-plated filters as hazardous. These filters remain on the hazardous list because the amount of lead they contain exceeds RCRA standards. In response, the Filter Manufacturers Council stopped producing terne-plated filters in 1993. Even though the EPA removed the hazardous classification from non-terne-plated filters in 1992, some states continue to classify them as hazardous.<sup>2</sup> Currently, three states consider all oil filters as hazardous material: California, Massachusetts, and Rhode Island.<sup>4</sup>

### Iowa's Used Oil Filter Requirements

Iowa's regulations on oil filters are stricter than the federal guidelines set by the EPA. To properly dispose of used oil filters, Iowa law requires the filter to be non-terne plated and to be hot-drained. Iowa law prohibits improper dumping of used oil filters into landfills. Those who do not comply are subject to a civil penalty not to exceed five thousand dollars for each day of such violation.<sup>5</sup>

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<sup>2</sup> Matt Walter, Disposal of Terne-Plated and Non-Terne Plated Oil Filters, January 2001, U.S. Army Center for Health Promotion and Preventive Medicine, December 2007.

<<http://chppm-www.apgea.army.mil/hmwp/Factsheets/OilFilters.html>>

<sup>3</sup> Used Filter Management Requirements, May 2007, Oil Filter Manufactures Council, December 2007. <<http://www.filtercouncil.org/regs/search.cgi?State=IA&Submit=Search>>

<sup>2</sup> Matt Walter, Disposal of Terne-Plated and Non-Terne Plated Oil Filters, January 2001, U.S. Army Center for Health Promotion and Preventive Medicine, December 2007.

<<http://chppm-www.apgea.army.mil/hmwp/Factsheets/OilFilters.html>>

<sup>4</sup> Used Motor Oil Collection and Recycling, 2007, American Petroleum Institute, December 2007.

<<http://www.recycleoil.org/faqs/index.html>>

<sup>5</sup> Iowa Administrative Code 2007 Homepage, 2007.

<<http://nxtsearch.legis.state.ia.us/NXT/gateway.dll?f=templates&fn=default.htm>>

Besides hot-draining, another option for used oil filters is recycling. Oil filters are recycled at all state and county recycling centers. The centers recycle both the uncontaminated oil drained from the filter and the metals that comprise the actual filter unit. There are two recycling drop-off options in Iowa:<sup>6</sup>

- Take the filter directly to a recycling center.
- Take the filter, free of charge, to a collection site that has agreed to transport the filter to a recycling center. A collection site is typically an automotive business that sells and handles oil.

All Iowa retailers that sell motor oil, oil additives, and oil filters are required to display booklets and signs issued by the Iowa Department of Natural Resources (DNR.) The information in these booklets and signs covers the proper use, disposal, and emergency procedures for hazardous products.<sup>6</sup>

### State Government Incentives For Recycling

Several states have created programs to increase the number of oil filters recycled. State programs work to develop incentives at both the individual and commercial level. Listed below is a sample of programs.

#### Florida

In 1984, Florida implemented a used oil recycling program that has received recognition by the EPA. The program set uniform statewide standards for used oil filter disposal, while providing generous government tax incentives to the used oil transporters and recyclers. The legislation also encouraged new ways of recycling oil by reusing the oil to generate electricity in energy plants and to produce asphalt for roads and highways. Florida currently recycles over half of its used oil, ranking it well above the national average. Many states have followed Florida's example of recycling oil for similar public uses.<sup>7</sup>

In 2005, Florida amended its law to set better record keeping standards and to re-adjust monetary benefits for used oil recyclers.<sup>7</sup>

#### Washington

In Seattle, the city picks up oil filters for free from commercial businesses and transports them to recycling centers.<sup>8</sup>

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<sup>6</sup> Automotive Products Disposal Directory, 2007, Iowa DNR Waste Management, December 2007.  
<<http://www.iowadnr.com/waste/hhm/hhmauto.html>>

<sup>7</sup> Florida's Used Oil Recycling Program, March 2007, Department of Environmental Protection, December 2007.  
<[http://www.dep.state.fl.us/waste/quick\\_topics/publications/shw/used\\_oil/07NEW.pdf](http://www.dep.state.fl.us/waste/quick_topics/publications/shw/used_oil/07NEW.pdf)>

<sup>7</sup> Florida's Used Oil Recycling Program, March 2007, Department of Environmental Protection, December 2007.  
<[http://www.dep.state.fl.us/waste/quick\\_topics/publications/shw/used\\_oil/07NEW.pdf](http://www.dep.state.fl.us/waste/quick_topics/publications/shw/used_oil/07NEW.pdf)>

## California

California does not have a statewide recycling incentive program, but many of its counties do provide incentives. These counties encourage people who change their own oil filters to bring their old filters to drop-off points and receive a new filter, free of charge. The drop-off points are usually commercial automotive shops or big box stores, like Wal-mart and K-mart. The local government, in turn, refunds these shops for the filters given out.<sup>8</sup>

## Additional State Incentives/Regulations

Many states, including Texas, New Jersey, Virginia, Oregon, California, and Florida have mandated that certain automotive shops accept used oil filters, free of charge, from people who change their own oil filters.<sup>8</sup>

In New York and Massachusetts, all Wal-marts and K-marts must accept used oil filters, even if a particular store location does not have an automotive service center. In addition, both states require any retail store that sells more than 1,000 gallons of oil a year to accept and recycle used oil.<sup>8</sup>

Missouri, Ohio, and Texas give tax breaks to automotive shops who advertise that they accept used oil filters.<sup>8</sup>

## Other non-state methods

Many retailers have contracted for pickup service from First Recovery, a subsidiary of Valvoline Oil. First Recovery charges a flat rate of \$85 a month per store for pickup service. Many of these retailers charge their oil change customers an "environmental service fee" on oil filter changes to offset the recycling costs. Kmart, for instance, charges a \$1 "environmental service fee."<sup>8</sup>

Additional information on used oil filter recycling can be found at:

<http://www.filtercouncil.org>

This report was prepared in December 2007 by the Iowa Civic Analysis Network (I-CAN), a non-partisan public policy undergraduate research group at the University of Iowa. For additional research on this or other issues, please visit our website at <http://www.uiowa.edu/~ican> or contact us at [studorg-i-can@uiowa.edu](mailto:studorg-i-can@uiowa.edu).

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<sup>8</sup> Law push discounters, auto parts chains into oil, filter recycling, November 1993, BNET Research Center, December 2007. <[http://findarticles.com/p/articles/mi\\_m3092/is\\_n21\\_v32/ai\\_14645741](http://findarticles.com/p/articles/mi_m3092/is_n21_v32/ai_14645741)>

<sup>8</sup> Ibid