OCAPP
Office of Compliance Assistance and Pollution Prevention

Fact Sheet

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Auto Service and Repair Facility Pollution Prevention

What is Auto Service and Repair Facility Pollution Prevention (P2)?

Automotive repair facilities can generate spent solvents from parts washers, lead-acid batteries, used antifreeze, absorbents, used oil and filters, shop cleaning wastes, aerosol cans, paint wastes, refrigerants, tires and various engine and auto body parts. There are many P2 opportunities for auto repair facilities. This fact sheet outlines some common P2 strategies.

General P2 Opportunities

Use catch pans to prevent leaks, drips and spills from reaching the floor. Keep a spill kit on site, and train employees yearly in spill prevention and response. Know where your floor drains lead. Using floor drains improperly can contaminate nearby surface waters and/or drinking waters.

Keep waste streams separate for reuse, recycling or treatment. Keep non-hazardous materials from becoming contaminated. Label all materials and wastes. Keep tight-fitting lids on containers except when adding or removing material or waste.

Control inventory to prevent overuse or underuse of materials. Don't let the inventory become old and useless, creating hazardous wastes. Don't store materials in a manner that makes them useless. For example, some materials are damaged by freezing, heating or getting wet. Use a first-in, first-out policy.

Used Oil and Antifreeze

Recycle used oil, antifreeze, engine fluids, batteries and used parts. Use pop-up level indicators on drums and other bulk receptacles to prevent overfilling. Oil filters should be hot-drained and crushed prior to disposal/recycling. Burn used oil onsite for energy recovery but be sure to follow proper handling and air pollution control regulations. Some examples of used oil include engine oil, lubricating oil, brake fluid, transmission fluid, and hydraulic fluid.

Solvents/Parts Washing

Consult the Material Safety Data Sheet (MSDS) before purchasing a new product. Substitute less toxic or non-toxic solvent alternatives whenever possible. Options include terpenes, citric acid-based cleaners, microbial cleaners or aqueous or water-based cleaners.

Microbial cleaners use enzymes to digest the oils and other soils from parts, allowing the solution to be used for an extended period. Some shops can use their microbial cleaner for almost two years, adding only enzyme and water with no loss of cleaning power.

Aqueous or water-based cleaners can reduce worker exposures and hazardous wastes. These spent cleaners, however, may become a hazardous waste when used for long periods of time due to heavy metal build-up.

Keep parts washers away from heat sources and drafts to prevent evaporation. Increase the time between solvent change outs. Change solvent only when it loses its cleaning power, not on a schedule or because it looks dirty. Use a two-stage cleaning system, using dirty solvent for pre-cleaning, then finish cleaning with clean solvent. Drain all parts completely to reduce the drag-out loss of cleaning fluids, installing a drainage shelf may help.

Pre-clean parts by mechanical means such as wire brushes or rags. This will decrease the amount of sludge and soil loading on the system. Clean only the parts that need to be cleaned for the repair. Install a filter to extend the cleaning time of the solvent. (The Iowa Waste Reduction Center has a

What is Pollution Prevention?

Pollution prevention (P2) is the use of source reduction techniques to reduce risk to public health, safety, welfare and the environment and, as a second preference, the use of environmentally sound recycling to achieve these same goals. P2 addresses all types of waste and environmental releases to the air, water and land.

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brochure on how-to-install a filtration unit for $50 on your solvent based parts washer, see Resources list). Use a solvent parts washer with a built-in distillation unit that supplies continuous clean solvent.

Benefits of Auto Service and Repair Facility P2

Auto body shops and repair facilities must comply with numerous environmental laws and regulations. Implementing some of the P2 techniques described in this fact sheet may help reduce some of the requirements and the costs of compliance. Environmental benefits include protection of surface waters and/or drinking water supplies, energy recovery from burning used oil onsite, reduction in the amount of hazardous waste and reduced worker exposure.

P2 Success Story

Diesel/Fuel Injection Specialties (DFIS), located in Santa Ana, California, repairs engines, sensors, and fuel injection systems. They employed one person who cleaned parts full-time. DFIS used a solvent immersion system which required servicing every two months. They switched to an ultrasonic unit costing $9,300, saving $15,012 per year (a 7-month payback). This system saves DFIS time and money and cleans fuel injectors in fifteen minutes. According to DFIS, the ultrasonic system cleaned the fuel injectors just as well as, if not better than, the solvent immersion system.

Attached List of P2 Suggestions

The attached list of P2 suggestions can help you reduce the amount of hazardous waste you generate.

Contact your inspector at the appropriate District Office or Ohio EPA's Office of Compliance Assistance and Pollution Prevention (OCAPP) at 800-329-7518 for more information.

Resources

Adding a Filter to Your Parts Washer, Iowa Waste Reduction Center, University of Northern Iowa, 8 pps. www.iwrc.org/download/pdf/partsWasher1x1.pdf.

Automotive Repair Facilities, Office of Compliance Assistance and Pollution Prevention, Ohio EPA, Number 35, February, 1999, www.epa.state.oh.us/opp/fact35.pdf.

Auto Service and Repair/Solvent Usage Industry P2 Checklist, Pollution Prevention Institute, Kansas State University, June, 2001, www.sbeap.org/ppi/publications/auto_service_and_repair_industry_P2_checklist.PDF.

Case Studies in Aqueous Parts Cleaning, Best Environmental Practices for Auto Repair Shops, United States EPA, November, 1999, www.epa.gov/region09/waste/p2/autofleet/caseauto.pdf.

Environmental Compliance Guide for Auto Body Shops, Office of Compliance Assistance and Pollution Prevention, Ohio EPA, March, 2002, www.epa.state.oh.us/ocapp/sb/publications/collisionrepair.pdf.

Ohio EPA, OCAPP Web Site, www.epa.state.oh.us/ocapp/ocapp.html

The Regulation of Used Oil: Used Oil Burners, Division of Hazardous Waste Management, Ohio EPA, www.epa.state.oh.us/dhwm/pdf/Used_Oil_Burner_Guidance.pdf.