REUSABLE OIL FILTERS

Best Environmental Practices for Fleet Maintenance • November 1999

What is a reusable oil filter?

Fleet maintenance facilities generate hundreds of used oil filters every year from routine engine maintenance. In doing so, these facilities incur costs associated with maintaining filter inventory and managing and disposing of used filters. An alternative to conventional oil filters is reusable oil filters, which can last up to the life of the vehicle and eliminate the waste stream created by conventional disposable filters. Using reusable oil filters can save your facility money and reduce its impact on the environment.

A reusable oil filter consists of an adapter plate; a canister; and a pleated, stainless-steel, wire cloth filter. The wire cloth replaces the paper elements in conventional oil filters. Most filter parts last the lifetime of the vehicle. In comparison, conventional oil filters must be drained and either landfilled or recycled.

Will the filter fit any engine? Reusable oil filters are made to fit most vehicles. The adapter plate can be changed to accommodate different engine types, while the wire cloth filter inserts are often the same for vehicles of similar size. Depending on your fleet, you can often replace multiple sizes of disposable oil filters with fewer replaceable filter inserts. This makes stocking and ordering filters easier, saving you time and money.

How is the filter cleaned? The wire cloth filter is easily removed, cleaned in a parts washer and replaced. Some vendors, such as PureCycle Filter System (PureCycle), sell machines specifically for washing reusable oil filters. The cleaning time ranges from 5 to 15 minutes, and cleaning is usually performed when the oil is changed.

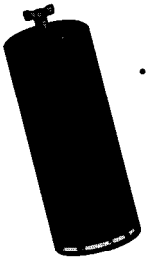
How much does the filter cost? Prices for a reusable filter (including adapter plate, canister and wire cloth filter) range from $65 to $130 for cars and small trucks and from $120 to $300 for large trucks.

What will the payback period be? According to vendors and facilities using reusable oil filters, the payback period ranges from 1 to 3 years, depending on fleet size and oil change cycles. Savings are achieved by eliminating purchase and disposal costs for conventional oil filters.

ADVANTAGES OF REUSABLE OIL FILTERS

Environmental

- Conserve oil, a non-renewable resource
- Reduce potential for used oil contaminating groundwater, soil, and surface water



Operational

- Reduce on-site filter inventory
- Eliminate draining and crushing of used filters
- Eliminate used filter storage and disposal

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Case studies:

Benefits of reusable oil filters

Two fleet facilities, Barton Sand and Gravel (a sand and gravel carrier in Minnesota) and the City of Walnut Creek, California, provided the following information about using reusable oil filters. As the tables show, each of these facilities realized environmental and cost benefits from reusable oil filters.

	BARTON SAND & GRAVEL, MN	CITY OF WALNUT CREEK, CA
Fleet Size	100 trucks, 40 of which use reusable oil filters	290 vehicles; reusable filters used in 10 out of 18 police cars
Filters Used	PureCycle oil filters ($169 to $195 each for heavy trucks)	System One Filter Systems oil filters ($80 each for cars)
Reusable Filter Implementation	Started by using 1 reusable filter and gradually increased to 40	Started by using 1 reusable filter and gradually increased to 10
Cleaning Frequency	Clean filters during every oil change (every 6,000 to 10,000 miles or 6 to 7 weeks)	Clean filters during every oil change (every 5,000 miles)
Cleaning Methods	Use a PureCycle washing machine to clean filters; cleaning takes about 10 minutes	Use a Safety-Kleen parts washer to clean filters; cleaning takes about 5 minutes
Previous Costs for Conventional Oil Filters	6 oil changes per year x 40 trucks x $10 per filter = $2,400 per year Disposal: $80 per drum x 2 drums per month x 12 months per year = $1,920 per year	12 oil changes per year x 10 cars x $3.75 per filter = $450 per year Disposal: Decreased but not quantified
Reusable Oil Filter Costs	40 trucks x $180 (average filter) + $700 (washing machine) = $7,900	10 cars x $80 = $800
Payback Period	Less than 2 years	Less than 2 years
Facility Comments	"Our facility saved money by reducing our inventory and used oil filter disposal costs. The washing machine has made cleaning the filters a simple task. This product is a proactive approach to minimizing environmental impacts caused by filter disposal."	"Our facility is helping the environment by producing less waste. Reusable oil filters have finer filtration than conventional oil filters; reusable filters can serve as an inspection tool because contaminants can be seen on the wire cloth screen."

VENDOR CONTACT INFORMATION

PureCycle Filter System	System One Filter System	Racor	Vortex Fluid Filter Technologies
(612) 338-1250	(209) 687-1955	(209) 521-7861	(888) 286-7839
http://www.purecyclefilters.com	http://system1filter.com	http://www.parker.com/racor	http://www.vortexfilter.com

These vendors provided information for this fact sheet. This list is not complete: other vendors may provide similar or identical products and services.

Your state or local government environmental agency has more information about compliance and pollution prevention for auto repair shops and fleet maintenance operations in your state or area. Additional fact sheets and information can be found at www.epa.gov/region09/p2/autofleet. This fact sheet is part of a package of fact sheets entitled either "The Pollution Prevention Tool Kit, Best Environmental Practices for Auto Repair" (publication number EPA-909-E-99-001) or "The Pollution Prevention Tool Kit, Best Environmental Practices for Fleet Maintenance" (publication number EPA-909-E-99-002). To obtain copies of either package, call (800) 490-9198. Accompanying videos, "Profit Through Prevention", are available at the same phone number for either auto repair (number EPA-909-V-99-001) or fleet maintenance (number EPA-909-V-99-002).