



PACE
PARTNERS FOR A
CLEAN ENVIRONMENT

What is PACE?

PACE provides education outreach, technical assistance, and recognition for environmental achievement. The program is available at no cost to businesses in Boulder County. PACE offers:

- Assessments to identify opportunities for waste reduction, water conservation, and energy-efficiency
- Information and assistance to meet your business needs
- Compliance education
- Public recognition for your environmental efforts

Why Participate?

Compliance – Our free, non-regulatory consultations help you comply with environmental laws and ordinances and reduce your liability.

Cost Savings - Less waste means lower disposal and operating costs. Efficient use of water, energy, and materials saves money.

Public Image - Environmental practices impact your image with customers, the community, and regulatory agencies.

Public Recognition!

PACE publicly recognizes certified businesses through free advertising. This includes Internet listings and advertising in newspapers, magazines, utility bill inserts, and radio spots.

Certified businesses receive a PACE window decal and framed certificate. PACE encourages the public to support businesses that contribute to the community through environmentally sound operating practices.

Vehicle Repair *Brake Cleaner*

Spring 2009

What is Wrong with Aerosol Cans?

When compared to refillable spray bottles and aqueous brake washing units, aerosol cans are expensive and have greater environmental and employee health impacts.

Cost Savings

- Ounce for ounce, spray-on product sold in aerosol cans is about twice the cost of bulk product. You pay for propellants in every aerosol can (10 to 15 percent by weight).
- You also pay for excess packaging and disposable cans.
- To use bulk products, you make an initial investment in refillable air-powered cans (about \$30 - \$80 per can), but you pay much less for the cleaning solution. Shops report actual savings of \$300 to \$2,000 per year by using bulk cleaners.

Refillable Spray Bottles

There are two basic types of refillable spray bottles: metal bottles that spray product using compressed air and plastic bottles that use a hand pump.

- Metal bottles are filled with cleaning solution from a bulk container and are pressurized with air from a compressor.
- Plastic bottles are also filled from a bulk container, but are operated by pumping a trigger to create a mist or stream of product.

What to consider when purchasing a refillable spray bottle:

Capacity The capacity of typical refillable spray bottles varies from 7 fluid ounces to 1 quart. Depending on your needs, smaller bottles can be more convenient for hard to reach places. Where as larger bottles can be more convenient because they need to be refilled less frequently.

Construction Material You need to ask your vendor which bottle type is compatible with the type of product you intend to use in it.

Nozzle Type 1-quart refillable spray bottles usually come with standard spray and stream nozzles. Smaller spray bottles typically spray a stream similar to aerosol cans. You can also purchase nozzle extensions up to 12 inches long for spraying hard to reach areas.

Cost Refillable air-pressurized bottles cost from \$30-\$80 per can. Chemically resistant plastic bottles and hand pumps cost \$1 to \$6 each.

Refillable Spray Bottles: Commonly Perceived Problems and Real Answers	
PERCEIVED PROBLEM	REAL ANSWER
Refillable spray bottles require more labor time because they must be refilled	The actual time needed to fill a bottle is between 1 and 3 minutes, comparable to the time of disposing of a can and obtaining a new one.
Refillable spray bottles are cumbersome	Spray bottles the size of a typical aerosol can also be purchased, or nozzle extensions can be attached to larger bottles.
Refillable spray nozzles clog	Although clogs are rare, blowing compressed air through both sides of the spray nozzle can eliminate them

Aqueous Brake Washing

The best environmental practice for brake washing is to use aqueous brake washing units, which eliminates the use of both aerosol cans and solvents. These brake washing units use a water based, portable reservoir for brake cleaning. Many shop owners have found that the portable brake cleaning units save both time and money. They are height adjustable, and are available from a number of vendors.

Aqueous brake washing solutions contain compounds that are either non-hazardous or considerably less hazardous than solvents. With proper filtration and regular addition of fresh solution, many shops can go for years without requiring solution disposal. Many aqueous parts washing units can also perform brake washing (check with individual vendors).

Avoid potential regulatory problems by using compressed air to dry brakes after aqueous brake washing rather than an aerosol brake cleaner. Many aerosol products contain F-listed chemicals. An F-listed chemical is a chemical that makes each waste it contaminates a hazardous waste, no matter the concentration.

PACE Certification

As an elective for certification in the PACE program, businesses can eliminate or reduce usage of aerosols and chlorinated compounds by a minimum of 50%. The table below lists brake cleaning products that can help meet this requirement. The PACE program in no way endorses any of the companies or products, nor regards this as a complete list of brake cleaner manufacturers.

Helpful Resources

See the PACE website for a list of helpful resource sheets

www.pacepartners.com

Keep It Clean Partnership
www.keepitcleanpartnership.org

Manufacturer	Phone number	Types of Products
Safety-Kleen	(303) 761-8614	Sell a portable unit; the SK Multi-Level Parts Cleaner which uses their non-toxic, non-flammable aqueous solvent.
Wurth	(800) 346-4198	Produces a non-hazardous Brakes & Parts Cleaner for use in their Sharp Shooter product, a stainless steel, hand-held, air-powered can that can be refilled. Wurth Brake & Parts Cleaner does not contain any solvents which are listed under the hazardous waste regulations. Cost savings by purchasing bulk rather than aerosol cans by the case are at least \$2.50 per gallon.
Zep	(303) 373-1371	Produces a non-chlorinated, non-aerosol brake cleaner which removes grease, asbestos and dust. Zep also produces an air-powered stainless steel canister for use with this cleaning product. Cost savings by purchasing in bulk rather than individual cans are over \$24 per gallon. Also make the Zep Adjustable Brake Buggy II, a portable brake cleaning unit.
Kleen Tec	(800) 435-5336	Sells a portable brake washing unit for \$550. Unit can also be used as a parts washer.
Misty	(970) 224-4740	Distribute bulk, non-chlorinated brake and parts cleaner as well as choke and carb cleaner. Also sell a 16-ounce refillable air-powered canister for about \$30. Cost savings by purchasing in bulk rather than aerosol cans are at least \$2.50 per gallon.
CRC	(800) 521-3168	Produces a non-chlorinated, non-aerosol brake cleaner which can be purchased in bulk. This brake cleaner does not contain any solvents which are listed under the hazardous waste regulations. The CRC brake cleaner must be used in an air-powered canister which can be purchased in various sizes from most auto supply shops for a cost of \$40 and \$80 depending on type and size.



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